

Nagar Prathmik Shikshan Samiti Ahmedabad

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

February 2024

Tender No. :	Smart School RFP 04-2024
Pre Bid Meeting:	20/02/2024, 15:30 Hrs.
Last Date Online Price Bid Submission:	26/02/2024 up to 17:00 Hrs.
Last Date of Receipt of Physical Bid:	26/02/2024 up to 17:00 Hrs.
Date of Opening of Bid:	To be communicated
Bid Processing Fee:	Rs. 12,000/- (Rupees Twelve Thousand Only)
Bid Security EMD:	Rs. 1,20,00,000/- (Rupees One Crore Twenty Lacs Only)

Invited By:
Administrative Officer,
Ahmedabad Municipal Corporation School Board
Scout Bhavan, Near Prabhudas Thakkar College,
Paldi, Ahmedabad, Gujarat- 380007
E-mail: aoschoolboard@ahmedabadcity.gov.in, aoschoolboard@gmail.com



DISCLAIMER

The information contained in this Request for Proposal document (“**RFP**”) whether subsequently provided to the bidders, (“**Bidder/s**”) verbally or in documentary form by Ahmedabad Municipal Corporation School Board (henceforth referred to as “**AMC School Board**” in this document) or any of its employees or advisors, is provided to Bidders on the terms and conditions set out in this RFP document and any other terms and conditions subject to which such information is provided.

This RFP document is not an agreement and is not an offer or invitation to any party. The purpose of this RFP is to provide the Bidders or any other person with information to assist the formulation of their financial offers (“**Bid**”). This RFP includes statements, which reflect various assumptions and assessments arrived at by AMC School Board in relation to this scope. This Tender document does not purport to contain all the information each Bidder may require. This Tender document may not be appropriate for all persons, and it is not possible for the Chief Executive Officer, AMC School Board and their employees or advisors to consider the objectives, technical expertise and particular needs of each Bidder. The assumptions, assessments, statements and information contained in the Bid documents, may not be complete, accurate, adequate or correct. Each Bidder must therefore conduct its own analysis of the information contained in this RFP and to seek its own professional advice from appropriate sources.

Information provided in this Tender document to the Bidder is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. AMC School Board accepts no responsibility for the accuracy or otherwise for any interpretation of opinion on law expressed herein.

AMC School Board and their employees and advisors make no representation or warranty and shall incur no liability to any person, including the Bidder under law, statute, rules or regulations or tort, the principles of restitution or unjust enrichment or otherwise for any loss, cost, expense or damage which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, reliability or completeness of the RFP, and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way in this Selection Process.

AMC School Board also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Bidder upon the statements contained in this RFP. AMC School Board may in its absolute discretion, but without being under any obligation to do so, can amend or supplement the information in this RFP.

The issue of this RFP document does not imply that AMC School Board is bound to select a Bidder or to appoint the Selected Bidder (as defined hereinafter), for implementation and AMC School Board reserves the right to reject all or any of the Bidders or Bids without assigning any reason whatsoever.

The Bidder shall bear all its costs associated with or relating to the preparation and submission of its Bid including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by AMC School Board or any other costs incurred in connection with or relating to its Bid. All such costs and expenses will remain with the Bidder and AMC School Board shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a Bidder in preparation for submission of the Bid, regardless of the conduct or outcome of the selection process.

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IMPORTANT DATES

Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city		
1.	Contract Period	3 Years 6 Months
2.	Delivery	Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city
3.	RFP No.	Smart School RFP 04-2024
4.	Pre-Bid Meeting Date	20/02/2024, 15:30 Hrs
5.	Online Price Bid Submission Date	26/02/2024 up to 17:00 Hrs. (At https://www.tender.nprocure.com only)
6.	Physical Proposal Submission	26/02/2024 up to 17:00 Hrs. (In Hard Copy with Bid Fee, EMD and other eligibility documents)
7.	Proposal Opening (Un-priced bid)	Will be intimated to the qualified bidders later.
8.	Date & Time of opening of Price Bid	Will be intimated to the qualified bidders later.
9.	Venue of Pre-Bid Meeting, opening of Technical & Commercial Bid/s	Municipal School Board Office Scout Bhavan, near Prabhudas Thakkar College, Paldi, Ahmedabad, Gujarat- 380007
10.	Bid Processing Fees (Non - refundable)	Rs. 12,000/- (Rupees Twelve Thousand only) in form of DD only
11.	Bid security (EMD)	Rs. 1,20,00,000/- (Rupees One Crore Twenty Lacs only) in form of Demand Draft or Bank Guarantee <i>in favor of The Administrative Officer, AMC School Board payable at Ahmedabad from Nationalized or Scheduled Banks except Co-operative Banks.</i>
12.	AMC School Board Contact email ID	Email ID: aoschoolboard@ahmedabadcity.gov.in, aoschoolboard@gmail.com
13.	RFP Document Available at	nProcure Portal, Website of Municipal School Board, Ahmedabad

NOTE: Please address all queries and correspondence to:

The Administrative Officer,
Ahmedabad Municipal Corporation School Board
Scout Bhavan, Near Prabhudas Thakkar College, Paldi, Ahmedabad, Gujarat- 380007
E-mail: aoschoolboard@ahmedabadcity.gov.in, aoschoolboard@gmail.com

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Ahmedabad Municipal Corporation School Board (AMC School Board) invite proposals for Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city. The Authority will enter into agreement with the Successful Bidder selected in accordance with this RFP. The agreements will be in the format specified by the Authority.

Only the bidders matching the pre-qualification criteria will be selected for further evaluation. The bidders are required to meet the minimum threshold limit for technical evaluation mentioned herein, post which their financial bid will be reviewed. The proposal with the lowest cost will be awarded the contract.

The Bidders are required to meet the minimum threshold technical and financial capability criteria, as stated in the Notice Inviting Tenders (“NIT”) advertisement published in the local & National newspapers and as provided herein. Pursuant to that, the Bidders would be evaluated on the basis of detailed technical and financial proposals and qualify for undertaking the Project as set out in this RFP.

The RFP document contains information about the Project, bidding process, proposal submission, qualification, and financial proposal requirement. Proposal in the form of BID is requested for the item(s) in complete accordance with the documents/attachments as per following guidelines.

Instruction to the bidders for bid submission:

- ✓ Tender documents are available only in electronic format which Bidders can download free of cost from the website www.ahmedabadcity.gov.in and <https://tender.nprocure.com>
- ✓ Bidder shall upload their financial bid on <https://www.tender.nprocure.com>.
- ✓ Bidder shall submit technical proposal (both at <https://tender.nprocure.com> and in hard copy) with eligibility documents, non-refundable bid processing fees bid fee and bid security EMD in separate sealed envelopes super scribed with title and packaged all together in big envelope with tender number to AMC School Board Office.
- ✓ The bid shall specify time schedule of various activities.
- ✓ Bids complete in all respects should be submitted on or before the BID DUE DATE.
- ✓ Services offered should be strictly as per requirements mentioned in this Bid document.
- ✓ Please spell out any unavoidable deviations, Clause/ Article-wise in your bid under the heading Deviations.
- ✓ Once quoted, the bidder shall not make any subsequent price changes, whether resulting or arising out of any technical/commercial clarifications sought regarding the bid, even if any deviation or exclusion may be specifically stated in the bid. Such price changes shall render the bid liable for rejection. However, AMC School Board reserve the right to revised financial offer.
- ✓ The duration of the Contract period for this activity will be of **3 years 6 months**.
- ✓ Bidders who wish to participate in this bid will have to register on <https://tender.nprocure.com>. Further bidders who wish to participate in online bids will have to procure Digital Certificate as per Information Technology Act 2000 using which they can sign their electronic bids. Bidders can procure the same from (n) code solutions – a division of GNFC Ltd., or any other bidder licensed by Controller of Certifying Authority, Govt. of India. Bidders who already have a valid Digital Certificate need not procure a new Digital Certificate.
- ✓ In case of any clarifications required, please contact on email ID of AMC School Board.

SECTION: 1 PROJECT PROFILE

1.1. Introduction and Background

Ahmedabad Municipal Corporation (AMC) runs municipal schools in the city. The AMC School Board is governing and managing body to run operations of municipal schools. In last few years AMC School Board has implemented several innovative projects to upgrade the school infrastructure and modernize the teaching process.

In phase I & II AMC School Board has already developed more than 60 smart schools to introduce Activity Based Learning method along with technological interventions in government schools running under Ahmedabad Municipal Corporation (AMC) to transform the teaching-learning process, improve learning outcome and foster curiosity, creativity, and imagination in young minds.

1.2. Project Summary

The project intends to transform twenty seven (27) municipal school to smart school by adopting the modern technologies and improved physical infrastructure in government schools of Ahmedabad. In learning by doing teaching method learners willingly with enthusiasm internalize and implement concepts relevant to their needs. Their senses get stimulated which help in retaining of lessons. It is a child-centered approach, where child is actively involved in participating mentally and physically. This method will inculcate essential 21st-century skills which will help a child in developing their professional and personal skills.

The selected school will have a Math and Science Labs with working Models with Teachers Training (with LED T.V), smart panels, 3D Educational Charts, Stem & Robotic Labs with QR Code (Including 3D printer), Educational kits, Sports kits, Fancy Benches and other supporting physical infrastructure like furniture, 3D wall paints etc.

1.3. Project Objective & Envisaged Benefits

The Smart School Project has been conceptualized to improve the classroom interaction, upgradation of school infrastructure resulting into curiosity & learning eagerness among students. In same line the project objectives have been identified and will act as guiding framework for entire project duration.

1.3.1. Objectives

The key project objectives broadly are as follows:

- i. To foster curiosity, creativity, and imagination in young minds and increase knowledge assimilation and retention amongst school children of Municipal/Government Schools
- ii. To modernize education infrastructure and provide quality teaching at public schools.
- iii. To enhance classroom interactivity through advancement in teaching-learning process through visualization and learning by doing kit.
- iv. To build the student's self-confidence by giving reality to learning and group exercises.

1.3.2. Envisaged Benefits & Outcome of Project

The benefits and outcomes of project are as follows:

- i. Improved learning outcome of students with state, national & global standards.
- ii. Increase in student enrollment.
- iii. Reduction in dropout rate.

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- iv. Increase in average student attendance.
- v. Enhanced classroom interactivity through advancement in teaching-learning process.
- vi. Increased level of confidence & curiosity among students.
- vii. Branding of AMC schools in innovative infrastructure & learning modules for AMC schools.
- viii. Exposure to newer technologies and hands-on experience on routine syllabus.

1.4. Stakeholders

The implementation and successful execution of this project will require support and involvement from multiple stakeholders. It is therefore important to understand the various stakeholders envisioned to be part of this project and the role that they are expected to play. Following are the critical stakeholders whose involvement will drive the project and enable the establishment of a strong project governance:

- Project Execution – AMC School Board, AMC, Implementation Agency and Concerned Departments of AMC
- Beneficiaries – Students, Parents, Teachers, Principals, Teaching Support Staff, Administrative Team
- External Stakeholders – Education Dept. Office of District, State, SSA and other schemes implementing agencies of central & state govt., Education Research and Training Institutions, NGOs, Community, Health, Revenue, Social Welfare, Higher Education

1.5. Key Considerations for Project

Keeping the objective of project in center there are certain areas of which the implementing agencies should take notice during project inception and implementation phase. In order to make this project successful these points need to be addressed in project design irrespective of scope of work for the projects.

- It is of utmost importance to conduct proper stakeholder consultation, orientation and handholding during project implementation.
- User Behavior - Treating teaching aid and equipment as a priced possession in school, kept out of reach of teachers & Students instead of a tool to be used by them.
- Possible overlap of different initiatives and programs of government in pedagogy & curriculum may lead to confusion among stakeholders.
- Low adoption of data driven decision making and the usage of Learning support services.
- Limited number of Quality Digital Content Suppliers & Approval authorities
- Need of a holistic approach including civil, building infrastructure, curriculum, pedagogy, teacher training and technology interventions as an integrated solution.
- Need to strengthen the institutional capability of school management committee, adequate pupil-teacher ratio, teaching support staff and budget for AMC school operations.
- Transformation in pedagogy, teaching-learning methodology usually take long gestation period and required capacity building, behavior change and advocacy of new system among stakeholders.

SECTION 2: ELIGIBILITY CRITERIA

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The bidder must possess the requisite experience, strength, and capabilities in providing services necessary to meet the requirements as described in the RFP document. Keeping in view the complexity and volume of the work involved, following criteria are prescribed as the eligibility criteria for the bidder interested in undertaking the project.

The bidder must also possess technical know-how and financial ability that would be required for implementation of scope of work described in this RFP as per AMC School Board's requirement for the entire contract duration.

2.1. Pre-Qualification (PQ) Criteria

Sr No	Description	Minimum Requirement	Documentary Evidence to be submitted
PQ 1	Consortium	<p>1.1 Bidder can submit their proposal either as a sole bidder or in consortium.</p> <p>1.2 Consortium is allowed for participation in this tender. Consortium should be of maximum of two (2) parties.</p> <p>1.3 Collectively they should meet the aggregate requirement for financial, experience and technical capability as asked in this table for Pre-Qualification Criteria.</p> <p>1.4 The lead bidder in consortium shall have min. 51% stake and should have demonstrable experience in setting up school/</p>	<p>a) Original or Notarized Copy of consortium partnership with clearly defined stake and scope of each partner.</p> <p>a) Undertaking by lead bidder of consortium to be sole responsible for execution of work defined in RFP and meeting the</p>
PQ 2	Legal Entity	<p>2.1 Bidder/consortium partners should be an Indian firm.</p> <p>2.2 Bidder/consortium partners should be registered under the Companies Act 1956/2013 in India or a Limited Liability Partnership Firm under Limited Liability Partnership Firm Act 2008 at the time of the bidding.</p> <p>2.3 Bidder/consortium partners should have a registered number of, GST, Income Tax / Pan number.</p> <p>2.4 Bidder/consortium partners should be in operation in India for a period of at least 3 years as on publication of bid</p>	<p>a) Copy of certification of incorporation issued by competent authority/ Registration Certificate/ Shop & Establishment certificate.</p> <p>b) Copy of PAN card</p> <p>c) Copy of GST registration</p>
PQ 3	Financial Capability	<p>3.1 The Bidder should have average annual turnover from similar nature of work of at least Rs. 12 Cr. from last three financial years ending 31 March 2023, i.e. (FY 2020-21, FY 2021-22, and FY 2022-23). If the results are not audited for FY 2022-23, bidder may provide the turnover of FY 2020-21, 2021-22 and 2022-23 for the verification of Average Annual Turnover.</p> <p>3.2 The bidder must have positive net worth and should be Profit making as on 31st March 2023. If results are unaudited for the FY 2022-23, bidder may provide the positive net worth certificate for FY 2021-22</p> <p>3.3 In case of consortium - The lead bidder and consortium partner should have aggregate average annual turnover of at least Rs. 12 Cr. from last three financial years ending 31 March</p>	<p>a) Copy of audited Balance Sheet, audited Profit & Loss statements for each of the last 3 financial years as on 31st March 2023.</p> <p>b) Certificate from the statutory auditor / Chartered Accountant (CA) clearly specifying the annual turnover and net worth for each of the last 3 financial years as on 31st March 2023. Original or Notarized Copy should be submitted for evaluation.</p>

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Sr No	Description	Minimum Requirement	Documentary Evidence to be submitted
		2023, i.e. (FY 2020-21 FY 2021-22 and FY 2022-23). If the results are not audited for FY 2022-23, bidder may provide the turnover of FY 2020-21, 2021-22 and 2022-23 for the verification of Average Annual Turnover.	
PQ 4	Bidder's Experience	<p>4.1 The similar work/project of bidder should have min. 5 out of 6 below mentioned similar work. Projects should include but not limited to Supply, Installation, Testing, Commissioning and O&M for schools/Anganwadis/education institutes in last Seven years in India as on bid publication date.</p> <p>I. Smart Classroom - Projects with components like computer, projector, projection screen or smart panel.</p> <p>II. Future classroom - Projects with digital devices like computer/laptop, projector/smart panel, digital content and with software for classroom management (online assignment, assessment attendance etc.)</p> <p>III. Mathematics and Science Lab with working models and kits</p> <p>IV. Supply/Creation/Customization of Digital Content</p> <p>V. Joyful learning class - Projects with components like pre-educational kits, 3D Educational Charts, educational toys, creative art in schools, wall paintings/posters for education messages</p> <p>VI. Play area or play-ground development in school/Anganwadis/Education Institutes.</p> <p>4.2 At least three (3) similar projects not less than of 16 Cr (Cumulative) OR Two (2) similar projects not less than of 20 Cr (Cumulative) OR One (1) similar project not less than of 32 Cr (Cumulative)</p> <p>4.3 In case of consortium - The lead bidder and consortium partner should have aggregate similar work experience as described in 4.2</p> <p>4.4 The bidder may cite the prior experience of projects, where they were part of consortium/joint Venture and were the lead bidder in partnership.</p> <p>4.5 In case of On-going projects, only those projects where implementation phase has been completed and the project is in operation & maintenance phase.</p> <p>4.6 Client certificate clearly specifying the completion of implementation phase is required.</p>	<p>Documentary evidence:</p> <ul style="list-style-type: none"> • Copy of work order • Contractual agreement with client • Completion Certificates from client • Project Citation

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Sr No	Description	Minimum Requirement	Documentary Evidence to be submitted
PQ 5	Mandatory Undertaking	<p>The bidder/consortium partners should:</p> <p>5.1 Not have been blacklisted by Central Government / Any State Government / Urban Local Body (ULB) / PSU in India as on the date of bid submission.</p> <p>5.2 Not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of the foregoing reasons.</p> <p>5.3 The bidder should have at least one office in Ahmedabad / Gandhinagar and preferably support centers/logistics for the entire state. If the Bidder is not having any office in Ahmedabad / Gandhinagar, then bidder should submit a letter of undertaking to open the office in Gujarat within 45 days from the date of issue of work order if he is awarded the work.</p> <p>5.4 Not have their directors and officers convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified.</p>	Self-declaration by the Bidder duly signed and stamped by the authorized signatory in format described in RFP.

Note:

- i. The Bidder must attach valid documents in support to their Pre-Qualification as mentioned above. Without proper supporting documents, the bid proposals are liable to be rejected. The Pre-qualification proposal should be submitted in hard copy with soft version stored in pen drive.
- ii. For all cited projects under bidder's experience criteria; the bidders have to submit LoI/work order with complete BoQ, contract agreement, go-live / completion certificate as a supporting document for each project. Sub-contracted projects by bidder will not be considered for evaluation.
- iii. The bidder needs to provide contact detail (email & phone number) of senior official from client.
- iv. AMC School Board (or the nominated party) reserves the right to check/validate the authenticity of the information provided in the Pre-qualification and Technical evaluation criteria.
- v. The Bid Evaluation Committee (BEC) may invite each bidder to make a presentation may require written clarifications from the bidders to clarify ambiguities and uncertainties arising out of the evaluation of the Bid documents.
- vi. In case of conditional bid or major deviations from the RFP requirements, AMC School Board may at its discretion reject the respective bid and will not be considered for further evaluation process.
- vii. The bidder should submit authorization certificate of Original Equipment Manufacturer (OEM) (or multiple OEMs) specific to the bid. The bidder should have a support agreement/arrangement for services including supply of spare parts etc. which includes the post-sales support activities for the entire project period.

2.2. Technical Qualification (TQ) Evaluation Parameters

For technical evaluation, all the pre-qualified bidder/s would be required to develop 1 (One) model school in accordance with the scope mentioned in this RFP.

- AMC school board will allocate school to each PQ qualified bidders.
- The eligible bidders will have to create one future classroom and one science lab with 3D chart and 3D paint as per RFP specification.
- Two days of time will be given to qualified bidders to place all required items in future classrooms and science lab. Therefore it is advisable to participating bidders to make prior necessary arrangement for placing the items in science lab and future classroom.
- During model school development no civil work is required to be taken for school transformation

Following are the details.

Details	Scope	Evaluation Criteria
Preparation of Model School	The pre-qualified bidder/s must build a model school in accordance with the exact scope as mentioned in this tender document. Ahmedabad school board would allocate one school to every pre-qualified bidder/s and the bidder/s have to complete the model classroom.	<ul style="list-style-type: none"> • Quality of workmanship • Quality of the materials • Complete adherence to the scope as mentioned in the RFP

Note:

- The detail assessment methodology and scoring criterion shall be shared with PQ qualified bidders and the Bid Evaluation Committee will assess the model school accordingly.
- Bidder must submit all the documentary evidence to understand their capabilities against all the criteria mentioned in Section 2.1 and 2.2.
- Bidder shall have to submit Manufacturer Authorization Form (MAF) in desired format for all the hardware and software products being supplied under this bid. Format for MAF is provided in section TQ 10
- Bidder shall have to provide Original Equipment Manufacturer (OEM) form in desired format, as suggested in section TQ 11
- Bidder shall have to submit compliance checklist on bidder's letterhead stating compliance against each of the product.
- Bidder shall have to submit unpriced BoQ along with the proposed Make and Model against each of the line item. Please note that this is not restricted to only major BoQ line items, as bidder shall have to submit Make and Model against each of the sub line item, as mentioned in Annexure B, section IV of this RFP.
- Bidder shall have to submit datasheet against each of the products being procured under this RFP.
- The qualified bidders who is unsuccessful during financial evaluation will be paid for the model school development as per the L1 rates discovered in this tendering process. The payment would be in proportion to the materials deployed by the vendor.

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- i. Electronic Devices (Laptop, Smart Panel, TV, Projector etc.) - The bidder shall submit the test report of product along with the technical proposal
- ii. The cost towards the testing of sample devices shall be borne by OEM/Bidder only.
- iii. The Bidders shall get the testing of the devices from the Testing Agency in accordance with the Indian Standards - 14896:2001 as amended from time to time and also with the Technical Specification as specified in the RFP.
- iv. It is the sole responsibility of the Bidders to submit the samples and get the testing completed as per the requirement of bid evaluation committee.
- v. The financial bid will be opened to only those bidders who passes the technical evaluation criterion.

Technical Evaluation of the bids would be carried out on the 5 broad parameters various sub-categories, as broadly mentioned below.

Sr. No.	Evaluation Criteria	Sub-Criteria	Max. Marks	Marking Guidelines
1	Experience of Bidder in Smart Schools	Bidder should have demonstrable experience in construction and Operation & Maintenance of smart school	30	<p>Experience of Bidder in Smart Schools</p> <ul style="list-style-type: none"> ▪ 0-9 Smart Schools – 0 Marks ▪ 10- Smart Schools – 15 Marks ▪ 20 Smart Schools – 20 Marks ▪ 30 Smart Schools – 25 Marks ▪ 40 Smart Schools and more – 30 Marks <p><i>(Bidder needs to submit workorder/certificate from client/official communication as evidence of work completed by the agency)</i></p>
2	Financial Capability	The bidder should have min avg. annual turnover of Rs.12 Cr. in last 3 FY ending 31 March 2023, i.e. (FY 2020-21 FY 2021-22 and FY 2022-23).	10	<ul style="list-style-type: none"> ▪ <= 12 cr of Turnover–02 Marks ▪ > 12 cr to 20 cr of Turnover–05 Marks ▪ >20 cr to 25 cr of Turnover–06 Marks ▪ >25 cr to 30 cr of turn over–08 Marks. ▪ >= 30 Cr of turnover - 10 Marks
3	Approach and Methodology (Presentation to bid evaluation committee)	Methodology and Action Plan detailing how the bidder shall deliver and manage the scope of project.	10	<ul style="list-style-type: none"> ▪ Understanding of Scope – 2 Marks ▪ Project Team CV – 2 Marks ▪ BoM Details with make and model and technical compliance – 2 Marks. ▪ Implementation & Risk Mitigation Plan – 2 marks ▪ O&M Plan with training & capacity building – 2 Marks ▪ Quality of presentation and response to the query of bid evaluation committee – 2 Marks

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Sr. No.	Evaluation Criteria	Sub-Criteria	Max. Marks	Marking Guidelines
4	Model School	Proof of Concept (PoC) of the solution being proposed by the bidder for this project.	50	Quality of Material, workmanship & Adherence to specification mentioned in RFP BoQ. <ul style="list-style-type: none"> ▪ Component 1 Future Classroom: 15 Marks ▪ Component 2 Science Math Lab : 15 Marks ▪ 3D Chart: 10 Marks ▪ 3D Paint: 10 Marks

Note:

- Minimum absolute technical score to qualify for commercial evaluation is 70 marks out of total 100 marks.
- The bidders must submit the above information along with the required supporting documents for technical bid evaluation. Technical bid document without supporting document will be liable for rejection.
- In case of conditional bid or major deviations from the RFP requirements, AMC may at its discretion reject the respective bid and will not be considered for further evaluation process.
- Bidder must submit all the documentary evidence to understand their capabilities against all the criteria mentioned in Section 2.1 and 2.2.
- Bidder shall have to submit Manufacturer Authorization Form (MAF) in desired format for all the hardware and software products being supplied under this bid. Format for MAF is provided in section TQ10
- Bidder shall have to provide Original Equipment Manufacturer (OEM) form in desired format, as suggested in section TQ 11
- Bidder shall have to submit compliance checklist on bidder's letterhead stating compliance against each of the product.
- Bidder shall have to submit unpriced BoQ along with the proposed Make and Model against each of the line item. Please note that this is not restricted to only major BoQ line items, as bidder shall have to submit Make and Model against each of the sub line item, as mentioned in Annexure B, section IV of this RFP.
- Bidder shall have to submit datasheet against each of the products being procured under this RFP.

SECTION 3: EVALUATION OF BID

3.1. Bid Submission

Financial Bid

- The financial bid must be submitted online on <https://tender.nprocure.com>. It should not be sent physically, if submitted physically the bid shall be rejected.

Technical Bid

- The Technical Bid must be submitted in hard copy to AMC School Board, strictly by Postal Speed Post or Registered Post or in person by the representative of the bidder. Documents received in any other manner or mode (like email) will not be considered.
 - Envelope 1: RFP Document fee (original DD) & Bid Security/Earnest Money Deposit (EMD) (original DD/BG)
 - Envelope 2: Eligibility documents for Pre-Qualification criterion with all annexures described in RFP.
 - Envelope 3: Support documents for Technical Qualification evaluation with all annexures described in RFP.
 - Envelope 4: Soft copy of Technical Bid in a Pen Drive
- All four envelopes should be packaged all together in big envelope with tender number.
- Each page of the technical bid above should bear the initials of the applicant along with the seal of the Applicant in token of confirmation of having understood the contents. Also, each page of technical proposal should be numbered with a proper index.
- Bidder must submit soft copy of all the documentary evidence along with the hard copy in Pen Drive. This pen drive must be placed in both Envelopes of Pre-Qualification and Technical Qualification. No sensitive information should be available in Pen Drive. Only Soft copy of the bid should be there in Pen Drive.

3.2. Evaluation Process

3.2.1 Stage 1: Pre-Qualification Evaluation

- i. AMC School Board shall validate the - “RFP Document fee & Bid Security/Earnest Money Deposit (EMD)”.
- ii. AMC School Board shall open the bid and check the bidder’s eligibility as per the “Pre-Qualification Criteria”. Each of the Pre-Qualification condition mentioned in above Section is MANDATORY. In case, the Bidder does not meet any one of the conditions, the bidder shall be disqualified.
- iii. Technical and Financial bids for those bidders who don’t pre-qualify will not be opened.

3.2.2 Stage 2: Technical Evaluation

- i. “Technical bid” will be evaluated only for the bidders who succeed in Stage 1 (One).
- ii. Bidders who qualify Pre-Qualification Stage will be asked to develop one model school in precise accordance with the scope mentioned in this RFP.

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- iii. Representative from each of all the pre-qualified bidders shall have to take the details of the schools, where in they have to create the model school. An intimation for the same would be sent to all the pre-qualified bidders by AMC school board.
- iv. AMC School Board and its appointed committee will review the developed model school, which would be developed by the pre-qualified bidders and would qualify the work done by pre-qualified bidders as satisfactory or unsatisfactory. All the bidder whose work of developing of model school has been found satisfactory by AMC School Board shall be the short-listed bidders whose financial bids would be opened. All the bidders whose work has been found to be unsatisfactory by AMC school board shall be disqualified at authority's discretion and financial bid for these disqualified bidders will not be opened.
- v. Amount incurred in building a model smart school shall be reimbursed by AMC school board at the least rate quoted amongst all the bidders. (Reimbursement at L1 rates) and measurement of actual work. However, the bid evaluation committee will decide on reimbursement of amount based on quality of work and performance during technical evaluation.
- vi. Each Technical Bid will be assigned a technical score out of a maximum of 100 marks. Only the SIs who get an Overall Technical score of 70% or more in the Technical Evaluation Framework as given in above Section will qualify for financial evaluation stage. Failing to secure minimum marks shall lead to technical rejection of the Bid.
- vii. For the model school development, the bidders must provide all the materials, deliveries, solutions, civil/architectural work in precise accordance with the scope and specifications of the RFP, failing to which the bidder/s shall be liable for disqualifications without any warning.
- viii. The Bidders are required to submit a sample of product asked in RFP. The performance of the sample shall be evaluated by the bid evaluation committee to see if it conforms to the project requirement.
- ix. Electronic Devices (Laptop, Smart Panel, TV, Projector etc.) - The bidder shall submit the test report of product along with the technical proposal
- x. The SIs' technical solutions proposed in the bid document shall be evaluated as per the requirements specified in the RFP and technical evaluation framework as mentioned in above Section.

3.2.3 Stage 3: Financial Evaluation

- i. All the technically qualified bidders will be notified to participate in Financial Bid opening process.
- ii. All the notified bidders shall have to bring bifurcation of cost against all 20-line items (*Reference: Annexure B, Section III*) further divided in multiple line items with varying quantity against each of the sub line item (*Reference: Annexure B, Section IV*) in a sealed envelope. This cover shall be opened only for the winning bidder. Total Cost Quoted on online bid shall be verified against the bifurcation submitted by the winning bidder. Later, same justification shall be considered as part of the bid for reference in AMC school board's record book. Please note that, if any discrepancy is observed then the bid would be rejected by concerned authority. Further, decision on the bid shall be at the discretion of AMC School Board only.
- iii. The Financial bids for the technically qualified bidders shall be opened on the notified date and time. They will be reviewed to determine whether the financial bids are substantially responsive or not. Bids that are not substantially responsive are liable to be disqualified at Authority's discretion.
- iv. Financial Bids that are not as per the format provided in the RFP shall be liable for rejection.
- v. The bidder with **least price (L1)** shall be declared as a winning bidder and shall be awarded with the contract.
- vi. If L1 bidder fails to submit the Performance Bank Guarantee (PBG) and align the agreement as per the timelines defined in this RFP, L2 bidder will be invited for negotiations. In this case, L2 bidder will be asked to match the prices of L1 bidder. Final decision of awarding the project to L2 bidder will depend upon the mutually agreed price between both the parties (bidder and Authority).

3.2.4 Rights to Accept/Reject any or all Proposals

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AMC School Board reserves the right to accept or reject any proposal, and to annul the bidding process and reject all Bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected bidder or bidders of the grounds for AMC School Board's action.

3.2.5 Notifications of Award and Signing of Contract

- i. Prior to the expiration of the period of proposal validity, the bidders will be notified in writing through FAX or email that its proposal has been accepted.
- ii. AMC School Board shall facilitate signing of the contract within the period of 30 days of the notification of award. However, it is to be noted that the date of commencement of the project and all contractual obligations shall commence from the date of issuance of Purchase Order/Letter of Acceptance (LOA)/Letter of Intent (LOI), whichever is earlier. All reference timelines as regards the execution of the project and the payments to the Implementation Bidder shall be considered as beginning from the date of issuance of the Purchase Order/Letter of Acceptance, whichever is earlier.
- iii. The notification of award (LOI/LOA/Purchase Order) will constitute the formation of the Contract. Upon the Bidder's executing the contract with AMC School Board, it will promptly notify each unsuccessful bidder and return their EMDs.
- iv. At the time AMC School Board notifies the successful Bidder that its bid has been accepted, AMC School Board will send the Bidders the Pro forma for Contract, incorporating all clauses/agreements between the parties. Within 15 days of receipt of the Contract, the successful Bidder shall sign and date the Contract and return it to AMC School Board.

Note

- i. Any conditional bid would be rejected.
- ii. Errors & Rectification: Arithmetical errors will be rectified on the following basis:
 - a. "If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected.
 - b. If there is a discrepancy between words and figures, the amount in words will prevail."
- iii. If the Bidder does not accept the error correction, its Bid will be rejected and EMD may be forfeited.
- iv. Bidder must attach valid documents in support to their Pre-Qualification and Financial, Technical capabilities/strength, as mentioned above. Without proper supporting documents, the Bid proposals are liable to be rejected.
- v. The bidder should submit authorization certificate of Original Equipment Manufacturer (OEM) (or multiple OEMs) specific to the bid. The bidder should have a support agreement/arrangement for services including supply of spare parts etc. which includes the post-sales support activities for the entire project period.
- vi. All the proposed equipment should not be declared End-of-Support by the OEMs for next 6 years from the date of bid submission.
- vii. The Manufacturer's Authorization Form (MAF) is required for any hardware or software component being supplied as part of this project.
- viii. Kindly note that the indicative/estimated quantity provided in the RFP would be used for evaluation purposes; however, the payment would be done on actual usage basis.

SECTION: 4 SCOPE OF WORK

Ahmedabad Municipal Corporation (AMC) School Board has successfully implemented the Smart Model Primary School in Ahmedabad City and based on the achievement of extraordinary output in model primary school, AMC School Board would like to implement similar project in twenty-seven (27) Smart school. The initiative of AMC school board is to provide world class infrastructure in AMC schools and provide best-in-segment experience to the students at AMC schools.

In the event of potential additional work or the inclusion of projects up to 10 smart schools in future, the selected bidder shall commit to completing the specified project at the same cost as quoted in this RFP. In the event of future additional approvals for smart school implementation, compliance with pertinent government clauses shall authorize the issuance of 30% of the corresponding work project cost.

Bidder is required to execute multiple activities under this project and major activities are briefly introduced in this section of the RFP. Exhaustive list of items to be procured are mentioned in Annexure D of this RFP, wherein technical and / or functional specification is mentioned against each of the line item to be procured under this RFP. Bidder is requested to assess the scope in totality to provide the best possible solution to AMC school board.

SMART SCHOOL COMPONENTS

The selected bidder is required to develop smart schools in following manner:

- **25 Smart Schools** – Future Classroom with smart benches, Science & Maths Lab, 3D Education Chart, 3D Paint and minor civil work as per requirement and specification mentioned in this RFP.
- **2 Smart Schools** – These schools are required to develop from MP Grant Fund and as per their approval which requires all item defined in commercial bid and as per specification mentioned in this RFP.

4.1. Future Classrooms & STEM and Robotic Labs

The requirement for future classroom is of a compact projector integrated with computer. Bidder may offer similar solution to meet the functional & technical requirement of future classroom mentioned in RFP.

The future classroom shall augment the teaching-learning process through digital devices like laptop, integrated projector with computer (or projector with computer/laptop), classroom management software, digital content, console management software with support infrastructure like storage cabinet, benches etc. as mentioned in RFP.

Through Learning initiatives, the aspiration is provision of digital learning experience and develop a comprehensive solution for modernizing the learning experience for students at AMC schools. The use of technology in learning processes at schools shall greatly transform learning outcomes. The deliverable infrastructure to establish future classrooms are mentioned in Annexure D (Annexure 12) with their specifications.

STEM Lab should be a workspace where young minds can give shape to their ideas through hands on do-it-yourself mode; and learn innovation skills. Young children should get a chance to work with tools and equipment to understand the concepts of STEM (Science, Technology, Engineering and Math). The specifications of all the components of STEM lab are mentioned in Annexure D (Annexure 17 and 18)

4.2. Mathematics and Science Labs with working models and Teachers' training

The 3D models of the important concepts and topics of the Mathematics and Science subjects create the enthusiasm among the students to learn these subjects with better understanding and increased interest. The 3D models for Modern Periodic Table, Human Eye, Skull & Brain, Ear, Barometer, Digital Clock, Solar Vapor Tower, Human Battery, Magnetic Spring, Magnetic effect of electric current with compass, Solar Water Heater, Conservation of Momentum – Marbles Slide, Smoke Based Optical Bench for Concave & Convex Lens etc. 500+ such 3D models facilitate the better learning of the concepts among the students. The specifications of these models are as mentioned in Annexure D (Annexure 3).

4.3. Infrastructure for Classrooms and Labs

The physical infrastructure for the classrooms and laboratories of the AMC Schools will transform the aesthetics of the schools and provide comfortable learning environment to the students of AMC schools. The installation of False Ceiling in the labs and classrooms, comfortable benches for students, furniture of the labs, 3D paint, Indoor mats for labs, white boards, LED TVs, Storage cupboards etc. changes the aesthetics of the labs and classrooms.

4.4. Civil Work

The demolition and civil rework in the school buildings is intended wherever it is necessary. Dismantling of tiled or stone flooring, dismantling of brick work and stone masonry, new brick work, concreting, termite control treatment, repairing of doors, windows & ventilators, painting, electrical wiring work etc. work is required to be undertaken for the school infrastructure wherever necessary. The details of the work to be completed is mentioned in the Annexure D (Annexure 20)

The bidder needs to fill the unit cost of activities under civil work (please fill the unit cost of civil items in commercial bid format in nProcure. Bidders need to fill unit cost for all 30 items under civil cost.

The payment for civil work Like this (3D Paint, 3D Wallpaper, False Ceiling etc..) shall be done on actual basis (door & window deduction, gaps, vent etc.) after completion and approval of work in selected schools.

4.5. Scope for Project Inception & Installation

4.6.1. Inception Phase

The Bidder needs to plan all the important tasks to ensure that all pre-requisite is met, and the Bidder team is able to deliver the project as per the timelines, requirements and service levels. The first step to initiate the project is to prepare the project plan and mobilize the implementation team. The Bidder needs to submit the CVs of implementation team for Ahmedabad School Board's approval before mobilization. During the course of project, the Bidder would be required to prepare project plan, project initiation document, progress reports, risk register, issue register and other project management related documents. The indicative list of project management documents would include the following:

- i. Define an organized set of activities for the project and identify the interdependence between them.
- ii. Resource planning and loading for each phase/activity. It must also indicate where each resource would be based during that phase, i.e., onsite at the AMC School/AMC School Board/AMC or off site at implementation agency premises.
- iii. Establish and measure resource assignments and responsibilities.
- iv. Highlight the milestones and associated risks.
- v. Communicate the project plan to stakeholders with meaningful reports.
- vi. Measure project deadlines and performance objectives.

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- vii. Project Progress Reporting. During the implementation of the project, the implementation agency should present weekly reports. Report shall be presented in the steering committee meeting to AMC School Board. The report should contain at the minimum the under mentioned:
 - a. Results accomplished during the period (weekly)
 - b. Cumulative deviations from the schedule date as specified in the finalized Project Plan
 - c. Corrective actions to be taken to return to planned schedule of progress.
 - d. Plan for the next week
 - e. Proposed revision to planned schedule provided such revision is necessitated by reasons beyond the control of implementation agency.
 - f. Support needed.
 - g. Highlights/lowlights
 - h. Issues/Concerns
 - i. Risks/Show stoppers along with mitigation
- viii. Identify the activities that require the participation of client personnel and communicate their time requirements and schedule early enough to ensure their full participation at the required time.
- ix. All the proposed products should be delivered only after receiving an approval against sample product from AMC school board. If in case the products are procured without an approval against sample of the same product, no claim shall be entertained on reimbursement towards the expenditure incurred by the implementation agency.
- x. **Project Schedule:** A detailed week-wise timeline indicating various activities to be performed along with completion dates for the same shall be provided by the Lead Bidder.
- xi. **Project Initiation Report:** The project initiation report shall be prepared by the Bidder after the initiation of the project. The report shall contain manpower deployment plan, project plan, risk mitigation plan, escalation matrix, etc.
- xii. **Progress Reports:** Detailed weekly, fortnightly, monthly Progress Report along with issues/escalations/risks. The format shall be finalized by the AMC School Board prior to start of the project.
- xiii. **Risk Register:** Bidder shall be required to maintain a risk register which shall enlist all possible risks which shall impact the solution along with their occurrence and likelihood. The Bidder shall also propose the mechanism to mitigate the identified risks.
- xiv. **Issue Register:** Apart from the risk register the Bidder shall also maintain the issue register which shall list down the issue that have occurred in the project and the decision/remedial measures taken in reference to the issue.
- xv. **Stakeholder Register:** To keep the information about the stakeholders, the Bidder will be required to prepare a stakeholder register containing details about each stakeholder or group of stakeholders. This will be an input into the requirement gathering and communications plan.
- xvi. **Deployment of implementation team:** The Bidder will be required to provide CVs of the implementation team and various resources which it intends to deploy on the project and ensure their mobilization to the project site.
- xvii. Other reports which shall be required to be delivered as part of implementation of the solution

Compliance and Reporting Procedures

The Bidder shall submit the MIS and Monitoring reports on a regular basis in a mutually decided format agreeable to AMC SCHOOL BOARD and the Bidder. Vendor must supply reports to AMC SCHOOL BOARD on a monthly, quarterly, and annual basis documenting all activity and noted trends for the period, including but not limited to:

- a. Volume of Calls, and tickets
- b. Types of Incidents and requests
- c. Time to resolve
- d. Systems involved
- e. Areas involved, etc

Manpower Deployment for Implementation Phase

- i. The bidder needs to deploy a competent team to execute scope of work defined in RFP. The bidder needs to depute adequate number of team members to execute the project in a timely manner, failure to execute the project within the defined time period shall attract a liquidated damage as defined in this RFP.
- ii. The implementation team shall consist of a Project Manager, Civil Project Manager and at least two (2) Field executives. Bidder needs to share CV of these resources along with their technical bid. It should be in the format mentioned in TQ9
- iii. Project Manager: a permanent professional personal to supervise the entire project on regular basis during implementation phase & O&M Phase and co-ordinate with the authority nominated by AMC School Board. Project Manager will ensure that everything is getting implemented as per the agreed plan and SLAs.
- iv. Project Manager should be available for meetings in the AMC School Board / School premises based on the agreed plan or as per the requirement.
- v. The implementation project team shall be available for discussion, meeting, and working jointly with AMC school board team.
- vi. The bidder needs to provide their team details along with the tentative timeline to complete various activities allied with each of the school within first 1 week only. Bidder is also requested to update the aforementioned timeline as and when there is any deviation is observed by the bidder.
- vii. Bidder is also requested to raise flag against any of the concerns that they may have to complete the execution within the stipulated period of time.
- viii. The bidder will ensure that in the event of change of project resources during the course of the project, prior intimation to the AMC School Board and suitable knowledge transfer takes place. Also, the replacement of the resource should be of higher or similar skill set, experience level and shall need to be approved by AMC School Board
- ix. If required, AMC School Board may request to deploy all team member at AMC School Board /AMC School Board location for speedy implementation of project.
- x. AMC School Board may arrange interview with proposed project team to understand their suitability for the role; in case of non-fitment the bidder will have to replace the resource with higher or similar skill set, experience level and shall need to be approved by AMC School Board.
- xi. All members of project team need to be available with bidder from start of assignment (i.e., issue of LOI/LOA/Work Order).

Minimum qualification of resources to be deployed during the implementation phase has been mentioned in below table:

Sr No	Name of Position	No. of Resources	Qualification	Years of Exp.	Area of Experience
1	Project Manager	1	B.E. / B.Tech. / M.C.A. in IT or Computer Science / Computer engineering with MBA	10	Relevant experience in planning, design, execution, monitoring, controlling and closure of Smart School / large scale IT / ICT projects.
2	Installation & Field Team	5	Bachelor/master's degree in Math/Statistics/Computer science/ IT /Computer Engineering/ Education/Development Studies	2	Relevant experience in deployment of smart components in ICT projects.

Requirement Gathering

The bidder shall carry out a detailed systems study of AMC schools and project stakeholders to review and make additions on the Functional Requirements Specifications and formulate site survey report to the concerned AMC school board.

- a. The bidder shall study and revalidate the requirements with AMC School Board/AMC and submit as an exhaustive document.
- b. Implementation agency must get the sign off from user groups formed by AMC School Board/AMC.
- c. For all the discussion with AMC School Board team, implementation agency shall be required to be present at AMC / AMC School Board office with the requisite team members.
- d. Prior to starting, the bidder shall carry out survey of all schools and submit exhaustive document containing the requirements against each of the AMC school.

Bidder will conduct workshops with relevant users of the systems wherever necessary, to obtain more details on the requirements of the project and have to get a sign-off on the requirements from the appropriate authorities.

Supply & Delivery

The bidder shall provide delivery challan and all supporting document for delivery of all the hardware & software items. It is responsibility of bidder for supplying unlimited licenses for the proposed solution. All licenses supplied by the Bidder for the purpose of this project shall be perpetual in nature and shall be in the name of AMC School Board and will include maintenance and insurance for the entire duration of the contract. Bidder will maintain an inventory of all software components procured, license renewals etc. This list will be made available to the AMC School Board on request. All licenses will be invoked only after the successful completion of UAT and after the signing of End user license agreement (EULA).

- The manufacturer for hardware shall have manufacturing and testing facility be accredited by national/state government recognized agency. The bidder will have to submit the accreditation, safety and quality certificate with delivery of hardware.
- The manufacturer calibration lab accreditation certificate should be submitted with technical proposal for review and approval prior to inspection along with QAP.
- The Purchaser (AMC School Board) or its representative shall have the right to inspect and / or to test the Goods to confirm their conformity to the Contract. The special conditions of contract and / or the Technical Specification shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Supplier in writing of the identifying of any representatives retained for these purposes.
- The inspections and tests may be conducted on the premises of the Supplier or its sub bidder(s), at point of delivery and / or at the Good's final destination. Should any inspected or tested Goods fail to conform to the Specifications, the Purchaser may reject them and the Supplier shall either replace the rejected Goods or make all alterations necessary to meet specification requirements free of cost to the Purchaser. The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Good's arrival in India shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods' shipment from the country of origin.
- 10% of Total delivered quantity from each line item of price bid shall be reviewed and inspected at warehouse of bidder at project location by Third Party Inspectors (TPI)/ PMC / AMC School Board team.
- For every unit supplied by the supplier, the conformance to the Specifications mentioned in the Tender shall be established by the supplier.
- All the expenses related to inspection at manufacturing and testing facility of supplier viz. lodging & boarding, transportation, all facilities including third party inspection (TPI) fees, testing charges and other related commercial expanses as and where required shall be borne by the bidder.
- The supplier shall facilitate in-process and / or Pre-delivery inspection by the Representatives

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of the Purchaser, as and when, the same is required by the Purchaser.

Installation & Commissioning

- i. The bidder shall carefully consider the scope of work and provide a solution that best meets the project's requirements.
- ii. The bidder shall carefully consider the solutions it proposes and explicitly mention the same in the technical proposal. The implementation of the application software shall follow the procedure mentioned below:
- iii. Software Products (Configuration and Customization): In case implementation agency proposes software products the following need to be adhered:
 - a. Bidder shall be responsible for supplying the application and licenses of related software products and installing the same so as to meet project requirements.
 - b. Implementation agency shall have provision for procurement of User licenses in a staggered manner as per the actual requirement of the project.
 - c. Bidder shall perform periodic audits to measure license compliance against the number of valid End User software licenses consistent with the terms and conditions of license agreements, volume purchase agreements, and other mutually agreed upon licensed software terms and conditions.
 - d. Bidder shall report any exceptions to license terms and conditions at the right time to AMC School Board. However, the responsibility of license compliance solely lies with the implementation agency. Any financial penalty imposed on AMC School Board during the contract period due to license non-compliance shall be borne by implementation agency.
- iv. Bidder will be responsible for installation & commissioning of all software & hardware devices as per the project timeline defined in this RFP. Also, if there is requirement to add specific items (Hardware, software or networking components) which are necessary to implement their solution shall be approved by the client.
- v. Bidder is required to note that all the hardware, tools, software installations and its maintenance will be responsibility of the bidder to make their solution live at all the mentioned sites.
- vi. Bidder will be responsible for all the supply, installation, commissioning, cabling, setup and configuration of the units in terms of hardware and software utilities to make the system end-to-end go live for central learning lab, smart classrooms and labs.
- vii. It is responsibility of bidder to get requisite approval from officials of AMC School Board and from govt. and private entities for installation and commissioning work.
- viii. The purchaser may give permission to bidder for installation & commission in parts of total awarded work. It will be decided by AMC School Board based on learning observed during implementation phase.
- ix. If there is any delay in meeting the timeline for installation & commissioning due to non-availability of approval or reasons not attributed to bidder performance; the bidder needs to inform AMC School Board and AMC school board officials in writing in advance on minimum 15 days.
- x. Bidder will be responsible for the maintenance and support for all the equipment and software provided at the mentioned sites for the duration of contract period.
- xi. For any change/ movement requirement, the bidder will be responsible for re-installation of equipment, connectivity, cabling, and configuration of the solution considering additional installation cost as mentioned in BOM.
- xii. For any additional request the purchaser will place the request to the bidder. The per unit rates specified by the bidder as a part of this proposal submission will remain valid for the complete contract period and no variation (except for the taxes / duties) will be considered by the purchaser.
- xiii. The contractual terms of service shall be monitored on a monthly basis as per the individual service requirements. However, if the performance of the system/ services is degraded significantly at any given point of time during the contract and if the immediate measures are not implemented and issues are not rectified to the complete satisfaction of the AUTHORITY or an agency designated by it, then the AUTHORITY shall have the right to take appropriate punitive actions including termination

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of the contract.

Reporting, Database Administration and Trouble Shooting

- i. The bidder will need to provide daily, weekly, monthly and periodic reports to AMC School Board and AMC School Board as defined by authority.
- ii. Successful Bidder shall maintain data regarding entitlement for software & hardware upgrades, enhancements, refreshes, replacements and maintenance.
- iii. Undertake end-to-end management of database on an on-going basis to facilitate smooth functioning and optimum utilization including regular database backup and periodical testing of backup data, conducting configuration review to tune database, maintaining the necessary documentation and managing schemes to database schema, disk space, user roles, and storage.
- iv. The bidder shall allow the AMC School Board or its nominated agency access to information reasonably required to define the then current mode of operation associated with the provision of the services to enable the AMC School Board to assess the existing services being delivered;
- v. Promptly on reasonable request by the AMC School Board, the implementation agency shall provide access to and copies of all information held or controlled by them which they have prepared or maintained in accordance with the agreement relating to any material aspect of the services (whether provided by the implementation agency or sub-contractors appointed by the implementation agency).
- vi. The AMC School Board shall be entitled to copy of all such information. Such information shall include details pertaining to the services rendered and other performance data. The implementation agency shall permit the AMC School Board or its nominated agencies to have reasonable access to its employees and facilities, to understand the methods of delivery of the services employed by the implementation agency and to assist appropriate knowledge transfer

Testing & Go-Live of the solution

The AMC School Board shall appoint an agency/officials/team who shall be responsible for conducting the user acceptance test & performance and security audit of the solution. The agency/officials/team appointed by the AMC School Board shall conduct audit and make recommendations on system before Go-Live. The bidder shall incorporate and make changes in solution.

The testing and audit shall be performed on the below mentioned aspects.

- a. Functional Testing: Ensuring that the application functionality as described by the AMC School Board works adequately. The functional testing of application will necessarily be core responsibility of the bidder.
- b. User Acceptance Test on all software modules & digital content.
- c. Acceptances Test of all hardware & support infrastructure
- d. Performance Testing - Ensuring that the application meets expressed performance requirements by using performance test tools and performance monitoring tools.
- e. Security Testing - Testing for exploitable application security weaknesses that undermine the application security or the security of the infrastructure.
- f. Penetration Testing
- g. Vulnerability Testing
- h. Testing and Measurement of all the items installed under the project.

The illustrative deliverables for this activity are mentioned below.

- i. First Round Testing & Audit Report
- ii. Rectified solution and submission of next round of testing & audit
- iii. Next Round Testing & Audit Report
- iv. If required, rectified solution and submission of next round of testing & audit
- v. Compliance Confirmation by purchaser

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All the mentioned activities under scope of work shall get completed before the commencement of go-live.

- a. Bidder shall prepare and agree with AMC School Board, the detailed plan for Go-Live (in-line with AMC School Board's implementation plan).
- b. Bidder shall define and agree with AMC School Board, the criteria for Go-Live.
- c. Bidder shall ensure that all the data migration is done from existing systems if required.
- d. Bidder shall submit signed-off UAT report (issue closure report) ensuring all issues raised during UAT are being resolved prior to Go-Live.
- e. Bidder shall ensure that Go –Live criteria as mentioned in User acceptance testing of Project is met and implementation agency needs to take approval from AMC School Board team on the same.
- f. Go-live of the application shall be done as per the finalized and agreed upon Go-Live plan.

The key activities that need to be performed before go-live of the solution are as follows:

- i. Business readiness check before handing over to user
- ii. Training of all modules to respective school officials (As and when requested during the tenure of the project)
- iii. Exit Management and Knowledge Transfer Plan
- iv. Mobilization of manpower for hand holding support
- v. Data Migration both old and new to solution
- vi. Approval from AMC School Board

The users will operate the system for 4 weeks and will report any issues faced, the Bidder shall be responsible to fix the aforementioned issues within stipulated time. The AMC School Board will authorize the go-live of the solution.

The Go-live shall be issued, only after completion of all the allied activities at each of the schools. Further, AMC school board may provide an interim Go-live at their own discretion. However, please note that if in case, either the school is not finalized or the readiness is not there at the school, AMC school board may provide Go-live for the remaining school, where all the activities are completed.

Preparation of Standard Operating Procedures

Bidder shall prepare Standard Operating Procedures and Practices for operating and maintaining the solution, risk mitigation strategies, periodic status reports, training guidelines and modules, knowledge management protocol. Bidder has to submit the SOPs and risk mitigation strategies to the AMC School Board for approval. Bidder shall also have to submit Do's and Don'ts for the entire solution being installed.

Training & Capacity Building

- i. The bidder is required to train a set of Master Trainers as part of "Training of Master Trainers (ToMT) program to effectively use the hardware and software of the smart school during implementation phase.
- ii. The participants will include principals, administrative staff and nominated officials by AMC school board for implementation phase training.
- iii. The Bidder shall prepare detailed training plan for all the users of the system.
- iv. The bidder needs to conduct training either at schools or venue decided by AMC school board.
- v. The training should ensure proper hands-on training is imparted to the designated end-so as to make them well conversant with the functionalities, features and processes built in the Software.
- vi. Along with training manual/user guide needs to be provided by the bidder.
- vii. Bidder shall have to provide such training as and when requested by the AMC school board even during the entire contractual duration.
- viii. The training needs to be completed before Go-Live.

4.6. Role of Project Stakeholders

4.6.1 Successful Bidder

- i. Delivery of project scope described in this RFP for both implementation phase and O&M phase.
- ii. Ensuring the achievement of project objective & envisaged outcome
- iii. Deployment of competent project team as per the requirement.
- iv. Delivery of quality product and services.
- v. Methodical and Result Oriented Project Management Approach & Technique.
- vi. Adherence to project timeline.
- vii. Accurate and timely reporting and information management.
- viii. Co-ordination and teamwork with project stakeholders to deliver the objective of project.
- ix. Adherence to code of conduct, culture and discipline of AMC School Board, AMC School Board, AMC and other organization/individual working on this project.
- x. Project office and warehouse in Ahmedabad for daily functioning and storage of equipments, parts and material under project.
- xi. Signing of contract with AMC School Board & submission of PBG.
- xii. Support in carrying out inspection, audit as well as measurement at all the schools envisaged under this school.

4.6.2 AMC School Board

- i. Support to successful bidder in delivery of project scope and meeting the objective & envisaged outcome.
- ii. Review, approval, and suggestions on deliverables.
- iii. Locations, list of schools for delivery of project scope.
- iv. School building, Power and utility connection at project site.
- v. On demand of bidder, access to relevant data and approval for visit, meetings and work in schools.
- vi. List of teachers for training.
- vii. Permission to work in AMC Schools and office premises.
- viii. Approval on work completed & billing request raised by bidder.
- ix. Approval on attendance of project team deployed by bidder.
- x. Participation and approval on testing, UAT and Go-Live of project.
- xi. Review of project progress and report to AMC School Board incase of non-performance or deviation from RFP.

4.7. Scope for Operation & Maintenance (O&M) Period

As part of its scope of work the successful bidder shall provide 3 years of Post Implementation Operational & Maintenance (O&M) Support. Bidder shall also have to have 3 years of comprehensive on-site warranty from respective OEM to enable AMC school board to have seamless services during the O&M phase of the project.

There is no separate cost to be quoted for Operation and Maintenance phase by the bidder as part of the commercial bid against this bidding document. Bidders are requested to factor such cost in their Capital Expenditure (CAPEX) price bid only. Further, while making the final payment pertaining to the implementation phase of this project, 10% of CAPEX per smart school shall be withheld by AMC school board. Such hold amount shall be released to the winning bidder only after the contractual agreement period is over (i.e., 3 years from the date of Go-Live). The selected vendor shall be required to furnish a bank guarantee equivalent to 10% of the total contract value during the Operations and Maintenance (O&M) Phase. Amount pertaining to the violation of SLA terms, as stated in this document shall have to be paid by the bidder within 45 days of such intimation. If such amount is not paid by the implementation agency, same should be invoked from their Performance Bank Guarantee.

If the performance of the bidder is not satisfactory during the O&M phase of the project, Performance Bank Guarantee (PBG) shall be invoked by the AMC school board and the amount kept on hold shall not be released to the implementation agency.

During the O&M Phase of the project, successful bidder shall be required to carry out various activities such as: Routine Maintenance of various Science and Mathematics working model, 3D educational chart, Smart Panel, Chromebook, STEM and Robotics lab infrastructure and all other modules procured under this RFP. All the procured software's support should also be provided during this O&M period including any requirement pertaining to licenses as well. No additional payment shall be made by AMC school board during the O&M phase of the project. License should be perpetual in nature as well.

Bidder should meet the SLA criteria defined in this RFP and ensure that routine preventive maintenance is also taken care of over and above the restoration of various models turns into non-working mode.

Bidder should provide all the products with 3 years of On-site warranty support to AMC school board. Bidder may be asked to produce relevant documents in this regard by the AMC school board during the declaration of Go-Live / before the commencement of O&M phase / at relevant stage of the project.

During the culmination of the Operations and Maintenance (O&M) phase, the vendor is required to furnish calibration certificates for all operational models within the Science and Mathematics Lab, Robotics Lab, and Future Class. Given that the O&M period spans three years, the vendor is obligated to submit the certificates no later than six months prior to the conclusion of the O&M period. The consumable items needed for all the labs should be provided by the vendor during O&M phase.

4.8.1 Manpower Deployment for O&M Phase

- i. The bidder should deploy **at least two resources per school at onsite** during the O&M phase of the project. Project Manager shall coordinate with AMC School Board for any concerns related to this project and for updates on day-to-day activities to the department.
- ii. The bidder needs to provide **onsite** Project Manager and minimum two Field Resources during the O&M phase of the project. Bidder needs to provide their CV to AMC school board in requisite format at the time / before of award of Go-live to the winning bidder.
- iii. The bidder needs to deploy adequate number of team members to cater to the SLAs specified in this RFP for O&M phase.
- iv. The bidder needs to deploy a competent team for O&M phase to execute scope of work defined in RFP. All project team member should be stationed at project location and a proper monthly attendance report should be submitted to AMC School Board with approval from AMC school board.
- v. Resources should remain available from 10 AM to 8 PM on all days except public holidays. Bidder may opt to propose rotation based on the availability / amount of work required from the resource.

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- vi. The resource persons should be bonafide member/employee of the concerned company for 3 months. The bidder will be responsible for all the employment terms of these trainers including the service laws i.e. income tax, provident fund, gratuity, pension, LTC, Medical Expenses etc., and will also comply applicable Minimum Wages Act. AMC School Board shall not be responsible of any act of the trainers and also not be liable for any damages/penalty /payment in any form either legal or otherwise.
- vii. It is **mandatory to deploy minimum 5 resources** during the O&M phase at AMC school board location.
- viii. The bidder will ensure that in the event of change of project resources during the course of the project, prior intimation to the AMC School Board and suitable knowledge transfer takes place. Also, the replacement of the resource should be of higher or similar skill set, experience level and shall need to be approved by AMC School Board.
- ix. AMC School Board may arrange interview with proposed project team to understand their suitability for the role; in case of non-fitment the bidder will have to replace the resource with higher or similar skill set, experience level and shall need to be approved by AMC School Board.
- x. In case of non-availability of any team member for more than two (2) working days without informing AMC School Board, the bidder will need to replace the resource with same or higher qualification and experience.
- xi. All members of project team need to be available from the start of Go-Live date. In case of partial Go-Live the requirement of project team shall be change accordingly.

Minimum qualification of resources to be deployed during the implementation phase has been mentioned in below table:

Sr No	Name of Position	No. of Resources	Qualification	Years of Exp.	Area of Experience
1	Project Manager	1	B.E. / B.Tech. / M.C.A. in IT or Computer Science / Computer engineering with MBA	10	Relevant experience in planning, design, execution, monitoring, controlling and closure of Smart School / large scale IT / ICT projects.
2	School Co-ordinator	2	Bachelor/master's degree in Math/Statistics/Computer science/ IT /Computer Engineering/ Education/Development Studies	2	Relevant experience in deployment of smart components in ICT projects.

4.8.2 Training & Capacity Building during O&M Phase

Training of all stakeholders for smart school project is essential for ensuring that the solution developed is actually put to use. The bidder needs to ensure proper hands-on training is imparted to the designated end-so as to make them well conversant with the functionalities, features and processes built in the Software. Along with training manual/user guide needs to be provided by the bidder.

The Bidder is responsible for providing training to all the teacher, principals & administrative staff and provides required support as part of Capacity building as and when requested from the authority

4.8.3 Deliverables

The operational aspects of project need to be handled by the implementation agency including maintaining weekly statuses, minutes of the meetings, weekly/monthly/project plans, etc. Relevant stake holders will meet formally on a weekly basis covering, at a minimum, the following agenda items:

- Project Progress
- Delays, if any – Reasons thereof and ways to make-up lost time, Issues and concerns
- Performance and SLA compliance reports.
- Quarterly SLA report
- Current scenario of each site with actual image of site at an interval of 3 months for each of the smart school
- Unresolved and escalated issues.
- Project risks and their proposed mitigation plan
- Discussion on submitted deliverable.
- Timelines and anticipated delay in deliverable if any
- Bidder needs carry out colour work (On need basis) as per the instruction of AMC authority and payment shall be made as per tender rate. However, the colour wok should last for minimum 1.5 years, no payment will be made if the colour is required due to poor quality work within 1.5 years.
- Bidder shall have to ensure necessary / requisite touch-ups are carried out where the color work has affected due to one or the other reason at each of the smart school.
- Any other issues that either party wishes to add to the agenda

During the customization and implementation phase, there may be a need for more frequent meetings and the agenda would also include:

- Module development status
- Testing results
- IT infrastructure procurement and deployment status
- Status of setting up/procuring of the DC hosting
- Any other issues that either party wishes to add to the agenda

4.8.4 Project Monitoring and Reporting

- a. The implementation agency shall circulate written progress reports at agreed intervals to AMC School Board and other stakeholders. Project status report shall include Progress against the Project Management Plan, status of all risks and issues, exceptions and issues along with recommended resolution etc.
- b. Other than the planned meetings, in exceptional cases, project status meeting may be called with prior notice to the implementation agency. AMC School Board reserves the right to ask the implementation agency for the project review reports other than the standard weekly review reports.

4.8.5 Risk and Issue Management

- a. The implementation agency shall develop a Risk Management Plan and shall identify, analyze and evaluate the project risks, and shall develop cost effective strategies and action plans to mitigate those risks.
- b. The implementation agency shall carry out a Risk Assessment and document the Risk profile of AMC School Board based on the risk appetite and shall prepare and share the AMC School Board Enterprise Risk Register. The implementation agency shall develop an issues management procedure to identify, track, and resolve all issues confronting the project. The risk management plan and issue management procedure shall be done in consultation with AMC School Board.

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- c. The implementation agency shall monitor, report, and update the project risk profile. The risks should be discussed with AMC School Board and a mitigation plan be identified during the project review/status meetings. The Risk and Issue management should form an agenda for the Project Steering Committee meetings as and when required.

4.8.6 Planning and Scheduling

The implementation agency shall prepare a detailed schedule and plan for the entire project covering all tasks and sub tasks required for successful execution of the project. The implementation agency has to get the plan approved from AMC School Board at the start of the project and it should be updated every week to ensure tracking of the progress of the project.

The project plan should include the following:

- a. The project breaks up into logical phases and sub-phases
- b. Activities making up the sub-phases and phases
- c. Components in each phase with milestones
- d. The milestone dates are decided by AMC School Board. Implementation agency cannot change any of the milestone completion dates. Implementation agency can only propose the internal task deadlines while keeping the overall end dates the same. Implementation agency may suggest improvement in project dates without changing the end dates of each activity.
- e. Key milestones and deliverables along with their dates including those related to delivery and installation of hardware and software
- f. Start date and end date for each activity
- g. The dependencies among activities.
- h. Resources to be assigned to each activity

4.8.7 Warranty Support Service

As part of the warranty services, it is proposed that the bidder shall provide:

- i. Successful bidder shall provide performance warranty in respect of performance of the installed application to meet the performance requirements and service levels in the RFP.
- ii. Comprehensive & On-site Warranty and Annual Maintenance of the product should be for entire project duration i.e., three (3) years from the date of Go-Live. (due to contract period 3.6 year)
- iii. Bidder needs to procure all the licenses required to run the project components installed under this project. No additional charges shall be paid to the bidder during the O&M phase.
- iv. Warranty and Annual Maintenance should cover all services to ensure un-interrupted operation of STEM labs, including perpetual license of device management console and software except physical damage and loss of product.
- v. The bidder shall provide insurance of product in first year at own cost to cover physical damage and loss of product. From second year onwards the bidder may raise payment requests for repair/replacement of physical damaged/lost kits with quarterly O&M bills to AMC School Board.
- vi. It is the responsibility of bidder to perform all activities, documentation and procedure for insurance of product.
- vii. Overall, it is the responsibility of bidder to ensure the proper functioning of product for entire project duration.
- viii. Onsite comprehensive (including all Hardware, Software, network cabling for all types of defects and problems) maintenance services shall be provided by the Supplier / OEM during the period of warranty and Comprehensive Annual Maintenance Contract (CAMC). In case the supplier fails to rectify the problem within required timelines including holidays then OEM shall be required to provide second level support, service to rectify the problem or replace the faulty system or part thereof. The performance of the system shall be measured, and applicable penalties shall be

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- calculated and imposed on the bidder, in case the performance is below the required thresholds.
- ix. The contractual terms of service shall be monitored on a monthly basis as per the individual service requirements. However, if the performance of the system/ services is degraded significantly at any given point of time during the contract and if the immediate measures are not implemented and issues are not rectified to the complete satisfaction of the AUTHORITY or an agency designated by it, then the AUTHORITY shall have the right to take appropriate punitive actions including termination of the contract.
 - x. Monitor the available Updates of versions, patches etc.
 - xi. Measure that the warranty complies with the agreed Technical Standards, Security.
 - xii. Requirements, Operating Procedures, and Recovery Procedures.
 - xiii. A comprehensive warranty support and on-site free service warranty for the entire contract period from the date of Go Live. Bidder shall obtain the minimum of five-year product warranty and five year onsite free service warranty on all licensed software, computer hardware and peripherals, networking and other equipment. Bidder shall also be responsible for infrastructure maintenance of all the locations.
 - xiv. Bidder shall make partnership with OEMs for in build warranty support with products.
 - xv. Bidder shall provide the comprehensive manufacturer's warranty in respect of proper design, quality and workmanship of all hardware, equipment, accessories etc. covered in the scope. IA must warrant all hardware, equipment, accessories, spare parts, and software etc. procured and implemented against any manufacturing defects during the warranty period.
 - xvi. Bidder shall provide the performance warranty in respect of performance of the installed hardware and software to meet the performance requirements and service levels.
 - xvii. Bidder should upgrade Application Software/ any licensed software / Database to latest versions of system software for application and database servers as required.
 - xviii. Mean Time between Failures (MTBF) - If during contract period, any equipment has a hardware failure on four or more occasions in a period of less than three months or six times in a period of less than twelve months, it shall be replaced by equivalent or higher-level new equipment by the Bidder at no cost to the AMC School Board. For any delay in making available the replacement and repaired equipment for inspection, delivery of equipment or for commissioning of the systems or for acceptance tests / checks on per site basis, AMC School Board reserve the right to charge a penalty.
 - xix. During the warranty period IA shall maintain the systems and repair / replace, at no additional charge to the AMC School Board, all defective components that are brought to the IA's notice at the installed sites.
 - xx. The Bidder shall as far as possibly ensure that the equipment is repaired at site.
 - xxi. Warranty should not become void, if AMC School Board buys, any other supplemental hardware from a third party and installs it within these machines under intimation to the Bidder. The entire responsibility for providing onsite support and getting services from OEM for all such procurements by the AMC School Board will remain with Bidder.
 - xxii. The Bidder shall carry out Preventive Maintenance (PM), including cleaning of interior and exterior, of all hardware and testing for virus etc., if any, and should maintain proper records at each site for such PM. Failure to carry out such PM will be a breach of warranty and the warranty period will be extended by the period of delay in PM.
 - xxiii. Bidder shall monitor warranties to check adherence to preventive and repair maintenance terms and conditions of all equipments and components.
 - xxiv. The IA shall ensure that the warranty complies with the agreed Technical Standards, Security Requirements, Operating Procedures, and Recovery Procedures, as defined by Government.
 - xxv. Bidder shall have to stock and provide adequate onsite and offsite spare parts and spare component to ensure that the uptime commitment as per SLA is met.
 - xxvi. Any component that is reported to be down on a given date should be either fully repaired or replaced by temporary substitute (of equivalent configuration) within the time frame indicated in the Service Level Agreement (SLA).
 - xxvii. The Bidder shall develop and maintain an inventory database to include the registered hardware

warranties.

4.8.8 Exit Management Plan

- i. The implementation agency shall provide the AMC School Board or its nominated agency with a recommended exit management plan ("Exit Management Plan") which shall deal with at least the following aspects of exit management in relation to the MSA as a whole and in relation to the Project Implementation, and the Operation and Management SLA.
 - a. A detailed program of the transfer process that could be used in conjunction with a replacement implementation agency including details of the means to be used to ensure continuing provision of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer.
 - b. Plans for the communication with such of the implementation agency 's sub-contractors, staff, suppliers, customers and any related third party as are necessary to avoid any material detrimental impact on the AMC School Board 's operations as a result of undertaking the transfer.
 - c. (If applicable) proposed arrangements for the segregation of the implementation agency 's networks from the networks employed by AMC School Board and identification of specific security tasks necessary at termination.
 - d. Plans for provision of contingent support to AMC School Board, and replacement implementation agency for a reasonable period after transfer.
- ii. The implementation agency shall re-draft the Exit Management Plan annually thereafter to ensure that it is kept relevant and up to date.
- iii. Each Exit Management Plan shall be presented by the implementation agency to and approved by the AMC School Board or its nominated agencies.
- iv. The terms of payment as stated in the Terms of Payment Schedule include the costs of the implementation agency complying with its obligations under this Schedule.
- v. In the event of termination or expiry of MSA, and Project Implementation, each Party shall comply with the Exit Management Plan.
- vi. During the exit management period, the implementation agency shall use its best efforts to deliver the services.
- vii. Payments during the Exit Management period shall be made in accordance with the Terms of Payment Schedule.
- viii. Exit Management plan shall be furnished in writing to the AMC School Board or its nominated agencies within 90 days from the Effective Date of this Agreement.

SECTION: 5 DELIVERABLE, TIMELINE & PAYMENT PROCESS

5.1 Project Deliverables, Timeline and Payment Process

The total duration of the Project shall be of 3 (Three) months. The AMC School Board may provide multiple extensions to the Implementation Bidder on the same terms and conditions under original agreement after completion of project duration.

Primary School upgradation to Smart School in Ahmedabad City.

To – Date of issuance of Work Order to the winning bidder

Sr No	Milestone	Timeline	Deliverable	Payment
1.	Requirement Gathering & Submission of Documents <ul style="list-style-type: none"> ▪ As-Is Study ▪ School-wise Detailed implementation plan 	To + 1 weeks	Submission of all deliverables & report to AMC School Board	0
2.	Material Delivery as per the updated quantity derived in the requirement gathering	To + 8 weeks	Delivery Challan Report & Post-Dispatch Inspection & Acceptance Report	70% of CAPEX
3.	Installation & Commissioning of all hardware & software items with Testing & Customization of hardware, software product as per RFP and client requirement.	To + 20 weeks	Installation and Commissioning Sign-off report	10% of CAPEX
4.	User Acceptance & Go-Live (T1)	To+ 24 weeks	User Acceptance Test / Final Acceptance Test report	10% of CAPEX

To ensure the performance of vendor during operation and maintenance phase AMC School board will release remaining 10% of payment during O&M phase (i.e., 3 years from the date of Go-Live) through equal quarterly payment.

Amount pertaining to the violation of SLA terms, as stated in this document shall be levied from quarterly bill payment of vendor. If such amount is not paid by the implementation agency, same shall be invoked from their Performance Bank Guarantee. While making the final Bidder is required to provide Comprehensive and on-site Warranty Support for 3 years from the date of Go-live. *(Please refer Section 4.8 Scope of Operation & Maintenance period)*

Note:

- To is date of award of LOI/LOA/Work Order i.e., start of the project.
- T1 is the date of start of operations after Go – Live based on the agreed and approved Implementation Plan with AMC School Board.
- The payment will be made as per the quantities defined in the financial bid of this RFP.
- AMC School Board at its discretion may or may not give work order for any or all items quoted by the selected bidder. The contract value, PBG, Scope of Work and other associated terms will be revised accordingly.
- AMC School Board may issue commissioning and GO-Live approval in parts for allotted work.
- Part commissioning and Go-Live will be based on recommendations of AMC School Board for purpose of better use of deployed software and hardware solutions. In such cases the bidder will have to initiate the services for O&M phase and may raise the request of payment on quarterly basis.
- However, it has been assumed that the work (for all 15 schools) will be allotted under one work order. In case of change in allotted work the timeline and payment terms shall also be revised accordingly.
- The payment will be done as per the quantities defined in the financial bid of this RFP.

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Payment for additional items

AMC School Board may release the work order for the additional work of 10 smart schools in totality or part there of any selected items from BOQ to the successful bidder the additional work will be given based on requirement and approval of AMC School Board Authority on rate discovered under the price bid of this tender.

Based on the final project plan or during the project duration if there is need for additional items and there is variation in the quantities (limited to thirty percent of quantity discovered in financial bid) as defined in the financial bid, implementation bidder will be required to arrange additional items.

Payment for such additional items will be made separately by AMC School Board.

In such case of any additional requirement, payment will be made based on the rate provided in the financial bid of the Implementation Bidder.

Payment mechanism to be followed for additional items is given below:

5.2 Service Level Agreement & Penalty

The purpose of this Service Level Agreement (hereinafter called SLA) is to clearly define the levels of service which shall be provided by the successful bidder to End Customer and AMC School Board for the duration of the contract. The SLA is intended to establish a clear set of measurable parameters against which the performance of the Implementation Bidder can be measured.

- The bidder needs to maintain a reliable database to monitor the project progress and their performance against the SLAs.
- Bidder needs to report the compliance / non-compliance to SLAs on weekly and monthly basis.
- Bidder needs to deploy a system (web based or portal or mobile application or project management software) for real time project progress monitoring and should share access with designated officials from AMC School Board.
- Penalties shall be levied only for the reasons attributable to the implementing agency. Any risks / issues foreseen by the implementing agency should be brought to the notice of the AMC School Board immediately. If no such issues / risks are highlighted by the implementing agency, then it is expected that no delays will be there in the implementation schedule.

5.2.1 SLA & Penalty for Implementation phase

Definition	
Service Level Requirement	All the deliverables defined in RFP must be submitted On-time on the date as mentioned in the contract with no delay.
Measurement of Service Level Parameter	To be measured in Number of weeks of delay from the timelines mentioned in the section “Project Timelines”
Penalty for non-achievement of SLA Requirement	Any delay in the delivery of the project deliverables (solely attributable to vendor) would attract a liquidated damage per week of 0.5% of the project cost of the unexecuted / undelivered portion

Note:

- To is date of award of LOI/LOA/Work Order i.e., start of the project.
- Maximum penalty is restricted to 10% of the CAPEX for project implementation phase and 10% of the OPEX for O&M phase. Non-compliance to SLA beyond the penalty limit defined for CAPEX & OPEX phase may lead to termination of contract on discretion of AMC School Board.
- T1 is the date of start of operations after Go – Live based on the agreed and approval from AMC School Board.
- Penalties shall be levied only for the reasons attributable to the implementation agency. Any risks/ issues foreseen by the implementation agency shall be brought to the notice of the AMC School Board

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immediately. If no such issues/risks are highlighted by the implementation agency, then it is expected that no delays will be there in the implementation schedule

- All works under or in course of execution or executed in pursuance of the contract shall at all times, be open to the inspection and supervision of AMC School Board or appointed representatives.
- If any hardware has hardware failure on four or more occasions in a quarter, it shall be replaced by equivalent new equipment by the vendor at no cost to AMC School Board within 10 days from the date of last failure. Till the replacement is provided, the original equipment has to be kept in running condition or else a standby provided, and all services restored. However, penalties for breakdown as per SLAs defined in the tender will be applicable.
- The penalties as above will be recovered from any payment due to the Successful bidder.

Partial/Full damage to hardware

- a. The bidder should be responsible for operation and maintenance of items, which have been installed/constructed/supplied by them for entire contract duration.
- b. A comprehensive warranty support and on-site free service warranty for the entire contract period from the date of Go Live for all products.
- c. In case of Partial/ Full damage or loss of the equipment due to reasons beyond the control of bidder performance like Theft, intentional damage by mishandling, Fire etc., they should procure an insurance for major items. The Bidder should be in a position to supply working standby equipment with same configuration or higher with all services restored, as if it is a normal breakdown.
- d. In the event of intentional damage, mishandling, or theft the bidder should promptly notify (within 24 hrs) the school principal and AMC school board. The replacement of such damages shall be done either through insurance or as per price discovered in the tender.
- e. Hardware installed through this Project would become an important public asset. During the contract period of the Project the bidder shall be required to repair / replace any equipment if stolen / damaged/faulty. Appropriate insurance cover must be provided to all the equipment supplied under this project
- f. In case of Partial/ Full damage or loss of the equipment due to reasons beyond the control like Theft, intentional damage by mishandling, Fire etc., the Bidder should be in a position to supply working standby equipment with same configuration or higher with all services restored, as if it is a normal breakdown.
- g. In such a case the Bidder will have to make provision for the supply of the new hardware against the lost/ damaged equipment/ component. Monthly rental of 5% of basic Hardware cost may be payable to the Bidder for the equipment supplied as standby or AMC School Board may choose to procure new equipment at the same rates as is mentioned in the price bid. If the Bidder does not provide standby equipment, the penalties for breakdown as per SLAs will be imposed.
- h. Service Engineers/ Representatives of Bidder shall invariably carry their identity cards with them, without which they will not be allowed to access department Systems. Service Engineers of the Bidder shall have access to the Computer Systems/ Backup Solution only after obtaining clearance from department authorized officials. No component of the System/ data/ log information will be taken out of department premises without clearance from authorized Officials of the department.

5.2.2 SLA & Penalty for Operation & Maintenance Phase

During the Operation & Management period the implementation agency is expected to keep the Technology and Performance levels above the specified level. It will be the responsibility of the implementation agency to design and code the software to ensure application is measurable in terms of uptime and performance.

The application and hardware infrastructure is expected to be in running condition on all days (24*7). If there is a system or software breakdown, all breakdown calls are to be resolved within specified time from the time of complaint made to bidder O&M team. The resolution time is defined based on the criticality of the issue. It

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would be the responsibility of the successful bidder to log issues / breakdowns related to all application, IT equipment supplied & network connections as part of this project at the AMC schools under the scope of work with the respective OEMs. The complaint shall be extended to O&M team through Call / Message / Email etc. Bidder is expected to provide quick resolution against the same as well.

Sr No	Service level parameter	Baseline Metric	Penalty	Basis for measurement
1	Availability of smart components schools	>90% per quarter	No penalty	The measurement of the component's availability (Future Classroom, Science Lab, STEM and Robotics Lab) will be based on the reports generated through open-source monitoring tools or by tools deployed by bidder/client during the project. (The bidder needs to maintain the O&M activities on weekly basis to determine the O&M performance in case of non-reporting or unavailability of the data, maximum quarterly payment will be livid i.e., Rs. 30,000 per school)
		80-90% per quarter	INR 15,000 on a quarterly evaluation	
		70 – 80%	INR 30,000 on a quarterly evaluation	
		< 70%	May lead to contract termination	
2	Resolution of complaints and queries recorded by school principal/teachers and AMC School Board officials	Within 1 working day	No penalty	The measurement of the component's availability (Future Classroom, Science Lab, STEM and Robotics Lab) will be based on the reports generated through open-source monitoring tools or by tools deployed by bidder/client during the project. (The bidder needs to maintain the O&M activities on weekly basis to determine the O&M performance in case of non-reporting or unavailability of the data, maximum quarterly payment will be livid i.e., Rs. 25,000 per instances)
		Within 3 working days	INR 5,000 per instances	
		Within 7 working days	INR 10,000 per instances	
		Within 7+ working days	INR 25,000 per instances	

Note:

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- Maximum penalty is restricted to 10% of the project cost. Non-compliance to SLA beyond the penalty limit defined may lead to termination of contract on discretion of AMC School Board.
- If the breakdown issue cannot be resolved within the above specified time limits, a compatible System of equivalent or higher specifications has to be installed within that period.
- The service requests are to be made between business hours (10.00 Hrs to 20:00 Hrs). Any service request made after 20:00 Hrs will be considered as next working day. AMC Colander to be followed for resource deployment. Additionally, bidder may have to arrange resources on a special case, upon request from AMC school board.
- SLA hours will be counted during the business hours, wherever SLA is hourly based only.
- The successful bidder will have to provide an open-source Enterprise Management System (EMS) or any SLA monitoring at no cost to Ahmedabad School Board to measuring and monitor the operational SLAs.
- Penalties shall be levied only for the reasons attributable to the implementation agency. Any risks/ issues foreseen by the implementation agency shall be brought to the notice of the AMC School Board immediately. If no such issues/risks are highlighted by the implementation agency, then it is expected that no delays will be there in the implementation schedule.
- The penalties as above will be recovered from any payment due to the Successful bidder.

Partial/Full damage to hardware

- i. Hardware installed through this Project would become an important public asset. During the contract period of the Project the bidder shall be required to repair / replace any equipment if stolen / damaged/faulty. Appropriate insurance cover must be provided to all the equipment supplied under this project
- j. In case of Partial/ Full damage or loss of the equipment due to reasons beyond the control like Theft, intentional damage by mishandling, Fire etc., the Bidder should be in a position to supply working standby equipment with same configuration or higher with all services restored, as if it is a normal breakdown.
- k. In such a case the Bidder will have to make provision for the supply of the new hardware against the lost/ damaged equipment/ component. Monthly rental of 5% of basic Hardware cost may be payable to the Bidder for the equipment supplied as standby or AMC School Board may choose to procure new equipment at the same rates as is mentioned in the price bid. If the Bidder does not provide standby equipment, the penalties for breakdown as per SLAs will be imposed.
- l. Service Engineers/ Representatives of Bidder shall invariably carry their identity cards with them, without which they will not be allowed to access department Systems. Service Engineers of the Bidder shall have access to the Computer Systems/ Backup Solution only after obtaining clearance from department authorized officials. No component of the System/ data/ log information will be taken out of department premises without clearance from authorized Officials of the department.

Review of SLA Parameters

The SLA design is based on the scope of services and operational aspects of Implementation Bidder. Due to evolving nature of the proposed project, a review of SLAs will be conducted at the end of three months from the date of go-live of the Implementation Bidder. The purpose of this review is to reassess the SLAs based on the first three months' call volumes. AMC School Board, after thorough analysis of the monthly statistics monitored as per the above mentioned SLA parameters, may consider revision of the SLA parameters and update this agreement. And if the revision occurs, then the revised SLAs would be final and binding for the rest of the term of the contract.

5.2.3 Termination of Contract

Termination of Contract AMC School Board may, without prejudice to any other remedy under this Contract and applicable law, reserves the right to terminate for breach of contract by providing a written notice of 30 days stating the reason for default to the SI and as it deems fit, terminate the contract either in whole or in

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part in the following ways.

- i. Termination by Default: for failing to perform obligations under the Contract of if the quality is not up to the specification or in the event of non-adherence to time schedule.
- ii. Termination for Convenience: AMC School Board by written notice sent to the SI, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that the termination is for AMC School Board's convenience, the extent to which performance of the SI under the Contract is terminated, and the date upon which such termination becomes effective.
- iii. Termination for Non-Performance: If the SI fails to deliver any or all of the project requirements / operationalization / go-live / performance parameters (PERFORMANCE STANDARDS) of the project within the time frame specified in the contract; or
 - a. If the SI fails to perform any other obligation(s) under the contract.
- iv. Termination for NCLT proceedings or Insolvency proceedings: The Department may at any time terminate the contract by giving written notice to the bidder(s), if the bidder has NCLT proceedings going them or if the lead bidder(s) becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the bidder(s), provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Department. Bidder agrees to handover all requisite data in terms of code, documents, etc. along with requisite to the office of the AMC School Board identified team in this case.

Prior to providing a notice of termination to the SI, AMC School Board shall provide the SI with a written notice of 30 days instructing the SI to cure any breach/ default of the Contract, if AMC School Board is of the view that the breach may be rectified.

On failure of the SI to rectify such breach within 30 days, AMC School Board may terminate the contract by providing a written notice of 30 days to the SI, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to AMC School Board. In such event the SI shall be liable for penalty/liquidated damages imposed by the AMC School Board. The performance Guarantee shall be forfeited by the AMC School Board.

Consequences of Termination

- In the event of termination of this contract, AMC School Board is entitled to impose any such obligations and conditions and issue any clarifications as may be necessary to ensure an efficient transition and effective continuity of the services which the SI shall be obliged to comply with and take all available steps to minimize the loss resulting from that termination/ breach, and further allow and provide all such assistance to AMC School Board and/ or succeeding vendor, as may be required, to take over the obligations of the SI in relation to the execution / continued execution of the requirements of this contract.
- In the event of termination of this contract, AMC School Board shall have ownership over entire volume of delivered & installed software and hardware irrespective payment made to successful bidder.
- In the event of the SI being unable to service the contract for whatever reason, AMC School Board would evoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of department under the Contract in the matter, the proceeds of the PBG shall be payable to department as compensation for any loss resulting from the Bidder's failure to complete its obligations under the Contract. Department shall notify the Bidder in writing of the exercise of its right to receive such compensation within 14 days, indicating the contractual obligation(s) for which the Bidder is in default.
- AMC School Board shall also be entitled to make recoveries from the Bidder's bills, performance bank guarantee, or from any other amount due to him, the equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction, or misstatement.
- All plans, drawings, specifications, designs, reports, other documents prepared by the Vendor and materials for which part delivery payment is made in the execution of the contract shall become and remain the property of AMC School Board/ AMC and before termination or expiration of this contract

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the SI shall deliver all such documents, prepared under this contract along with a detailed inventory thereof, to AMC School Board/ AMC.

SECTION: 6 INSTRUCTIONS TO THE BIDDERS

6.1 Instructions to the bidder

- Bidders are advised to study all instructions, forms, terms, requirements and other information in the Bid Documents carefully.
- Every page of the proposal should necessarily be numbered and signed with seal.
- The bidder should not tamper the templates, and file types. If any additional information should be provided in a separate sheet where required.
- Submission of bid shall be deemed to have been done after careful study and examination of the Bid Document with full understanding of its implications.
- The response to this Bid Document should be full and complete in all respects. Failure to furnish all information required by the Bid Documents or submission of a proposal not substantially responsive to the Bid Documents in every respect will be at the bidder's risk and may result in rejection of its Proposal.
- Additionally, proposals of only those Bidders who satisfy the Conditions of Eligibility, stated herein, will be considered for evaluation by AMC School Board.
- Any past projects where the bidder executed other works in addition to what is asked in Pre-Qualification Criteria in a single order, the bidder should consider only the value of asked project part and highlight only those components.

6.1.1 Purpose of Bid Document

The purpose of this tender is to select bidder to enhance teaching-learning process in municipal schools through use of ICT technology and support infrastructure in Ahmedabad City. This document provides information to enable the bidders to understand the broad requirements to submit their 'Bids'.

In case a bidding firm possesses the requisite experience and capabilities required for undertaking the work, it may participate in the selection process individually (the "Sole Firm") in response to this invitation. The term "Bidder" means the bidding entity for this project.

The manner in which the Proposal is required to be submitted, evaluated and accepted is explained in this RFP.

6.1.2 Proposal Preparation Cost

The bidder is responsible for all costs incurred in connection with participation in this process, including, but not limited to, costs incurred in conduct of informative and other diligence activities, participation in meetings/discussions/presentations, preparation of proposal, in providing any additional information required by AMC School Board to facilitate the evaluation process, and in negotiating a definitive Contract or all such activities related to the bid process. The department will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

This Bid Document does not commit the AMC School Board to award a contract or to engage in negotiations. Further, no reimbursable cost may be incurred in anticipation of award. All materials submitted by the Bidder shall become the property of AMC School Board and may be returned at its sole discretion.

6.1.3 Queries (Online)

A prospective Bidder requiring any clarification on the RFP Document may submit his queries, via email, till 6 pm of pre bid meeting date.

The queries should necessarily be submitted in the following format:

Bidders Request for Clarification

Name and Address of the Organization submitting request	Name and Position of Person submitting request	Contact Details of the Organization / Authorized Representative
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Bidders Request for Clarification

		Tel: Mobile: Fax: Email:
RFP Document Reference (Section No., Page No.)	Content of the RFP requiring clarification	Clarification Sought

Queries submitted post the above-mentioned deadline, or which do not adhere to the above-mentioned format may not be considered.

6.1.4 Amendment of RFP Document

At any time before the deadline for submission of bids, the AMC School Board, may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RFP Document by an amendment.

The bidders are advised to visit the, <https://tender.nprocure.com>, www.ahmedabadcity.gov.in on regular basis for checking necessary updates. AMC School Board also reserves the rights to amend the dates mentioned in this RFP for bid process.

In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their bids, the AMC School Board may, at its discretion, extend the last date for the receipt of Bids.

6.1.5 AMC School Board's rights to terminate the selection process

AMC School Board may terminate the RFP process at any time and without assigning any reason. AMC School Board makes no commitments, express or implied, that this process will result in a business transaction with anyone.

This RFP does not constitute an offer by AMC School Board.

The bidder's participation in this process may result in AMC School Board selecting the bidder to engage in further discussions and negotiations toward execution of a contract. The commencement of such negotiations does not, however, signify a commitment by the AMC School Board to execute a contract or to continue negotiations. AMC School Board may terminate negotiations at any time without assigning any reason.

6.1.6 Right to reject any proposal

Notwithstanding anything contained in this RFP, AMC School Board reserves the right to accept or reject any Proposal and to annul the Selection Process and reject all Proposals, at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons therefore.

Besides other conditions and terms highlighted in the Tender Document, bids may be rejected under following circumstances:

General Rejection criteria:

- i. Conditional Bids - If the information provided by the Bidder is found to be partial/ incorrect / misleading / fraudulent at any stage / time during the Tendering Process.
- ii. Any effort on the part of a Bidder to influence the bid evaluation, bid comparison or contract award decisions.
- iii. Bids received after the prescribed time & date for receipt of bids.
- iv. Bids without signature of person (s) duly authorized on required pages of the bid.
- v. Bids without power of attorney/ board resolution or its certified true copy.

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- vi. Technical Rejection criteria
- vii. Bid not sealed and packaged in envelope as asked in RFP.
- viii. Bidders not complying with the Eligibility Criteria given in this Tender
- ix. Technical Bid containing commercial details.
- x. Revelation of Prices in any form or by any reason before opening the Commercial Bid.
- xi. Failure to furnish all information required by the Tender Document or submission of a Bid not substantially responsive to the Tender Document in every respect.
- xii. Bidders not quoting for the complete scope of work as indicated in the Tender Documents, addendum /corrigendum (if any) and any subsequent information given to the Bidder.
- xiii. Bidders not complying with the Technical and General Terms and conditions as stated in the Tender Documents.
- xiv. The Bidder not confirming unconditional acceptance of full responsibility of providing services in accordance with the scope of work and Service Level Agreements of this Tender.

Commercial Rejection Criteria

- i. Incomplete price Bid.
- ii. Price Bids that do not conform to the Tender's price bid format.
- iii. Total price quoted by the Bidder does not include all statutory taxes and levies applicable.
- iv. If there is an arithmetic discrepancy in the commercial Bid calculations the Technical Committee shall rectify the same. If the Bidder does not accept the correction of the errors, its Bid may be rejected.
- v. Misrepresentation/ improper response by the Bidder may lead to the disqualification. If such disqualification / rejection occurs after the Proposals have been opened and the highest-ranking Bidder gets disqualified / rejected, then AMC School Board reserves the right to consider the next best Bidder or take any other measure as may be deemed fit in the sole discretion of AMC School Board, including annulment of the Selection Process.

6.1.7 Bid Fee and Earnest Money Deposit (EMD) and amount

- The bidder should pay non-refundable Bid Fee of Rs. 12,000/- in favor of "The Administrative Officer, Ahmedabad Municipal Corporation School Board" payable at Ahmedabad, from Nationalized or Scheduled Banks except Co-operative Banks, payable at Ahmedabad. The Bid fees shall be in the form of a Demand Draft / Banker's Cheque.
- The bidder should also pay bid security Earnest Money Deposit (EMD) of Rs. 1,20,00,000/- in favor of The Administrative Officer, Ahmedabad Municipal Corporation School Board" from Nationalized or Scheduled Banks except Co-operative Banks, payable at Ahmedabad. The EMD shall be in the form of DD or BG with validity of 180 days beyond the original validity period for the bid.
- No interest will be payable by the AMC School Board on the Earnest Money Deposit (EMD).
- In case bid is submitted without EMD or Bid fees as mentioned above then AMC School Board reserves the right to reject the bid without providing opportunity for any further correspondence to the bidder concerned.
- The EMD of unsuccessful Bidders will be returned by the Authority, without any Interest, as promptly as possible on acceptance of the Proposal of the Selected Bidder or when the Authority cancels the Bidding Process.
- The Selected Bidder's EMD will be returned, without any interest, upon the Selected Bidder signing the Agreement and furnishing the Security Deposit / Performance Guarantee in accordance with the provision thereof.
- The decision of AMC School Board regarding forfeiture of the EMD and rejection of bid shall be final & shall not be called upon question under any circumstances.
- The EMD may be forfeited:
- If a Bidder withdraws their bid or increases their quoted prices during the period of bid validity or its extended period, if any; or

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- In the case of a successful bidder, if the Bidder fails to sign the Contract or to furnish Performance Bank Guarantee within specified time
- During the bid process, if a Bidder indulges in any such deliberate act as would jeopardize or unnecessarily delay the process of bid evaluation and finalization.
- During the bid process, if any information found wrong / manipulated / hidden in the bid.

6.1.8 Sealing, Marking and Submission of Technical Bid

The price bid must be submitted online on <https://tender.nprocure.com>. It should not be sent physically, if submitted physically the bid shall be rejected.

Bidders are required to submit their technical bid on both at <https://tender.nprocure.com> and in separate sealed envelopes as per instructions given below:

Part 1: Technical Bid consisting Pre-Qualification documents, Bid Fees and EMD with complete details as mentioned in RFP. The proposal shall also consist with all supporting documents, MAF, Data sheet if any.

Each Bidder shall submit only one proposal containing documents as below.

- i. Original DD/BG of the Bid fee & EMD
- ii. Pre-qualification criteria related documents.
- iii. Each page of the above should bear the initials of the Applicant along with the seal of the Applicant in token of confirmation of having understood the contents.
- iv. Details of EMD & Tender fee shall be submitted in electronic format (by scanning) while uploading the bid. This submission shall mean that EMD & tender fees are received for purpose of opening the bid. Accordingly, offer/ tenders of those bidders whose EMD & tender fee is received electronically, shall be opened. However, for the purpose of realization of EMD and Tender fee, bidder shall send the EMD as well as Tender fee in required format in original through RPAD/ Speed Post/in person so as to reach to registered office of AMC School Board. Punitive action shall be initiated for non-submission of EMD & Tender fees in original to registered office by bidder including abeyance of registration and cancellation of E-tendering code for one year.
- v. Proposal should be signed by an authorized person of the bidder. It should be submitted along with a certified true copy of a board resolution/power of attorney empowering authorized signatory to sign/act/execute documents binding the bidder to the terms and conditions detailed in this proposal.
- vi. Tenders by partnership firm must be signed by all partners. The full name and addresses of all the partners shall be furnished. The tenders by Corporation/ Companies must be signed with the legal name of the Corporation/ Company by the president/ or by the secretary or other person or persons legally authorized to bind the Corporation/ Company in the matter
- vii. Proposals must be direct, concise, and complete. AMC School Board will evaluate bidder's proposal based on its clarity and completeness of its response to the requirements of the project as outlined in this RFP. AMC School Board reserves the right to accept or reject any or all the proposals without assigning any reason.
- viii. Following documents shall only be submitted in HARD COPY to AMC School Board, Ahmedabad by all bidders.
 - a. Earnest Money Deposit as mentioned in the tender
 - b. Tender Fees as mentioned in the tender
 - c. Affidavit on Non-Judicial Stamp Paper of Rs. 100/-

Note: The EMD and the tender fee details should match the Details of the Original EMD and the Tender Fee DD/BG, failing which the bid shall be out rightly rejected

The large envelope must be sealed and super scribed containing above documents and shall be sent as under:

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Details to be mentioned exactly on sealed envelop

Tender Details

Notice No.:

Tender Name

Last date of Submission:

To,
The Administrative Officer
Ahmedabad Municipal Corporation School Board
Scout Bhavan, Near Prabhudas Thakkar
College, Paldi,
Ahmedabad, Gujarat- 380007

The Bid must be sent strictly by Postal Speed Post or Registered Post AD or in person by the representative of the bidder to AMC School Board. Documents received in any other manner or mode (like courier, email etc.) will not be considered. AMC School Board won't be responsible for any postal delays.

AMC School Board will not accept submission of a proposal in any manner other than that specified in the document. Proposals submitted in any other manner shall be treated as defective, invalid and rejected.

In case bidder needs any clarification or if training required for participating in online tender, they can contact the following office: -

(n) Code solutions – A division GNFC Ltd.
403, GNFC Infotower, Bodakdev, Ahmedabad – 380 054, Gujarat (India)
Tel: +91 26857316/17/18 Fax: + 91 79 26857321
E-mail: nprocure@gnfc.net Website: www.tender.nprocure.com
Toll Free: 1800-233-1010 (Ext. 501 & 512)
For further particulars contact above office/ or visit on following websites:
www.tender.nprocure.com ,

6.1.9 Late Bids

The Bids received after the due date and the specified time (including the extended period if any) shall not be entertained. The Bids submitted by telex/telegram/fax/e-mail etc. shall not be considered. No correspondence will be entertained on this matter. PURCHASER shall not be responsible for any delay or non-receipt/ non-delivery of the documents. No further correspondence on the subject will be entertained. PURCHASER reserves the right to modify and amend any of the above-stipulated condition/Criteria depending upon project priorities vis-à-vis urgent commitments.

For the online bid submission, it is advised that the SI takes all necessary precaution for the same, including submitting the Bid well in advance to avoid any last-minute hassles, ensuring that the names/ formats of the files to be uploaded are as per the e-tendering portal requirements, using the prescribed browser for upload etc. PURCHASER shall not entertain any bids which could not be uploaded or uploaded properly in the portal for whatsoever reasons.

6.1.10 General Instructions

a) Language of Bids

The Bids prepared by the Bidder and all correspondence and documents relating to the bids exchanged by the Bidder and AMC School Board, shall be written in English language, provided that any printed literature furnished by the Bidder in another language shall be accompanied by an English translation in which case, for purposes of interpretation of the bid, the English translation shall govern.

If any supporting documents submitted are in any language other than English, Notarized copy of the translation of the same in English language shall be submitted by the bidder.

b) Concessions permissible under statutes

Bidder, while quoting against this tender, must take cognizance of all concessions permissible, if any, under the statutes and ensure the same is passed on to AMC School Board, failing which it will have to bear extra cost. In case Bidder does not avail concessional rates of levies like customs duty, excise duty, sales tax, etc. AMC School Board will not take responsibility towards this. However, AMC School Board may provide necessary assistance, wherever possible, in this regard.

c) Bid Validity

The proposal should be valid for acceptance for a minimum period of 180 days from the Bid Opening Date (the "Proposal Validity Period"). If required, Authority may request the bidder to have it extended for a further period. The request and the responses thereto shall be made in writing. A Bidder agreeing to the request will not be required or permitted to modify his Proposal but will be required to extend the validity of EMD for the period of the extension, and in compliance with Clause 4.7 in all respects.

d) Taxes

The Prices mentioned in the Price Bid should include all applicable taxes & duties as applicable.

GST

GST (Goods & Service Tax) has come in existence from 1st July 2017. Contractor/Successful Bidder is bound to pay any amount GST prescribed by the Govt. of India as per the terms of Contract agreed upon during the course of execution of this Contract.

During the course of execution of Contract, if there is any change in Rate of GST (Goods & Service Tax) by the Government, the same shall be reimbursed/recovered separately by AMC School Board, subject to the submission of Original Receipt/Proof for the amounts actually remitted by the Successful Tendered/Contractor to the Competent Authority along with a Certificate from Chartered Accountant of Contractor/Successful bidder certifying that the amount of GST paid to the Government and the same shall be intimated/submitted/claimed within 30 (Thirty) Days from the date of payment. Remittance of GST within stipulated period shall be the sole responsibility of the Successful bidder/contractor, failing which, AMC School Board may recover the amount due, from any other payable dues with AMC School Board and decision of AMC School Board shall be final and binding on the Contractor/Successful Bidder in this regard. Further the non- payment of GST to the Government may lead to the termination of contract and forfeiture of Security Deposit/Performance Guarantee Amount.

If imposition of any other new Taxes/Duties/Levies/Cess or any other incidentals etc. or any increase in the existing Taxes/Duties/Levies/Cess or any other incidentals etc. (excluding GST) are imposed during the course of the contract, the same shall be borne by the Contractor/Successful Bidder Only, in no case AMC School Board shall be liable for the same.

e) Firm Prices and Bid Currency

Prices quoted must be firm and final and shall not be subject to any upward modifications, on any account whatsoever. Prices shall be expressed in Indian Rupees (INR) only.

f) Right to vary the scope of the work at the time of award

AMC School Board reserves its right to make changes to the scope of the work at the time of execution of the resultant Agreement. If any such change causes an increase or decrease in the cost of, or the time required for the SI's performance of any part of the work under the Agreement, whether changed or not changed by the order, an equitable adjustment (if required) shall be made in the Contract Value or time schedule, or both, and the Agreement shall accordingly be amended. Any claims by the SI for adjustment under this Clause must be asserted within thirty (30) days from the date of the SI's receipt of the AMC School Board changed order.

g) Modification or Withdrawal of Bids

A Bidder wishing to withdraw its bid shall notify AMC School Board by e-mail prior to the deadline prescribed for bid submission. A withdrawal notice may also be sent by electronic means such as e-mail, but it must be followed by a signed confirmation copy, postmarked at least one day prior the

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deadline for submission of bids.

The notice of withdrawal shall be addressed to AMC School Board at the address named in the bid Data Sheet, bear the Contract name, the <Title> and < bid No.>, and the words “bid Withdrawal Notice.”

Bid withdrawal notices received after the bid submission deadline shall be ignored, and the submitted bid shall be deemed to be a validly submitted bid.

No bid may be withdrawn in the interval between the bid submission deadline and the expiration of the specified bid validity period. Withdrawal of a bid during this interval may result in the forfeiture of the Bidder's EMD.

h) Performance Bank Guarantee

The successful bidder shall at his own expense, deposit with department, within 30 days of the notification of award (done through issuance of the Purchase Order/Letter of Acceptance/Letter of Intent), an unconditional and irrevocable Performance Bank Guarantee (PBG) from Nationalized or Scheduled Banks except Co-operative Banks in favor of “The Administrative Officer, Ahmedabad Municipal Corporation School Board” for the due performance and fulfilment of the contract by the bidder.

The SI shall submit performance guarantee for implementation phase for an amount equivalent to 10% of the Project Value which is unconditional & irrevocable bank guarantee.

This will be released to SI on successful Go-Live of project and submission of new performance guarantee for O&M phase on yearly basis as stated below which is unconditional & irrevocable bank guarantee.

- Year 1: 6% of Project Value

- Year 2: 4% of Project Value

- Year 3: 2% of Project Value

The SI should renew the yearly bank guarantee 30 days prior to the date of expiry till the end of entire contract period".

All charges whatsoever such as premium, commission, etc. with respect to the Performance Bank Guarantee shall be borne by the bidder.

The successful bidder shall maintain a valid and binding Performance Guarantee for a period of three months after the expiry of the Contract Period (“Validity Period”) i.e., 3 years.

The Performance Bank Guarantee letter format can be found in the Annexure- III of this document. The Performance Bank Guarantee may be discharged/ returned by department upon being satisfied that there has been due performance of the obligations of the Bidder under the contract. However, no interest shall be payable on the Performance Bank Guarantee.

If the Bidder, fails to furnish the Performance Guarantee, it shall be lawful for the Authority to forfeit the EMD and cancel the contract or any part thereof

In the event of the Bidder being unable to service the contract for whatever reason or receive frequent complaints from citizens, AMC School Board would evoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of AMC School Board under the Contract in the matter, the proceeds of the PBG shall be payable to AMC School Board as compensation for any loss resulting from the Bidder's failure to complete its obligations under the Contract. AMC School Board shall notify the Bidder in writing of the exercise of its right to receive such compensation within 14 days, indicating the contractual obligation(s) for which the Bidder is in default.

AMC School Board shall also be entitled to make recoveries from the Bidder's bills, performance bank guarantee, or from any other amount due to him, the equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction, or misstatement.

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i) Work Order/ Purchase Order

For all installations to be carried out in the AMC school board under this contract, the contract will be signed with AMC School Board and the work order will be issued by the AMC School Board.

j) Validity Period of the Contract

Upon selection of the bidder and the contract is made, the validity of the Bidder contract period would be valid till 3 Years after go-live, unless revoked for whatever reasons. If at any stage during the tenure of the period, it comes to the notice of AMC School Board, directly or through some other complaint, that the Bidder had misinterpreted the facts or submitted any false information or hidden any information, which could have affected the signing of this agreement with the Bidder, this agreement shall stand terminated immediately under intimation to the Bidder.

The contract would be subjected to review at the end of its validity period for renewal. If any need, necessities for such review during the validity period would be considered by AMC School Board on its merit.

k) Quantity variation

The quantity mentioned in the Commercial Bid format (Section 9) is only for indicative in nature. The actual quantity depends on the actual site survey conducted by the bidder and after same is approved by AMC School Board for installations at various locations. AMC School Board reserves the right to vary quantity at the time of award of the contract or after the contract is awarded. Such variation on either side shall be capped at 30% of the BoQ quantity / of the total project cost.

l) Price Variation

During the validity of the contract including the extended period if any, if the Bidder supplied any item included in BoM of this RFP to any other department / organization / individual at a price lower than the price fixed in the contract, the bidder must voluntarily pass on the price difference with immediate effect.

m) Governing Law

The Bidding Process shall be governed by, and construed in accordance with, the laws of India and the Courts at Ahmedabad shall have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with the Bidding Process.

n) Restriction on Transfer of Agreement

The Bidder shall not assign or transfer its right in any manner whatsoever under this agreement to a third party or enter into any agreement for sub-contracting and/or partnership relating to any subject matter to the agreement to any third party or any sister-concerned firm within a group either in whole or in any part i.e., partnership/third party interest shall be created.

Failure to agree with the Terms & Conditions of the Bid Document/ Contract

Failure of the bidder to agree with the Terms & Conditions of the Bid Document/Contract shall constitute sufficient grounds for the annulment of the award of contract, in which event the contract may be awarded to the next most responsive bidder.

Terms and Conditions of the Tender

Bidder is required to refer to the draft Contract Agreement, attached as Annexure-II in this Bid Document, for all the terms and conditions to be adhered by the successful bidder during Project Implementation and Post implementation period.

Please note that one needs to read the Contract Agreement as a whole document; and the Annexure mentioned there-in may not correspond to the Bid Document Annexure. Please refer to the Interpretation Section of the Draft/Master Service Agreement.

o) Liability

Except as provided in this Agreement, hereinabove, neither party shall be liable to other party or any other party by virtue of termination of this Agreement for any reason whatsoever for any claim for loss or profit or on account for any expenditure, investment, leases, capital improvements or any other commitments made by the other party in connection with their business made in reliance upon

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or by virtue of this Agreement.

p) Force Majeure

In the event that any damages to items due to Force Majeure events (such as earthquake, fire, natural calamities, war, act of God) of any kind during Warranty Period and Maintenance Period shall be the liability of AMC School Board. In such case, AMC School Board shall request the successful Bidder to repair/replace the damaged unit and reinstall the same. All costs towards the same shall be reimbursed by AMC School Board to the successful Bidder on mutual understanding.

The Bidder shall not be liable for forfeiture of its Performance Guarantee, imposition of liquidated damages or termination for default, if and to the extent that its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure. For purposes of this Clause, "Force Majeure" means an event beyond the "reasonable" control of the Bidder, not involving the Bidder's fault or negligence and not foreseeable. Such events may include Acts of God & acts of Government of India in their sovereign capacity.

In the event of delay in performance attributable to the presence of a force majeure event, the time for performance shall be extended by a period(s) equivalent to the duration of such delay. If the duration of delay continues beyond a period of 30 days, AMC School Board and the SI shall hold consultations with each other in an endeavor to find a solution to the problem.

Notwithstanding anything to the contrary mentioned above, the decision of the AMC School Board shall be final and binding on the SI.

q) Conflict of Interest

A "Conflict of Interest" is any situation that might cause an impartial observer to reasonably question whether Bidder actions are influenced by considerations of your firm's interest at the cost of Government. The Bidder agrees that it shall hold the AMC School Board's interest paramount, without any consideration for future work, and strictly avoid any Conflict of Interest with other assignments of a similar nature. In the event the Bidder foresees a Conflict of Interest, the Bidder shall notify AMC School Board forthwith and seek its approval prior to entering into any arrangement with a third party which is likely to create a Conflict of Interest.

Bidders shall not have a conflict of interest that may affect the Selection Process or the scope (the "Conflict of Interest"). Any Bidder found to have a Conflict of Interest shall be disqualified.

AMC School Board requires that the Bidder provides professional, objective, and impartial advice and at all times hold the AMC School Board's interest's paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work.

The Bidder shall disclose to AMC School Board in writing, all actual and potential Conflicts of Interest that exist, arise or may arise (either for the Bidder or its team) during the term of the Agreement as soon as it becomes aware of such a conflict.

r) Resolution of Dispute

The AMC School Board and the Bidder shall make every effort to resolve amicably, by direct informal negotiation, any disagreement or dispute arising between them under or in connection with the contract. If after thirty days from the commencement of such informal negotiations, the AMC School Board/AMC and the Bidder have been unable to resolve amicably a contract dispute; either party may require that the dispute be referred for resolution by formal arbitration.

All questions, disputes or differences arising under and out of, or in connection with the contract, shall be referred to two Arbitrators: one Arbitrator to be nominated by the AMC School Board and the other to be nominated by the Bidder. In the case of the said Arbitrators not agreeing, then the matter will be referred to an umpire to be appointed by the Arbitrators in writing before proceeding with the reference. The award of the Arbitrators, and in the event of their not agreeing, the award of the Umpire appointed by them shall be final and binding on the parties. The Arbitration and Reconciliation Act 1996 shall apply to the arbitration proceedings and the venue of the arbitration shall be Ahmedabad. Cost of arbitration shall be borne by each party proportionately. However,

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expenses incurred by each party in connection with the preparation, presentation shall be borne by the party itself. The provisions of this clause shall survive termination of this Agreement.

s) Discount

The SIs are advised not to indicate any separate discount in the Financial Bid. Discount, if any, should be merged with the quoted prices. Discount of any type, indicated separately, shall not be considered for evaluation purpose. However, in the event of such an offer is found to be the lowest without considering the discount, the Purchaser shall avail such discount at the time of award of contract.

t) Site visit and verification of information

SIs are encouraged to submit their respective Bids after doing a thorough survey of project site and ascertaining for themselves the site conditions, traffic, location, surroundings, climate, availability of power, water and other utilities for construction, access to site, handling and storage of materials, weather data, applicable laws and regulations, and any other matter considered relevant by them.

It shall be deemed that by submitting a Bid, the SI has made a complete and careful examination of the Bidding Documents.

- Received all relevant information requested from the Authority
- Accepted the risk of inadequacy, error or mistake in the information provided in the Bidding Documents or furnished by or on behalf of the Authority relating to any of the matters.
- Satisfied itself about all matters, things and information including matters herein above necessary and required for submitting an informed Bid, execution of the Project in accordance with the Bidding Documents and performance of all of its obligations thereunder.
- Acknowledged and agreed that inadequacy, lack of completeness or incorrectness of information provided in the Bidding Documents or ignorance of any shall not be a basis for any claim for compensation, damages, extension of time for performance of its obligations, loss of profits etc. from the Authority, or a ground for termination of the Concession Agreement by the Concessionaire
- Acknowledged that it does not have a Conflict of Interest; and agreed to be bound by the undertakings provided by it under and in terms hereof.

u) Safety Regulation, Accident and Damage

The SI shall be responsible at his own cost in and relative to performance of the work and SI to observe and to ensure observance by his Sub-selected vendors, agents and servants of the provisions of Safety Code as hereinafter appearing and all fire, Safety and security regulations as may be prescribed by the Owner from time to time and such other Precautions, measures as shall be necessary and shall employ / deploy all equipment necessary to protect all works, materials, properties, structures, equipments, installations, communications and facilities whatsoever from damage, loss or other hazard whatsoever (including but not limited to fire and explosion) and shall during construction and other operations minimize the disturbance and inconvenience to the Owner, other SIs, the public and adjoining land and property owners and occupiers, and crops, trees and vegetation and shall indemnify and keep indemnified the One from and against all losses and damages and costs, charges and expenses and penalties, actions, claims, demands and proceedings whatsoever suffered or incurred by or against the Owner, as the case may be, virtue of any loss, alteration, displacement, disturbance or destruction or accident to any works materials, properties, structures, equipments, installations communications and facilities and land and property owners and occupiers and crops, trees and vegetation as aforesaid, with the intent that the SI shall be exclusively responsible for any accident, loss, damage, alteration, displacement, disturbance or destruction as aforesaid resultant directly or indirectly from any breach by the SI of his obligation aforesaid or upon any operation, act or omission of the SI his Sub-selected vendor(s) or agent(s) or servant(s).

The SI's liabilities under Clause (a) and otherwise under the Contract shall remain unimpaired notwithstanding the existence of any storage cum erection or other insurance covering any risk, damage, loss or liability for which the SI is liable to the Owner in terms of the foregoing Sub-Clause or otherwise and / or in respect of which the SI has indemnified the Owner with the intent that notwithstanding the existence of such insurance, the SI shall be and remain fully liable for all liabilities and obligations under the contract and

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indemnified to the Owner, and the Owner shall not be obliged to seek recourse under such policy(ies) in preference to recourse against the SI or otherwise to exhaust any other remedy in preference to the remedies available to in under the Contract prior written approval of SSCDL. However, even if the work is sub-contracted / outsourced, the sole responsibility of the work shall lie with the SI. The SI shall be held responsible for any delay/error/non-compliance etc. of its sub-contracted vendor. The details of the sub-contracting agreements (if any) between both the parties would be required to be submitted to SSCDL.

v) Ownership and Licenses

The ownership of all hardware/software developed/customized/ configured/ procured as part of the project and related documentation for the project would always lie with the SMC/SSCDL. All licenses for software procured related to project have to be in the name of Ahmedabad Municipal Corporation. The SI will be required to produce the Licenses/ATS/Warranty and other documents from the respective OEMs clearly mentioning the product name, quantity, duration, type of support, etc. The payment for the respective item will be subject to submission of the aforesaid documents to SMC/SSCDL.

w) General Clause related to Any SIs/Sub-Selected vendor from a Country which shares a Land Border with India

- I. Any SI from a country which shares a land border with India will be eligible to bid in this tender only if the SI is registered with the Competent Authority (Registration committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)).
- II. "SI" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, every artificial juridical person not falling in any of the descriptions of SIs stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "SI from a country which shares a land border with India" means:
 - a. An entity incorporated, established or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
- IV. The beneficial owner for the purpose of (iii) above will be as under:
 1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.
 - a. Explanation—
 - b. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company.
 - c. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements.
 2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership.
 3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals.
 4. Where no natural person is identified under i or ii or iii above, the beneficial owner is the relevant natural person who holds the position of senior managing official.
 5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

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VI. The successful SI shall not be allowed to sub-contract works to any selected vendor from a country which shares a land border with India unless such selected vendor is registered with the Competent Authority (Registration committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)).

x) Resolution of Dispute

The AMC School Board and the SI shall make every effort to resolve amicably, by direct informal negotiation, any disagreement or dispute arising between them under or in connection with the contract. If after thirty days from the commencement of such informal negotiations, the AMC School Board/AMC and the SI have been unable to resolve amicably a contract dispute; either party may require that the dispute be referred for resolution by formal arbitration.

All questions, disputes or differences arising under and out of, or in connection with the contract, shall be referred to two Arbitrators: one Arbitrator to be nominated by the AMC School Board and the other to be nominated by the SI. In the case of the said Arbitrators not agreeing, then the matter will be referred to an umpire to be appointed by the Arbitrators in writing before proceeding with the reference. The award of the Arbitrators, and in the event of their not agreeing, the award of the Umpire appointed by them shall be final and binding on the parties. The Arbitration and Reconciliation Act 1996 shall apply to the arbitration proceedings and the venue of the arbitration shall be Ahmedabad. Cost of arbitration shall be borne by each party proportionately. However, expenses incurred by each party in connection with the preparation, presentation shall be borne by the party itself. The provisions of this clause shall survive termination of this Agreement.

y) Consortium/Joint Venture

Consortium is allowed for maximum of two (2) parties. Collectively they should meet the aggregate requirement for financial and technical capability for eligibility. Original or Notarized Copy of consortium partnership with clearly defined stake and scope of each partner. Lead bidder of consortium will be sole responsible for execution of work defined in RFP and meeting the performance criterion.

These points shall also be captured in agreement.

- i. Identity of prime member and Power of Attorney in favour of prime member.
- ii. Roles and responsibilities of each consortium member, the identification of the lead partner, and providing for joint and several liability for each partner.
- iii. Both consortium members would be available throughout the Contract Period.
- iv. Both consortium members shall be jointly and severally liable for due implementation, operation and maintenance of the project.
- v. The role and responsibility of any member must be commensurate with the technical/financial capabilities that such member is contributing towards meeting the qualification criteria. Each consortium member is liable to contribute resources in terms of knowledge, skills and trained manpower commensurate with its role and responsibilities during the Contract Period.
- vi. The Consortium Agreement must also state that the period of the Agreement would coincide with the Contract period. Consortium must continue to be in existence during the period of the Contract and that any change will be subject to approval of the AMC School Board only.
- vii. The final Contract between the consortium members (The Consortium Contract) would be available for legal vetting and open to suggestions by the AMC. AMC School Board will suggest binding corrections if it finds that such contract does not meet its requirements and interests as per the Tender in letter and spirit.
- viii. The Agreement should be on stamp paper and notarized. The signatories must be duly authorized.
- ix. Any modification in roles and responsibilities between consortium members during Contract period shall be allowed only after approval from SCADL. Any changes and deviation of roles and responsibilities of consortium members during the execution, operation and maintenance of this project without prior approval of Authority shall be viewed seriously by the AMC School Board as it can affect an important public service. Such unilateral action by the implementing agency shall entitle AMC School Board to take appropriate action including considering it an Event of Default under this Contract leading to consequences including termination with appropriate notice.

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- x. Any dispute arising during Contract period between the consortium members shall be resolved amicably without adversely impacting project implementation and operation. If in AMC's opinion, dispute between consortium members adversely impacting implementation and operation of the project then Authority may its sole discretion in the interest of the project (a) Terminate the Contract after due process and/or (2) Provide a binding solution.
- xi. In case AMC School Board intends to proceed for Termination on account of IA/bidder, Event of Defect and/ or unresolved disputes between the consortium members, all the consortium members shall be jointly and severally liable for implementation, operation and maintenance of project at agreed prices and payment terms specified in this Tender till Authority or any new agency appointed by it takes over the project.
- xii. AMC School Board reserves the right to reject the bid in case of change in the constitution of the consortium after the submission of bid and before the execution of the Agreement.

6.1.11 Additional Quantity/Change Request

- a. AMC School Board reserves its right to award additional quantity of work order up to 30% of the original quantity (as per state and central govt. guideline) at the same price and terms and conditions quoted in original contract.
- b. AMC School Board also reserves right to award change request work order up to 30% of the original project cost for the work needed to execute the work defined in scope of work defined in original contract
- c. Payment for additional items
 - Based on the final project plan or during the project duration if there is need for additional items and Based on the final project plan or during the project duration if there is need for additional items and there is variation in the quantities as defined in the financial bid, implementation SI will be required to arrange additional items. Payment for such additional items will be done separately by AMC School Board.
- d. In such case of any additional requirement, payment will be done based on the rate provided in the financial bid of the Implementation SI. Payment mechanism to be followed for additional items is given below:
- e. CAPEX COMPONENT - 30% CAPEX payment on the successful delivery of additional item, post approval from AMC School Board and 70% CAPEX payment on the successful installation of the additional item, post approval on the installation report or shall be in accordance with the actual timeline proposed under this RFP.
- f. OPEX COMPONENT - OPEX part will be equally divided in remaining part of the quarterly payment during O&M. OPEX payment will be prorated based on the duration left in O&M. That is, if additional item is procured in 4th Quarter, then OPEX will be paid for 17 quarters only (starting from 4th Quarter till 20th Quarter).

6.1.12 Policy for procurement

- With reference to make in India, following policies will be applicable:
 - I. Policy released by Ministry of Electronics and Information Technology (MeitY), Government of India dated 14th September 2017 having no. F.No.33(1)/2017-IPHW and any further amendments.
 - II. Policy released by Ministry of Communications, Department of Telecommunications (DoT), Government of India dated 29th August 2018 having no. 18-10/2017-IP and any further amendments.
 - III. Policy released by Department of Promotion of Industry and Internal Trade, Ministry of commerce and industry, Government of India dated 4th June 2020 having no. P-45021/2/2017-PP (BE-II) and any further amendments.
 - IV. Policy released by Department of Promotion of Industry and Internal Trade, Ministry of commerce and industry, Government of India dated 20th June 2019 having no. P-45021/121/2018- (BE-II) and any further amendments.

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- For deciding L1 local supplier under make in India policy, the policy mentioned in sr. no. III will be applicable. For considering the products under make in India, the policy mentioned in sr.no. I and II will be applicable.
- For the products proposed under make in India, the bidder/s shall be required to verify, do due diligence, and submit all justifications / documents/ information along with the compliance of the products to meet the technical specifications, functional specifications, envisaged outcomes and SLA requirements specified in the RFP. After conforming the above, the bidders and the OEMs shall have to provide an undertaking on INR 300 rupees non-judicial stamp paper confirming the compliance of the technical specifications, functional specifications, envisaged outcomes, local content in terms of composition of the products and SLA requirements specified in the RFP.
- The bidder/s is also required to submit OEM's statutory auditor certificate certifying percentage of local content in terms of composition of the products confirming the compliance of the technical specifications, functional specifications, envisaged outcomes and SLA requirements specified in the RFP.

In case of procurement for a value in excess of Rs. 10 crores, the 'Class 1 local supplier'/'Class-II local supplier' shall be required to provide a certificate from the statutory auditor or Cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content" as per the policy no. P45021/2/2017-PP (BE-II) clause 9b.

Bidders and OEM's have to provide the compliance in accordance on the above.

- In case at any point of time, the details provided is found to misrepresent any facts or documents or any piece of information provided, then OEM/s shall be disqualified and blacklisted. The bidder/s have to provide the new solution as per the requirement of the RFP at no extra price within one month.
- With regards to above table, OEMs will certify the installation base and the project experience. This certificate shall be issued through the global Headquarters and attested by the Indian office. in case of any doubt, Tendering authority shall verify the claim of OEMs. Decision of AMC School Board shall be final and binding upon the Bidder and OEM.

Selection Process for Bidders

1. The AMC School Board will adhere the Make in India Policy released by department of Promotion of Industry and internal trade, Ministry of commerce and industry, Government of India dated 4th June 2020 having no. P-45021/2/2017-PP (BE-II). The mentioned policy along with office memorandum mentioned in the point 4 (immediately below) shall supersede any claims, petitions, representations etc made by the bidder/s while making any purchasing decision by the purchaser.
2. The AMC School Board will adhere office memorandum published by Ministry of Finance, Department of Expenditure, Public Procurement Division as insertion of rule 144 (xi) in the general financial rules (GFRs), 2017 dated 23rd July 2020 having no. F. No. 6/18/2019-PPD. Details of policy mentioned below:
 - I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.
 - II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
 - III. "Bidder from a country which shares a land border with India" for the purpose of this order means:
 - a. An entity incorporated, established or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or

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- d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
- IV. The beneficial owner for the purpose of (iii) above will be as under:
- i. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.
Explanation—
 - a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;
 - b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
 - ii. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
 - iii. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
 - iv. Where no natural person is identified under i or ii or iii above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
 - v. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
- VI. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.
Model Certificate for Tenders (for transitional cases as stated in para 3)
"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I hereby certify that this bidder is not from such a country and is eligible to be considered."

For more information, Bidder should refer to reference no. F. No. 6/18/2019-PPD dated 23rd July 2020 of public procurement division, Department of Expenditure, Ministry of Finance, Government of India on Restrictions on companies sharing land border with India.

6.1.13 Termination of Contract

Termination of Contract AMC School Board may, without prejudice to any other remedy under this Contract and applicable law, reserves the right to terminate for breach of contract by providing a written notice of 30 days stating the reason for default to the SI and as it deems fit, terminate the contract either in whole or in part in the following ways.

- Termination by Default: for failing to perform obligations under the Contract of if the quality is not up to the specification or in the event of non-adherence to time schedule.
- Termination for Convenience: AMC School Board by written notice sent to the SI, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that the termination is for AMC School Board's convenience, the extent to which performance of the SI under the Contract is terminated, and the date upon which such termination becomes effective.
- Termination for Non-Performance: If the SI fails to deliver any or all of the project requirements / operationalization / go-live / performance parameters (PERFORMANCE STANDARDS) of the project within the time frame specified in the contract; or

If the SI fails to perform any other obligation(s) under the contract.

- Termination for Insolvency/NCLT proceedings: The Department may at any time terminate the contract by giving written notice to the SI(s), if the SI(s) becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the SI(s), provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Department. SI agrees to handover all requisite data in terms of code, documents, etc. along with requisite to the office of the AMC School Board identified team in this case.

Prior to providing a notice of termination to the SI, AMC School Board shall provide the SI with a written notice of 30 days instructing the SI to cure any breach/ default of the Contract, if AMC School Board is of the view that the breach may be rectified.

On failure of the SI to rectify such breach within 30 days, AMC School Board may terminate the contract by providing a written notice of 30 days to the SI, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to AMC School Board. In such event the SI shall be liable for penalty/liquidated damages imposed by the AMC School Board. The performance Guarantee shall be forfeited by the AMC School Board.

Consequences of Termination

- In the event of termination of this contract, AMC School Board is entitled to impose any such obligations and conditions and issue any clarifications as may be necessary to ensure an efficient transition and effective continuity of the services which the SI shall be obliged to comply with and take all available steps to minimize the loss resulting from that termination/ breach, and further allow and provide all such assistance to AMC School Board and/ or succeeding vendor, as may be required, to take over the obligations of the SI in relation to the execution / continued execution of the requirements of this contract.
- In the event of termination of this contract, AMC School Board shall have ownership over entire volume of delivered & installed software and hardware irrespective payment made to successful SI.
- In the event of the SI being unable to service the contract for whatever reason, AMC School Board would evoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of department under the Contract in the matter, the proceeds of the PBG shall be payable to department as compensation for any loss resulting from the SI's failure to complete its obligations under the Contract. Department shall notify the SI in writing of the exercise of its right to receive such compensation within 14 days, indicating the contractual obligation(s) for which the SI is in default.
- AMC School Board shall also be entitled to make recoveries from the SI's bills, performance bank guarantee, or from any other amount due to him, the equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement
- All plans, drawings, specifications, designs, reports, other documents prepared by the Vendor and materials for which part delivery payment is made in the execution of the contract shall become and remain the property of AMC School Board/ AMC and before termination or expiration of this contract the SI shall deliver all such documents, prepared under this contract along with a detailed inventory thereof, to AMC School Board/ AMC.

Annexure A: Technical Bid Format

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

Checklist for Technical Qualification Document

<<To be printed on bidder company's letterhead and signed by Authorized signatory>>

S. No.	Documents to be submitted	Submitted (Y / N)	Documentary Proof (Page No.) of Proposal
i.	Bid Processing Fee (DD) as per RFP		
ii.	Bid Security EMD (DD/BG) as per RFP		
iii.	Technical Proposal Packaged in Envelope with Pen Drive as per RFP		
iv.	Power of attorney / board resolution to the authorized Signatory of the RFP		
v.	Copy of Certificate of Incorporation/Registration certificate/ Shop & Establishment Certificate		
vi.	Bidder Profile on their letterhead		
vii.	Copy of Audited Balance Sheet and Profit and loss statement for last three financial years 2022-23, 2021-22 and 2020-21		
viii.	Supporting Documents like Rent Agreement/ Electricity Bill / Self-Declaration on Company's Letter head to be submitted for Local Office in Ahmedabad. OR undertaking from authorized signatory to open the local office within 60 days from issuance of LOI to be submitted		
ix.	Copy of GST registration		
x.	Copy of PAN registration		
xi.	Make & Model of all Hardware & Software components		
xii.	Compliance to Technical Specifications as mentioned in the RFP on OEM's Letterhead.		
xiii.	Bill of Material without prices		
xiii.	Datasheets highlighting the Functional and Technical Specification parameters in each datasheet for compliances		
xiv.	OEM declaration letter		
xv.	Self-declaration by the Bidder duly signed and stamped by the authorized signatory - Not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of the foregoing reasons		
xvi.	Self-declaration by the Bidder duly signed and stamped by the authorized signatory - Not have their directors and officers convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified.		

Note:

All technical bid document(s)/ details should be duly sealed & signed as required.

In case of the deviation in the authorization letter by the manufacturer & forwarding letter; the price bid of such bidder will not be opened.

Any conditional mention regarding any technical details or prices in any document(s)/ forwarding letter; price bid of such bidder will not be opened.

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

TQ_1: Technical Bid Cover Letter

<<To be printed on bidder company's letterhead and signed by Authorized signatory>>

Date: dd/mm/yyyy

To
The Administrative Officer,
Ahmedabad Municipal Corporation School Board (AMC School Board)
Scout Bhavan, Near Prabhudas Thakkar College,
Paldi, Ahmedabad, Gujarat- 380007

Subject: Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city.

Reference: Tender No :<No> Dated<DD/MM/YYYY>

Dear Sir/ Madam,

Having examined the Bid Document (and the clarification / corrigendum issued thereafter, if any), the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the professional services as required and outlined in the Bid Document for the "Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city.

We attach hereto our responses to Technical-Qualification & Commercial proposals as required by the Bid Document. We confirm that the information contained in these responses or any part thereof, including the exhibits, and other documents and instruments delivered or to be delivered to AMC School Board is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead AMC School Board in its shortlisting process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the selection process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so.

We agree for unconditional acceptance of all the terms and conditions set out in the Bid Document (& subsequent clarification / corrigendum, if any) document and also agree to abide by this tender response for a period of 180 days from the Bid Opening date. We hereby declare that in case the contract is awarded to us, we shall submit the contract performance guarantee bond in the form prescribed the Bid Document.

We agree that you are not bound to accept any tender response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ services specified in the tender response.

It is hereby confirmed that I/We are entitled to act on behalf of our company/ corporation/ firm/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Signature of Authorized Signatory (with official seal)

Name :
Designation :
Address :
Telephone& Fax:
E-mail address :

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

TQ_2: Bidder Information Format

<<To be printed on bidder company's letterhead and signed by Authorized signatory>>

To whomsoever it may concern,

Please find below the details of bidder for participation in Selection of Bidder for RFP for Smart School Project to enhance teaching-learning process in municipal schools through use of ICT technology and support infrastructure in Ahmedabad City.

#	Particulars	Bidder
1	Name of the organization	
2	Type of Organization (Pvt. Ltd/ Public Limited)	
3	Address of Registered office	
4	Company Registration Details	
5	Date of Registration	
6	PAN	
7	GST	
8	Number of years of operations in India	
9	Authorized Signatory Name	
10	Authorized Signatory Designation	
11	Authorized Signatory Contact Details	
12	Authorized Signatory email ID	

Yours Sincerely,

Signature of Authorized Signatory (with official seal)

Name :
Designation :
Address :
Telephone& Fax:
E-mail address :

Note: To be submitted with any other supporting details specified as Document Proof in Section 3

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

TQ_3: Bidders Annual turnover over in last 3 financial years

<<To be printed on bidder company's letterhead and signed by Authorized signatory>>

Date: dd/mm/yyyy

To
The Administrative Officer,
Ahmedabad Municipal Corporation School Board (AMC School Board)
Scout Bhavan, Near Prabhudas Thakkar College,
Paldi, Ahmedabad, Gujarat- 380007

Subject: Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city.

Sir/ Madam,
I have carefully gone through the Terms & Conditions contained in the RFP Document Selection of Bidder for Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city.

I hereby declare that below are the details regarding Overall turnover over last 3 financial years for our organization.

#	Details	FY 2020-2021 (i)	FY 2021-22 (ii)	FY 2022-23 (iii)	Average Turnover [(i)+(ii)+(iii)/3]
1	Overall Annual Turnover- Bidder				

Contact Details of officials for future correspondence regarding the bid process:

Details	Authorized Signatory	Secondary Contact
Name		
Title		
Company Address		
Mobile		
Fax		
Email Id		

I further certify that I am competent officer in my company to make this declaration.

Yours Sincerely,

Signature of Authorized Signatory (with official seal)

Name :
Designation :
Address :
Telephone& Fax :
E-mail address :

Note: To be submitted with any other supporting details specified as Document Proof in Section 3 of RFP.

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

TQ_4: Auditor's/CA Certificate for turnover for bidder

Date: dd/mm/yyyy

This is to certify that the Annual Turnover as per books and records of _____ for the following financial years are as under.

#	Financial Year Ending	Annual Turnover (INR)
1.	31st March, 2021	
2.	31st March, 2022	
3.	31st March, 2023	
	Average Turnover	

I further certify that I am competent officer in my company to make this declaration.

Yours Sincerely,

Signature of Auditor (with official seal)

Name :
Designation :
Address :
Telephone& Fax :
E-mail address :

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

TQ_5: Self-Declaration – No Blacklisting

<<To be printed on company's letterhead and signed by Authorized signatory>>

Date: dd/mm/yyyy

To
The Administrative Officer,
Ahmedabad Municipal Corporation School Board (AMC School Board)
Scout Bhavan, Near Prabhudas Thakkar College,
Paldi, Ahmedabad, Gujarat- 380007

Sir/Madam,
In response to the Tender Ref. No. _____ dated _____ for Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city, as an owner/ partner/ Director of _____, I/ We hereby declare that presently our Company/ firm _____ is having unblemished record and is not declared ineligible for corrupt and fraudulent practices either indefinitely or for a particular period of time by any State/ Central Government/ PSU.

We further declare that presently our Company/ firm _____ is not blacklisted and not declared ineligible for reasons other than corrupt and fraudulent practices by any State/ Central Government/ PSU during last five years, from date of this bid submission.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, my/ our security may be forfeited in full and the tender if any to the extent accepted may be cancelled.

Name of the Bidder :
Authorized Signatory :
Seal of the Organization :
Business Address :
Date :
Place :

TQ_6: Affidavit

(The affidavit format as indicated below to be furnished on non-judicial stamp paper of Rs: 100 and duly notarized)

Name of work: Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city.

1. I, the undersigned, do hereby certify that all the statements made in the required attachments are true and correct.
2. The undersigned also hereby certifies that neither our firm M/s nor any of its constituent partners have abandoned any work in India nor any contract awarded to us for such works has been rescinded during last five years, from the date of this bid submission.
3. The undersigned hereby authorize(s) and request(s) any bank, person, authorities, government or public limited institutions, firm or corporation to furnish pertinent information deemed necessary and requested by the AMC School Board to verify our statements or our competence and general reputation.
4. The undersigned understands and agreed that further qualifying information may be requested and agrees to furnish any such information at the request of the AMC School Board.
5. The AMC School Board and its authorized representative are hereby authorized to conduct any inquiries or investigations to verify the statements, documents, and information submitted in connection with this application and to seek clarification from our bankers and clients regarding any financial and technical aspects. This Affidavit will also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information, to provide such information deemed necessary and requested by you to verify statements and information provided in the tender or with regard to the resources, experience and competence of the Applicant.
6. My/ our offer shall not be considered in case of fake/ forged document(s) found during verification at any stage or at any stage of contract. I/ We are agreed to whatever action (s) taken by competent authority of corporation in the aforesaid circumstances such as forfeiture of security deposit and debarring from participation in future tenders for the period/ years as deemed fit by the corporation and informing the same to all other state/ central level Government/ semi government organizations.

Signed by the Authorized Signatory of the firm

Title of the office: _____

Name of the firm: _____

Date: _____

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

TQ_7: Details of experience

Date: dd/mm/yyyy

To
The Administrative Officer,
Ahmedabad Municipal Corporation School Board (AMC School Board)
Scout Bhavan, Near Prabhudas Thakkar College,
Paldi, Ahmedabad, Gujarat- 380007

Sir/Madam,

I have carefully gone through the Terms & Conditions contained in the Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city”.

I hereby declare that below are the details regarding relevant work that has been taken up by our company.

Assignment Name:	
Location:	Approx. Value of Services:
Name of Client:	Duration of assignment (months):
Client Contact Person, Title/Designation, Tel. No./Address:	Total No. of Beneficiary from the system:
Start date (month/year):	Total No of client end users:
Completion date (month/year):	No. of professional staff-months provided by your firm/organization for the proposed Solution:
Description of Project:	
Description of Actual Services provided:	
Mandatory Supporting Documents:	
Work order / Contract for the project/ Purchase Order	
Client Certificate giving present status of the project and view of the quality of services by the Bidder	

I further certify that I am competent officer in my company to make this declaration.

Yours Sincerely,

Signature of Authorized Signatory (with official seal)

Name :

Designation :

Address :

Telephone& Fax :

E-mail address :

TQ_8: Solution Design

S. No.	Chapters of Technical Proposal	Description
Chapter 1: About Bidder		
1.1	Introduction & Background	
1.2	Services & Products	
1.3	Credentials & Prior Projects	
1.4	Team	
1.5	Address & Offices	
1.6	Similar Prior Experience	
Chapter 2: Understanding of Scope of Work and Approach of Bidder for Implementation		
2.1	Approach to meet the requirement asked in RFP Scope of Work	
2.2		
2.3		
2.4		
2.5		
2.6		
2.7		
2.8		
2.9		
2.10		
2.11		
2.12		
Chapter 3: Approach & Methodology for Deliverables		
3.1	Inception Phase	
3.2	Manpower Deployment for Implementation Phase	
3.3	Requirement Gathering	
3.4	Solution Design & Customization	
3.5	Supply & Delivery	
3.6	Installation & Commissioning	
3.7	Testing & Go-Live of the solution	
3.8	Activities, Timeline	
3.9	Completeness of the proposed project plan with proper Timelines, Responsibility Matrix, and change management	
3.10	Change Management	
3.11	Identification of Project Risks	
3.12	Mitigation Plan for the identified risks	
	Chapter 4: Expectation of Bidder from Authority	
	Chapter 5: Annexures	

TQ_9: Curriculum Vitae (CV) of Project Team

S. No.	Details	Response
1	Proposed Position & Skill Set	
2	Name of Firm	
3	Name of Staff [Insert full name]	
4	Date of Birth	
5	Education [Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment]	
6	Membership of Professional Associations / Societies	
7	Summary of key Training and Certifications	
8	Countries of Work Experience: [List countries where staff has worked in the last ten years]	
9	Language Proficiency	(Read/Write/Speak) - (Excellent/Good/Fair)
10	Number of years of experience	
11	Employment Record [Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment as per format provided]	From [Year]: _____ To [Year]: _____ Employer: Positions held:
12	Detailed Tasks Assigned [List all tasks to be performed under this assignment]	
13	Highlights of assignments handled and significant accomplishments. [Among the assignments in which the staff has been involved, indicate the following information for those assignments that best illustrate staff capability to handle the tasks listed under point 12.]	Name of assignment or project: Year: Location: Client: Main project features: Positions held: Activities performed:

SIGNATURE:

DATE OF SIGNING: Day Month Year

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

TQ 10: Format for Authorization Letters from OEMs

<<To be printed on letter head of OEM and signed by Authorized signatory of OEM>>

Date: dd/mm/yyyy

To

The Administrative Officer,
Ahmedabad Municipal Corporation School Board (AMC School Board)
Scout Bhavan, Near Prabhudas Thakkar College,
Paldi, Ahmedabad, Gujarat- 380007

Sub: Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city – Authorization letter

Ref : Tender No: <No> Dated <DD/MM/YYYY>

Dear Sir/ Madam,

We _____, (name and address of the manufacturer) who are established and reputed manufacturers of _____ having factories at _____ (addresses of manufacturing / development locations) do hereby authorize M/s _____ (name and address of the bidder) to bid, negotiate and conclude the contract with you against the above mentioned tender for the above equipment / software manufactured / developed by us.

We herewith certify that the above-mentioned equipment / software products are not end of the life and we hereby undertake to support this equipment / software for the duration of minimum 3 Years from the date Go-Live and completion of warranty period (3 year).

Yours faithfully,

(Signature of the Authorized Signatory
from OEM)

Name

Designation

Seal.

Date:

Place:

Business Address:

(Signature of the Authorized Signatory
Bidder)

Name

Designation

Seal.

Date:

Place:

Business Address:

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

**TQ 11 Undertaking as per guidelines published by Ministry of Finance, Dept. of Expenditure, Public Procurement division dated 23.07.2020.
(On Letterhead of Bidder)**

Date: DD/MM/YYYY

To,

The Administrative Officer,

Ahmedabad Municipal Corporation School Board (AMC School Board),
Scout Bhavan, Near Prabhudas Thakkar College,
Paldi, Ahmedabad, Gujarat- 380007

Tender No: AMC School Board / 22-23 /

Dear Sir,

Mr. _____ undersigned authorized representative of **M/s <<Name of Company>>** has read clause regarding restriction on procurement from a bidder of a country which shares a land border with India.

I certify that quoted product from following OEMs are not from such a country or, of if from such a country, these quoted products OEM have been registered with competent authority. I hereby certify that these quoted product & its OEM fulfils all requirements in this regard and is eligible to be considered for procurement from Bid number << Tender No. >>

No.	Item Category	Quoted Make & Model
1.		
2.		
3.		
4.		
5.		
6.		
.		
.		
N		

In case I'm supplying material from a country which shares a land border with India, I will provide evidence for valid registration by the competent authority, otherwise Purchaser/End user Dept. reserves the right to take legal action on us.

Thanking you,

Yours faithfully

(Signature of the Authorized signatory of the Bidding Organization)

Name :

Designation :

Date :

Company Seal :

Business Address :

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

(On Letter Head of OEM)

Date: DD/MM/YYYY

To

The Administrative Officer

Ahmedabad Municipal Corporation School Board (AMC School Board),
Scout Bhavan, Near Prabhudas Thakkar College,
Paldi, Ahmedabad, Gujarat- 380007

Tender No: AMC School Board / 22-23 /

Dear Sir,

Mr. _____ undersigned authorized representative of **M/s. <<Name of Company>>** has read clause regarding restriction on procurement from a bidder of a country which shares a land border with India.

I certify that following quoted product is not from such a country or, of if from such a country, these quoted product(s) & we as OEM has been registered with competent authority. I hereby certify that this quoted product(s) fulfil all requirements in this regard and is eligible to be considered for procurement from _____”.

No.	Item Category	Quoted Make & Model
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
.		
.		
N		

In case I'm supplying material from a country which shares a land border with India, I will provide evidence for valid registration by the competent authority; otherwise, Purchaser/End user Dept. reserves the right to take legal action on us.

Thanking you,

Yours faithfully

(Signature of the Authorized signatory of the OEM Organization)

Name :

Designation :

Date :

Company Seal :

Business Address :

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

TQ 12: Bank Guarantee format for EMD

FORMAT OF THE UNCONDITIONAL AND IRREVOCABLE BANK GUARANTEE FOR EARNEST MONEY DEPOSIT

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

In consideration of the (*Insert name of the Bidder*) submitting the Bid *inter alia* For Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city, for meeting the terms and conditions in response to the RFP DOCUMENT----- dated ----- issued by **Ahmedabad Municipal Corporation School Board** (“AMC School Board”), and AMC School Board agreeing to consider the Bid of [*Insert the name of the Bidder*] in accordance with the terms of the E-BID DOCUMENT, the (Insert name and address of the bank issuing the Bid Bond, and address of the head office) (Here in after referred to as “Guarantor Bank”) hereby agrees unequivocally, irrevocably and unconditionally to pay to AMC School Board or its authorized representative at [*Insert Name of the Place from the address of AMC School Board*] forthwith on demand in writing from AMC School Board or any representative authorized by it in this behalf an amount not exceeding Rupeeson behalf of M/s.[*Insert name of the Bidder*].

This guarantee shall be valid and binding on the Guarantor Bank up to and including (*Insert date of validity of Earnest Money Deposit in accordance with the terms of reference of the E-BID DOCUMENT*) and shall not be terminable by notice or any change in the constitution of the Guarantor Bank or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between concerned parties.

Our liability under this Guarantee is restricted to Rupees (Rs...). AMC School Board or its authorized representative shall be entitled to invoke this Guarantee until [*Insert Date, which is six months after the date in the preceding sentence*]. The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand from AMC School Board or its authorized representative, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to AMC School Board or its authorized representative.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection, disputes, or disparities raised by the Bidder or any other person. The Guarantor Bank shall not require AMC School Board or its authorized representative to justify the invocation of this

BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against AMC School Board or its authorized representative in respect of any payment made hereunder.

This BANK GUARANTEE shall be payable at Ahmedabad.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring, liquidation, winding up, dissolution or any other change in the constitution of the Guarantor Bank.

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly, AMC School Board or its authorized representative shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Bidder, to make any claim against or any demand on the Bidder or to give any notice to the Bidder to enforce any security held by AMC School Board or its authorized representative or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

The Guarantor Bank hereby agrees and acknowledges that AMC School Board shall have a right to invoke this Bank Guarantee either in part or in full, as it may deem fit.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rupees --- -----and it shall remain in force until [Date to be inserted on the basis of Terms of Reference of the E-BID DOCUMENT], with an additional claim period of 6 (six) months thereafter. We are liable to pay the guaranteed amount or any part thereof under this BANK GUARANTEE only ifAMC School Board or its authorized representative serves upon us a written claim or demand.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on thisday of at

Witness:

Signature
Name
Address
Designation with Bank Stamp Signature

Signature
Name
Address
Designation with Bank Stamp Signature

Name and address

Attorney as per power of attorney No.

For:..... [Insert Name of the Bank]

Banker's Stamp and Full Address:

Dated this day of 2022.

Note: The Stamp Paper should be in the name of the Executing Bank

FORMAT FOR POWER OF ATTORNEY FOR PRIME MEMBER OF CONSORTIUM

Whereas the Smart City Ahmedabad Development Ltd. has invited applications from interested parties for the Selection of **“Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city.”**.

Whereas, and (Collectively “Consortium”) being Members of the Consortium are interested in bidding for the Project in accordance with the terms and conditions of the Request for Proposal (RFP document) and other connected documents in respect of the Project, and

Whereas it is necessary for the Members of the Consortium to designate one of them as the Lead Member with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium’s bid for the Project and its execution.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS

We, Having our Registered office at,
M/s,..... Having our Registered office at,

(Hereinafter collectively referred to as the “Principals”) do hereby irrevocably designate, nominate, constitute, appoint and authorize M/s. having its registered office at, being one of the Members of the Consortium, as the Lead Member and true and lawful attorney of the Consortium (hereinafter referred to as the “Attorney”). We hereby irrevocably authorize the Attorney (with power to sub-delegate) to conduct all business for and on behalf of the Consortium and any one of us during the bidding process and, in the event the Consortium is awarded the concession/contract, during the execution of the Project and in this regard, to do on our behalf and on behalf of the Consortium, all or any of such acts, deeds or things as are necessary or required or incidental to the pre-qualification of the Consortium and submission of its bid for the Project, including but not limited to signing and submission of all applications, bids and other documents and writings, participate in SIs and other conferences, respond to queries, submit information/ documents, sign and execute contracts and undertakings consequent to acceptance of the bid of the Consortium and generally to represent the Consortium in all its dealings with the SCADL, and/ or any other Government Agency or any person, in all matters in connection with or relating to or arising out of the Consortium’s bid for the Project and/ or upon award thereof till the Concession Agreement is entered into with the SCADL.

AND hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us/ Consortium.

IN WITNESS WHEREOF WE THE PRINCIPALS ABOVE NAMED HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS DAY OF, 20....

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

For

(Signature)

.....

(Name & Title)

For

(Signature)

.....

(Name & Title)

Witnesses:

1.

2.

(Executants)

(To be executed by all the Members of the Consortium)

Notes:

- *The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.*
- *Also, wherever required, the SI should submit for verification the extract of the charter documents and documents such as a board or shareholders' resolution/power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the SI.*
- *For a Power of Attorney executed and issued overseas, the document will also have to be legalized by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by SIs from countries that have signed the Hague Legislation Convention, 1961 are not required to be legalized by the Indian Embassy if it carries a conforming Apostille certificate.*

Annexure B: Commercial Bid Format & Instructions

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

Section I: Commercial Bid Cover Letter

<<To be printed on letter head of Bidder and signed by Authorized signatory>>

Date: dd/mm/yyyy

To
The Administrative Officer,
Ahmedabad Municipal Corporation School Board (AMC School Board)
Scout Bhavan, Near Prabhudas Thakkar College,
Paldi, Ahmedabad, Gujarat- 380007

Subject: Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city.

Reference: Tender No :< No> Dated<DD/MM/YYYY>

Dear Sir/ Madam,

We, the undersigned Bidders, having read and examined in detail all the bidding documents in respect of “Selection of Bidder for Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city” do hereby propose to provide services as specified in the Bid Document referred above.

PRICE AND VALIDITY

All the prices mentioned in our Tender are in accordance with the terms as specified in the Tender documents. All the prices and other terms and conditions of this Tender are valid for entire contract duration. We hereby confirm that our Tender prices include all taxes. Taxes are quoted separately under relevant sections, as specified in the Bid Document formats.

We have studied the clause relating to Indian Income Tax and hereby declare that if any income tax, surcharge on Income Tax, Professional and any other corporate Tax in altered under the law, we shall pay the same.

DEVIATIONS

We declare that all the services shall be performed strictly in accordance with the Bid Documents and there are no deviations

Further we agree that additional conditions, if any, found in our bid documents, shall not be given effect to.

QUALIFYING DATA

We confirm having submitted the information as required by you in your Instruction to Bidders. In case you require any other further information/documentary proof in this regard before evaluation of our Tender, we agree to furnish the same in time to your satisfaction.

BID PRICE

We declare that our Bid Price is for the entire scope of the work as specified in the Bid Document. The bid price at which the contract is awarded shall hold good for entire tenure of the contract. These prices are indicated in the subsequent sub-sections of this Section.

CONTRACT PERFORMANCE GUARANTEE BOND

We hereby declare that in case the contract is awarded to us, we shall submit the contract Performance Bank Guarantee in the form prescribed in the Bid Document.

We hereby declare that our Tender is made in good faith, without collusion or fraud and the information contained in the Tender is true and correct to the best of our knowledge and belief.

We understand that our Tender is binding on us and that you are not bound to accept a Tender you receive. We confirm that no technical deviations are attached here with this commercial offer.

Request for Proposal (RFP) for Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad City

Thanking you,
Yours faithfully,

(Signature of the Authorized Signatory)

Name

Designation

Seal.

Date:

Place:

Business Address:

Section II: General instructions for Commercial Bid

- i. Bidder should provide all prices as per the prescribed format under this Annexure.
- ii. All the prices are to be entered in Indian Rupees (INR) only
- iii. Bidder needs to quote the cost against Capital Expenditure (CAPEX) part only. Bidder should factor any cost, which may be incurred during the O&M phase in their price bid. No additional cost shall be sanctioned for O&M phase of this project.
- iv. Prices indicated in the schedules shall be inclusive of all taxes, Levies, duties including GST and with excluding GST both.
- v. All prices should be inclusive of all required accessories/parts, installation charges and 3 years onsite repair warranty and comprehensive annual maintenance.
- vi. It is mandatory to provide breakup of all Taxes, Duties and Levies wherever asked for.
- vii. The bidder will have to arrange for storage of the goods at their own cost for storage of any items supplied as part of this scope of work. Security of the same should also be catered by bidder only.
- viii. AMC School Board reserves the right to ask the SI to submit proof of payment against any of the taxes, duties, levies indicated.
- ix. The Unit Rate as mentioned in the following formats may be used for the purpose of 'Change Order' (limited to thirty percent of quantity described in commercial bid) for respective items including license fee, if any. The unit-rates discovered shall be valid for duration for 3 years from the date of opening of the financial bid.
- x. AMC School Board also intends to utilize various rates obtained through this tender for requirements across various departments. Bidders are requested to factor this potential demand and give the best possible rate to AMC School Board.
- xi. Line items mentioned in the Commercial Formats are for representation purpose and SI may propose alternate technology / solution (with proper justification). Bidders are required to suitably add line items / merge the cost components depending upon their proposed solution.
- xii. Quantity mentioned against each of the item is tentative in nature. Actual quantity verification shall be carried out at respective school location. Successful bidder shall be paid based on the actual quantity, which is installed and commissioned at site only. However, final decisive authority shall be AMC school board only in this regard.
- xiii. No escalations of prices will be considered under any circumstances.
- xiv. Warranty Period is defined as 3 years from the date of Go-Live of the complete system in working condition to the end user. The bidder shall be responsible to maintain the system for 3 years from the date of Go-Live which includes year of onsite repair warranty and comprehensive Annual maintenance.
- xv. Bidder is requested to provide consumables as well for respective items for the entire contractual agreement period.
- xvi. Bidder is requested to provide adequate documentary evidence against all the work, specifically civil work carried out by their team.
- xvii. The bidders may visit the site and obtain additional information at their own cost and responsibility.
- xviii. AMC School Board to scale up and scale down resources based on requirements. Any line items may be removed from the scope based on AMC School Board's discretion.
- xix. During the payment stage, AMC School Board reserves the right to ask the Bidder to submit proof of payment against any of the taxes, duties, levies indicated. Bidder is also requested to submit all the documentary evidence while raising any invoice against respective milestone mentioned in this document.
- xx. The Bidder needs to account for all Out-of-Pocket expenses due to Boarding, Lodging and other related items. No additional/separate payment shall be made regarding the same.
- xxi. For the purpose of evaluation of Commercial Bids, AMC School Board shall make appropriate assumptions to arrive at a common bid price for all the Bidders. This however shall have no correlation with the Contract value or actual payment to be made to the Bidder.
- xxii. In case of repeat of same item in commercial bid, the least price quoted by bidder shall be considered while placing additional order.
- xxiii. The Contract Price shall be firm and not subject to any alteration.
- xxiv. The Implementation agency should be deemed to have satisfied itself as to the correctness and sufficiency of the contract price, which shall, except as otherwise provided for in the contract, cover all its obligations under the contract.
- xxv. Please note invitation of price discovery rate for future requirements does not imply guarantee of any

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additional work or any increase in scope of work under this project. The price discovery rates are being invited to meet any exigency requirements if a need emerges during the period of contract with respect to deployment of additional manpower resources.

- xxvi. The rate/cost quoted for AMC and price discovery elements would be considered for additional procurement/payment in future.
- xxvii. The bidder shall have to provide break-up of cost quoted under various line items (*Example: Break-up of cost quoted under each line item of Mathematics and Science Lab, which is more than 500 items under a particular one-line item in commercial bid*) in their commercial bid. The detailed break-up and its calculation shall be verified for the winning bidder only and overall rates quoted on online platform shall prevail. This discovered rate may be used by AMC School Board (Of winning bidder only).
- xxviii. Wherever present, the items mentioned as Lump Sum in above table will have quantity as 1 in the BoQ, the bidder should consider the same as Lump Sum and submit the commercials. Bidder is also requested to exercise the scope to be completed against the same line item.

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Section III: Commercial Bid Format

- **25 Smart Schools** – Future Classroom with smart benches, Science & Maths Lab, 3D Education Chart, 3D Paint and minor civil work as per requirement and specification mentioned in this RFP.
- **2 Smart Schools** – These schools are required to develop from MP Grant Fund and as per their approval which requires all item defined in commercial bid and as per specification mentioned in this RFP.

Detailed specification of the line items mentioned in Project cost (this includes both CAPEX and OPEX cost) table are available in Annexure D of this document.

A. Project cost for twenty five (25) smart schools (Table -A)

S R. N O.	Component	Quantity (A)	Unit of Meas urem ent	Unit Rate (Excluding GST) (INR) (B) (with Taxes & levies if any applicable)	Unit Rate (Including GST) (INR) (C) (with Taxes & levies if any applicable)	Total (Excluding GST) (INR) (D=A*B) (with Taxes & levies if any applicable)	Total (Including GST) (INR) (E=A*C) (with Taxes & levies if any applicable)
1.	Math and Science Lab with working Models with Teachers Training (with LED T.V)	1	No.				
2.	3D Educational Chart with Wall Waterproofing	11000	Sq. ft				
3.	3D Paint	1000	Sq. ft				
4.	Future Class	1	Lump sum				
5.	Fancy Benches for Future Class	20	No.				
6.	Civil Work	1	Lump sum				
Total cost for one (1) smart school							
Total cost for twenty five (25) smart schools							

Quantities mentioned in the commercial bid is for ONE (1) Smart school implementation only. Whereas bidder is required to implement in Smart schools under this project. Further, Quantities mentioned in the tender are approximate and no claim shall be entertained for quantities of work executed being either more or less than those entered in the tender of estimate. Total Cost for this project shall be table B – Commercial bid summary, as the cost of one Smart School in the same table to arrive to the total project cost.

Further, as stated in Section 3.2.3, bidders shall have to provide quote against each of the line item mentioned in Section IV BoQ below this section. Bidder needs to provide bifurcation against the same.

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Project cost for two (2) smart schools (Table - B)

Sr. No	Component	Quantity (A)	Unit of Measurement	Unit Rate (Excluding GST) (INR) (B) (with Taxes & levies if any applicable)	Unit Rate (Including GST) (INR) (C) (with Taxes & levies if any applicable)	Total (Excluding GST) (INR) (D=A*B) (with Taxes & levies if any applicable)	Total (Including GST) (INR) (E=A*C) (with Taxes & levies if any applicable)
1	Joyful Learning Class	1	Lumpsum				
2.	Smart Panel	4	No.				
3.	Math and Science Lab with working Models with Teachers Training (with LED T.V)	1	No.				
4.	3D Educational Chart with Wall Waterproofing	11000	Sq. ft				
5.	False Ceiling for Robotics Lab & Future Classrooms	500	Sq. ft				
6.	Fancy Benches for Std-1 to Std-4	80	No.				
7.	3D Paint	1000	Sq. ft				
8.	White Board	8	No.				
9.	Sports Kit	4	Set				
10.	Future Class	1	Lumpsum				
11.	Fancy Benches for Future Class	20	No.				
12.	Playground Equipment	06	No.				
13.	Sound System	2	No				
14.	Astronomical Telescope	1	No.				
15.	Stem & Robotic Lab with QR Code	1	Lumpsum				
16.	Stem & Robotic Lab Furniture	1	Lumpsum				
17.	LED T.V for Stem & Robotic Lab	1	No.				
18.	Civil Work	1	Lumpsum				
Total cost for one (1) smart school							
Total cost for two (2) smart schools							

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Total Project Cost (C = A+B)

S. No.	Commercial Bid Summary	Total Cost (Excluding GST) (INR) <i>(with Taxes & levies if any applicable)</i>	Total Cost (Including GST) (INR) <i>(with Taxes & levies if any applicable)</i>
1	Total Project Cost for twenty five (25) smart schools (Table-A) (INR)		
2	Total Project Cost for two (2) smart schools (Table-B)		
Grand Total Project Cost (C=A+B)			

The L1 bidder shall be determined based on total project cost quoted by bidder for schools including of GST and any other taxes, levies in any applicable.

The bidder must fill applicable taxes for each item as per the govt. rules and regulations as on bid submission date. In case of incorrect value of GST/taxes, the authority’s decision on bid evaluation shall be final and it may lead to disqualification of bidder.

AMC School Board may release the work order for the additional work of 10 smart schools in totality or part there of any selected items from BOQ to the successful bidder the additional work will be given based on requirement and approval of AMC School Board Authority on rate discovered under the price bid of this tender.

D. Detailed BoQ

As mentioned in the section 3.2.3, bidder is requested to provide commercial break-up of the cost quoted against various items mentioned in CAPEX (A) – Table 1A under this section at the time of opening of the bid in a sealed envelope.

Annexure – 1 (Joyful Learning Class) (No. of 1 to 3)

Sr. No	DETAILS	Unit	Unit/ Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
1	Pre-Educational Kit (Summation of Table 1A)	No.	01			
2	3D Educational Chart	Sq. ft	11000			

Table 1A: Pre-Educational Kit

Sr. No	Pre-Educational Kit	Unit/ Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
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Sr. No	Pre-Educational Kit	Unit/ Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
1	Ring Toss	2			
2	Linking Toys	2			
3	Jingle Bell Roller	2			
4	Dafli	6			
5	Ringing Ball	6			
6	Twin Teddy Toys	2			
7	Counting Frame	2			
8	New Business	2			
9	Snakes And Ladder	2			
10	Carry Bowling Pin	3			
11	Small Carom Board	2			
12	Cricket Set	2			
13	Small Hockey	2			
14	Skipping Rope	10			
15	Timer	2			
16	Teddy Rider	2			
17	Musical Drum	5			
18	Flying Disc	12			
19	Table Tennis	3			
20	Pre-Education Stand	1			

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Sr. No	Pre-Educational Kit	Unit/ Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
21	Flower Puzzle	4			
22	Vegetable Puzzle	4			
23	Fruit Puzzle	4			
24	Transport Puzzle	4			
25	Teddy Ring	2			
26	Xylophone	2			
27	Baby Chair	20			
28	Baby Mission Car	1			
29	Baby Tricycle	2			
30	Slide And Swing with Safety Flooring Mat	1 set			
31	Alpha Genius Board	1			
32	Education Train	1			
33	Front Rounded Table	2			
34	Shape Shorter Ball	5			
35	Link Designer	2			
36	Magic Pegs	2			

Annexure: -2 (Smart Panel)

Sr. No	Name of Item	Unit (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
1	Smart Panel	4			

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Annexure: - 3 (Math's and Science Lab with working Models with Teachers Training)

Sr No	Name	Unit/Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
Exhibits					
1	Waterproof monoscope	1			
2	Probability with Manipulative	1			
3	3-dimension modern periodic table				
4	Human eye model	1			
5	Human brain & skull	1			
6	Human ear	1			
7	Microscale experiments in environmental chemistry	1			
8	Barometer, digital clock and calendar weather Forecast Receiver	1			
9	Wind Speed and direction meter	1			
10	Human battery	1			
11	Solar vapor tower	1			
12	Magnetic spring	1			
13	Magnetic field visualization with compasses	1			
14	Magnetic effect of electric current with compass	1			
15	Shape of earth due to rotation	1			
16	Solar water heater	1			
17	Conservation of momentum – marbles slide	1			
18	Barometer, digital clock and calendar weather forecast receiver	1			
19	Smoke Based Optical Bench for Concave Lens	1			
20	Smoke Based Optical Bench for Convex Mirror	1			
21	Smoke Based Optical Bench for Concave Mirror	1			
22	Self-balancing doll	1			
23	Tower of Pisa	1			
24	D of nails	1			
25	The floating ball	1			
26	Heat spiral	1			
27	Bernoulli balls	1			
28	Magic water tap	1			
29	Archimedes screw	1			
30	Simple Machines – To understand the functions of Lever – Pulley	1			
31	Wheel and axle load lifting	1			
32	Anamorphous	1			
33	Freely suspended magnet	1			
34	Zoetrope	1			
35	Colored shadows	1			
36	BAROMETER, DIGITAL CLOCK AND calendar weather Forecast Receiver	1			
37	Thaumatrope	1			
38	Internal reflection tu	1			

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Sr No	Name	Unit/Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
39	Newton's disc	1			
40	Solar cooker	1			
41	Multiple reflection of light	1			
42	Human kaleidoscope	1			
43	The odd dining table	1			
44	Lateral shift	1			
45	Volcano eruption	1			
46	Day & night	1			
47	The universe – solar system	1			
48	Satellites	1			
49	Heat absorption	1			
50	Hand powered generator	1			
51	Radiometer	1			
52	Solar energy kit	1			
53	Newtons 3 rd Law Model	1			
54	Magnetic fluid	1			
55	Eddy current break	1			
56	Windmill	1			
57	K.E. and P.E. wheel	1			
58	Marble race	1			
59	Force and types – FRICTION	1			
60	Electric Bell	1			
61	Magnetic effect of electric current with galvanometer	1			
62	Wave motion with pendulum	1			
63	Oham's disc	1			
64	Volume vs density	1			
65	DNA model	1			
66	Rain measurement meter, heat index, dew point	1			
67	Angle of vision	1			
68	Depth perception – near and far	1			
69	Simple pendulum	1			
70	Pendulums of varying length	1			
71	Sympathetic pendulums	1			
72	Weight on different planets	1			
73	All roads lead to Delhi	1			
74	Angular momentum wheel	1			
75	Clap switch	1			
76	Funny mirrors	1			
77	Depth perception doll	1			
78	Drip irrigation	1			
79	Weight balancing scale	1			
80	Measurement of physical quantities: Weighing Machine	1			
81	Electric Maze	1			
82	Sand patterns of a compound pendulum	1			
83	The ironic border / colour boundary	1			
84	Change in electrical resistance due to	1			

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Sr No	Name	Unit/Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
	dimension				
85	Pin screen	1			
86	Indore, outdoor & humidity digital temperature indicator	1			
87	Human torso	1			
88	Human skeleton	1			
89	Electronics eyepiece	1			
90	Pascal's triangle	1			
91	Newton's cradle	1			
92	Resonance	1			
93	Moment of inertia	1			
94	Lateral and longitudinal waves	1			
95 A	Change in electrical resistance due to dimension	1			
96	Human heart model	1			
97	Sound - Transmission of various types of sound waves. – Xylophone	1			
98	Natural resources	1			
99 A	Animal cell	1			
99 B	Plant cell	1			
95 B	Series and parallel circuits	1			
95 C	Electrical resistance of materials	1			
Science kits					
100	Properties of Air	1			
101	Air can lift weight	1			
102	The 5 senses wheel	1			
103	Relationships quiz cards	1			
104	Dancing acrobat	1			
105	Tooth race board game	1			
106	Safety rules board game	1			
107	Stick animals – moving body parts	1			
108	Save the sun – board game	1			
109	Balloon car	1			
110	Body parts bingo game	1			
111	BAROMETER, DIGITAL CLOCK AND calendar weather Forecast Receiver	1			
112	Clay animals	1			
113	Do it YOURSELF kit of MANGALYAN and Model of PSLV ROCKET.	1			
114	Colossal s & l – space theme	1			
115	Animals' zoo – card game	1			
116	Aryabhata model	1			
117	Spin to read – secret communication	1			
118	3d ball for solar system with acrylic paint and paintbrush	1			
119	Pinwheel	1			
120	Animals' jigsaw	1			
121	Insects' jigsaw	1			
122	Birds' jigsaw	1			
123	Popsicle stick whistle	1			
124	Balloon bugle	1			
125	Paper cup telephone	1			

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Sr No	Name	Unit/Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
126	Pan pipes	1			
127	My body pocket chart	1			
128	Nutriplay	1			
129	The impossible fold	1			
130	Finding north	1			
131	Waterproof tissue paper	1			
132	Blowing out candle through bottle	1			
133	Magnetic spring	1			
134	Solar eclipse Viewer	1			
135	Sound gun	1			
136	Musical balloon	1			
137	Musical straws	1			
138	COSMOS: FROM BIG BANG TO EARTH	1			
139	Sun and the zodiac band	1			
140	Sundial	1			
141	Moon flip book	1			
142	Friction books	1			
143	Floating rice bottles	1			
144	Flexagon – food chain	1			
145	Flexagon – life cycle of a frog	1			
146	Flexagon – life cycle of a butterfly	1			
147	Light is needed for photosynthesis	1			
148	Air is needed for photosynthesis	1			
149	Starch test for green leaves	1			
150	States of my country jigsaw	1			
151	Tornado in a bottle	1			
152	Floating astronaut	1			
153	Floating Indian rocket to moon	1			
154	Magnetic field viewer	1			
155	Planets card game	1			
156	The Muscular system and digestive system in Human ings - Teeth	1			
157	Catapult	1			
158	Strength of paper pillar	1			
159	Inverted glass of water with card	1			
160	Inverted glass of water with cloth	1			
161	Water rising in cup	1			
162	Inverted bottle of water	1			
163	Structures – sticks	1			
164	Structures – paper cups	1			
165	Germination of seeds	1			
166	Starch test of food items	1			
167	Levitating pencil	1			
168	Diy magnetic compass	1			
169	Which one has more volume	1			
170	Leaky bottle – air pressure	1			
171	Blowing balloon in a bottle	1			
172	Lungs model	1			
173	Inertia challenge	1			
174	Straw sprinkler	1			

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Sr No	Name	Unit/Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
175	Small lifts heavy	1			
176	Electromagnet	1			
177	Measurement of physical quantities: Measuring Units	1			
178	Heat: Modes of heat transfer: Conduction	1			
179	Modes of heat transfer: Expansion and Contraction of a solid substance	1			
180	TELESCOPE 3.0	1			
181	Balloon rocket	1			
182	Magic roll back can	1			
183	The spinning spindle	1			
184	Twin planes	1			
185	Folding flyers	1			
186	Thaumatrope	1			
187	Piercing a balloon	1			
188	Cloth siphon	1			
189	Dancing coin	1			
190	Reflection of light	1			
191	Magic straw – static electricity	1			
192	Static electricity	1			
193	Jenga	1			
194	Balancing nails	1			
195	Genie in a bottle	1			
196	Bottle of brahma	1			
197	Ping pong ball cup challenge	1			
198	Waterfall race	1			
199	Reflection in a plane mirror	1			
200	Laws of reflection common optics box	1			
200	Laws of reflection Common optics box	1			
201	Multiple reflection in mirrors at an angle common optics box	1			
202	Multiple reflection in parallel mirrors common optics box	1			
202	No inversion – principle of periscope common optics box	1			
203	Dispersion of light common optics box	1			
204	Recombining light using two prisms common optics box	1			
205	Angle of prism common optics box	1			
206	Rainbow formation common optics box	1			
207	Eye defects and correction common optics box	1			
208	Lateral inversion common optics box	1			

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Sr No	Name	Unit/Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
209	Reflection through rectangular block common optics box	1			
210	Refraction and reflection at plane surface common optics box	1			
211	Refraction through semicircular block common optics box	1			
212	Critical angle common optics box	1			
213	Total internal reflecting prism common optics box	1			
214	Focal length of convex lens common optics box	1			
215	Focal length of concave lens common optics box	1			
216	Focal length of convex mirror common optics box	1			
217	Focal length of concave mirror common optics box	1			
218	Focal length of convex lens using plane mirror common optics box	1			
219	Focal length of convex lens - image and object method common optics box	1			
220	Convex lens as a combination of prisms common optics box	1			
221	Concave lens as a combination of prisms common optics box	1			
222	Simple kaleidoscope	1			
223	Refraction tricks - broken pencil & disappearing coin	1			
224	ISRO GSLV mk2 making kit	1			
225	Respiratory system jigsaw	1			
226	Heat resistant thread	1			
227	Heat resistant balloon	1			
228	Finding of light using water bottle and laser	1			
229	Paper chromatography	1			
230	Balloon wars	1			
231	Jal tarang	1			
232	Screaming balloons	1			
233	Soap and turmeric test	1			
234	Floating and sinking lemons	1			
235	Magic marble through the coin	1			
236	Static Electricity:Temporary electric charge generated through various objects.	1			
237	Simple circuits - bulb with switch	1			
238	Simple circuits – conductors and insulators	1			

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Sr No	Name	Unit/Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
239	Doppler effect	1			
240	The buzzing e	1			
241	Floating ball challenge	1			
242	Diy submarine	1			
243	Hydraulic jack	1			
244	Hydraulic excavator	1			
245	Slime ball	1			
246	Pepper trick	1			
247	Secret siphon	1			
248	Height might	1			
249	Magnetic slime	1			
250	Rusting of iron needs both water & oxygen	1			
221	CO ₂ & LIME WATER EXPERIEMENT Material from above Chemistry box	1			
252	Cuso ₄ & IRON FILINGS Material from above Chemistry box	1			
253	DEPOSITION OF COPPER FROM ITS SALT SOLUTION Material from above Chemistry box	1			
254	BAKING SODA & VINEGAR EXPERIMENT WITH FOOD COLOUR Material from above Chemistry box	1			
255	Working of leds	1			
256	Electric conductivity of fluids	1			
257	Potato battery	1			
258	Lemon battery	1			
259	Simple telegraph	1			
260	Dc motor	1			
261	Magnetic effect of electric current	1			
262	Chemistry rocket	1			
263	K.e. p.e. bounce	1			
264	Kabhie solid kabhie liquid	1			
265	Crystal model	1			
266	The Structure of an atom	1			
267	Density tower - 3 layers	1			
268	Galileo's experient - freely falling weights	1			
269	Aluminum rod - nodes and antinodes	1			
270	Led torch	1			
271	Food chain jigsaw	1			
272	Chemmi-rummy	1			
273	Guess the state flash cards	1			
274	Guess the professions	1			
275	Who am i	1			
276	Paper circuit	1			
277	Substances in daily use	1			
278	Colour blending top	1			
279	Electric bug	1			
280	Art bot	1			
281	Four-legged walking toy	1			

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Sr No	Name	Unit/Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
282	Substances in surroundings - their states & properties	1			
283	Water filtration	1			
284	Fun with magnets	1			
285	Effects of Light: LIGHT TRAVELS IN A STRAIGHT LINE	1			
286	Light & Shadow: i. Sources of Light, ii. How shadows form	1			
287	Elements, Compounds and Mixtures: Burning of Magnesium	1			
288	Telescope MAKING KIT	1			
289	Simple Machines - To understand the functions of Lever – Fulcrum Point	1			
290	The odd mous strips	1			
Mathematics kits					
291	$A(b + c) = ab + ac$	1			
292	$(A + b)(c + d) = ac + ad + bc + bd$	1			
293	$(A + b)^2 = a^2 + 2ab + b^2$	1			
294	$(A^2 - b^2) = (a+b)(a-b)$	1			
295	$(A + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$	1			
296	$(A + b)^3$	1			
297	$(A+b)^2 - (a-b)^2 = 4ab$	1			
298	Area of rhombus	1			
299	Area of triangle 1	1			
300	Area of triangle 2	1			
301	Area of parallelogram	1			
302	Area of trapezium	1			
303	2 d geometrical shapes	1			
304	3 d geometrical shapes	1			
305	$(A+b)^2 + (a-b)^2 = 2a^2 + 2b^2$	1			
306	Napier strips	1			
307	Fraction strips	1			
308	Numr puzzle game - arrange 1 to 8	1			
309	Equilateral triangle to square puzzle	1			
310	Sum of angles of a triangle	1			
311	Sum of angles of a quadrilateral	1			
312	Pentominoes	1			
313	Mid-point theorem	1			
314	Set of triangles	1			
315	Angle bisector theorem	1			
316	Two congruent right triangles	1			
317	Plug in 3 holes	1			
318	Parking puzzle	1			
319	Pegboard puzzle	1			
320	Sum of first n natural numrs	1			
321	Tower of brahma puzzle	1			
322	L.c.m	1			

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Sr No	Name	Unit/Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
323	Sum of first n odd numrs	1			
324	Sum of first n numrs in arithmetic progression	1			
325	Tangram puzzles	1			
326	Integers	1			
327	FACTORS Reuse material of Integers kit	1			
328	EVEN & ODD NUMRS Reuse material of Integers kit	1			
329	TURN-TURN GAME Reuse material of Integers kit	1			
330	Make a Square puzzle	1			
331	Property of intersecting chords of a circle	1			
332	Rectangular geoboard	1			
333	Circular geoboard	1			
334	Pythagoras theorem 1	1			
335	Pythagoras theorem 2	1			
336	Understanding pi	1			
337	Sum of angles of traingle with respect to shape of edge	1			
338	Constructions of parabola	1			
339	Conic sections	1			
340	Ad ² = bdxdc	1			
341	Construction of ellipse	1			
342	Binary convertor	1			
343	Find the bigger curve	1			
Charts – contributors of science					
344	Johannes kepler	1			
345	Sushrut	1			
346	Aryabhata	1			
347	Varahmihira	1			
348	Brahmagupta	1			
349	Nagarjuna	1			
350	Bhaskaracharya	1			
351	Raja sawai jai singh	1			
352	Srinivasaramanujan	1			
353	Jagdish chandra bose	1			
354	Prafulla chandra roy	1			
355	Homi jahangir bhabha	1			
356	Vikram sarabhai	1			
357	Alrt einstein	1			
358	Sir c v raman	1			
359	Satyendranath Bose	1			
360	Subrahmanyanchandrashek har	1			
361	Edwin hubble	1			
362	Baudhayana	1			
363	Charak	1			
364	Rishi kanad	1			
365	Galileo galilei	1			
366	Isaac newton	1			
367	Nicolaus copernicus	1			

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Sr No	Name	Unit/Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
368	Charles darwin	1			
Charts – contributors of mathematics					
369	Rene descartes	1			
370	D r kaprekar	1			
371	R c bose	1			
372	John napier	1			
373	Galileo galilei	1			
374	Fibonacci	1			
375	Varahmihira	1			
376	Bhaskaracharya 1	1			
377	Bhaskaracharya 2	1			
378	Brahmagupta	1			
379	Mahaviracharya	1			
380	Archimedes	1			
381	Aryabhata	1			
382	Pythagoras	1			
383	Euclid	1			
384	P c vaidya	1			
385	A r rao	1			
386	Isaac newton	1			
387	G w leibniz	1			
388	Leonhard euler	1			
389	C f gauss	1			
390	George boole	1			
391	Alrt einstein	1			
392	Srinivasaramanujan	1			
393	Harish chandra	1			
Charts – space & universe					
394	Alrt Einstein & $E=mc^2$	1			
395	Asteroids	1			
396	Charged solar particles	1			
397	Chandrayaan 1	1			
398	Comets	1			
399	Constellations of Southern hemisphere	1			
400	Constellations of Northern hemisphere	1			
401	Milky way galaxy	1			
402	Galaxies	1			
403	Craters	1			
404	Lunar missions	1			
405	Moon	1			
406	Nebula	1			
407	Earth	1			
408	Jupiter & its moons	1			
409	Mars	1			
410	Mercury	1			
411	Neptune	1			
412	Saturn	1			
413	Uranus	1			
414	Venus	1			

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Sr No	Name	Unit/Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
415	Drawf planet - Pluto	1			
416	Solar system	1			
417	Sun	1			
418	Tropic of Cancer & Capricorn	1			
419	Universe	1			
420	Zodiac It	1			
421	The big bang theory	1			
422	TRAPPIST 1 and possibility of life A	1			
423	TRAPPIST 1 and possibility of life B	1			
424	The sun temple	1			
425	Rashi chakra	1			
426	Iron pillar	1			
427	Konark sun temple	1			
428	Apollo	1			
Charts on syllabus					
429	Hygiene	1			
430	Safety rules	1			
431	Plants and Trees	1			
432	Body parts and organs	1			
433	Swacchbhaarat	1			
434	Cause, Effects and reducing of Air Pollution	1			
435	Helpful places and people	1			
436	Sources of food	1			
437	Rocks, minerals and soil	1			
438	Sources of water	1			
439	Saving forests - Causes & Effects	1			
440	Indoor safety	1			
441	Types of plants - climrs and creepers	1			
442	Leaf types	1			
443	Animal food habits / food chain	1			
444	Interesting insects	1			
445	Cooking safety	1			
446	Evolution of Tools & Machines	1			
447	Ways to store portable water	1			
448	Water pollution chart	1			
449	Natural disasters and tech to fight them	1			
450	Personal cleanliness	1			
451	Food from plants	1			
452	Food pyramid and balanced diet	1			
453	Composition of Air	1			
454	Wind types	1			
455	Cause, Effects of Water pollution	1			
456	Water cycle	1			
457	Reason of Season	1			
458	Moons of Jupiter	1			
459	Artificial satellite	1			
460	Soil erosion	1			

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Sr No	Name	Unit/Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
461	Types of joints lalled	1			
462	First aid	1			
463	Super Senses chart	1			
464	Animal kingdom	1			
465	Communicable diseases	1			
466	Water profile of Earth	1			
467	Renewable vs Non-renewable energy	1			
468	Conserving energy	1			
469	Food from Animals	1			
470	Classification by food habits	1			
471	Top 3 food for various components	1			
472	Foods that heal	1			
473	Charkha revolution of India	1			
474	The ideal student	1			
475	Math - Amazing numr patterns	1			
476	Rainwater harvesting	1			
477	Composting, vermicomposting, Landfills	1			
478	Adaptations in animals for extreme climates	1			
479	Nitrogen cycle	1			
480	The micro world	1			
481	Metallurgical advancements in Ancient India	1			
482	Pyre, Pyrotechnic - fighting fire	1			
483	Respiratory system	1			
484	Schematic diagram of Petrol refinery	1			
485	Constellations and their stories	1			
486	Image formation in Convex lens	1			
487	Biotechnology	1			
Misc charts					
488	Illusion - Faces or Vase	1			
489	Illusion - Straight lines or Curved	1			
490	Illusion - All lines are straight	1			
91	Illusion - All Circles are of the same size	1			
492	Illusion - Impossible objects	1			
493	Illusion - Static or Moving image? - A	1			
494	Illusion - Static or Moving image? - B	1			
495	Illusion - Static or Moving image? - C	1			
496	Illusion - Static or Moving image? - D	1			
497	Jesus/buddha illusion	1			
498	Stand for charts	1			
499	LED	1			
500	Pen drive	1			

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Sr No	Name	Unit/Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
501	Platform	16			
502	Storage cupboards	2			
503	Common tools box	1			
504	Trouble shooting and repairs box	1			
505	LED TV	1			

Annexure: - 4 (3D Educational Chart)

Sr No.	Name of Item	Unit/ Sq. ft (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
1	3D Educational Chart	11000 Sq. ft			

Annexure: - 5 False Ceiling

Sr. No.	False Ceiling TECHNICAL SPECIFICATIONS	Unit / Size
1	Providing and fixing tiled false ceiling of specified materials of minimum size 595*595 MM PVC Laminated Gypsum Ceiling Tiles – minimum 7 MM Thickness with minimum 24 MM T-Grid consisting of main “T” runner with suitably spaced joint to get required length of minimum size 24*32mm made from minimum 0.3 mm thick sheet, spaced at minimum 1200 mm center to center and cross “T” of minimum size 20*20 mm made minimum 0.3 mm thick sheet. Minimum 1200 mm long spaced between main “T” at minimum 600 mm center to form a grid of minimum 1200*600 mm and secondary cross “T” of length minimum 600 mm and size minimum 24*25 mm made of minimum 0.3 mm thick sheet to be interlocked at middle of the minimum 1200*600 mm panel to form grids of minimum 600*600 mm and wall angle of size minimum 24*24*0.3 mm and laying false ceiling tiles of required texture in the grid including cutting/making, opening for services like diffusers, grills, light fitting, fixtures, smoke detectors etc.	

Annexure: - 6 (Benches for Std-1 to Std- 4)

Sr. No.	Name of Items	Unit/ Size	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
1	For Std. 1 & 2	40			
2	For Std. 3 & 4	40			

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Annexure: -7 (3D Paint)

Sr. No.	Name	Unit/ Sq. ft (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D=(B+C) *A)
1	3D paint	1000 Sq. ft			

Annexure-8 (White Board)

Sr. No.	Name	Unit/ Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D=(B+C) *A)
1	White Board	8			

Annexure: -9 (Sports Kit)

Sr. No.	Sports Kit			Unit/ Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
	S. No.	Item Name	Nos.				
1	1	Cricket Bat (Branded Co.) (Size 1 to 4)	4	2			
	2	Cricket Ball (Tennis Ball)	12				
	3	Cricket Stumps & Bail (1 Set = 6 nos)	2				
	4	Volleyball (standard Brand)	2				
	5	Volleyball (Good Quality)	1				
	6	Football (standard Brand)	1				
	7	Flying Discs (Good Quality)	12				
	8	iron Ball (minimum 8-Ratal)	1				
	9	Carom Broad (Striker, Coin and Powder)	1				
	10	Carom Board (Striker, Coin and Powder) Small Size	1				
	11	Badminton (Good Quality)	2				
	12	Shuttle Cock (Good Quality)	1				
	13	Tekerring Game	1				

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Sr. No.	Sports Kit		Unit/ Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D = (B+C) *A)
	14	Skipping Rope (Good Quality)	1			
	15	Compressor Air Pump	1			
	16	Wooden Chess Minimum 12"x12"	2			
	17	Sport Kit Bag (Good Quality with Naylor Material)	1			

Annexure: -10 (Future Classroom)

Sr. No	Future Classroom		Unit / Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D= (B+C) *A)
	Estimated deliverables.					
	HARDWARE					
	1	Chromebook / Laptop	40			
	2	Integrated computer projector	1			
	3	Wireless Router	1			
	4	Chrome cart & Storage Facility	1			
	5	USP (Minimum 20 minutes back up)	1			
	6	Networking and Cabling	1			
	SOFTWARE/APPLICATION					
	1	Multimedia Learning Modules in Hindi/English	1			
	2	Management Console	40			
	3	G Suite for Education	-			
	PROJECT MANAGEMENT					
	1	Minimum 1 days of Professional Development Program for Teachers at the inception of Project	-			
	2	Refresher Training (one per year for Five years)	-			
	3	School Coordinator for minimum 12 months for all schools	-			
	4	Project Management for minimum 36 months (Including VAS)	-			
	5	Basic Electrification of all IT Equipment	-			

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Annexure: - 11 (Benches for Future Class)

Sr No	Name	Unit/ Sqft (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D= (B+C) *A)
1	Benches for Future Class	20			

Annexure: -12 (Playground Equipment)

Sr. No.	Playground Equipment	Unit / Size (A)	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D= (B+C) *A)
1	Merry go round	1			
2	Slide	1			
3	Four seat swing	1			
4	Jr. Combination 4 in 1	1			
5	Seater puller	1			
6	Chest press	1			

Annexure: -13 (Sound System)

Sr. No.	Name	Unit/ Sq. ft	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D= (B+C) *A)
1	Sound System	02			

Annexure: -14 (Astronomical Telescope)

Sr. No.	Name	Unit/ Sqft	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D=(B+C) *A)
1	Astronomical Telescope	1			

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Annexure: -15 (Stem Lab & Robotic Lab with QR Code)

Sr. No	Name	Unit/ Size	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D=(B+C)*A)
1.	Arduino UNO, Cable	30			
2.	Arduino Nano	10			
3.	Arduino Mega	10			
4.	Raspberry pi ow	05			
5.	Solderless 400 pin breadboard	30			
6.	Solderless 800 pin breadboard	20			
7.	Self-Adhesive Proto Shield	30			
8.	General Purpose Board (Small)	30			
9.	General Purpose Board (Big)	30			
10.	Female Berg Strip 40 pins	30			
11.	Male Berg Strip 40 pins	30			
12.	16x2 LCD display	20			
13.	USB Cables A to B	10			
14.	Usb Cables Mini	10			
15.	Battery HW 9V-12V Rechargeable	10			
16.	Rechargeable Battery Charger	01			
17.	Resistor Box	20			
18.	Capacitor Box	20			
19.	Linear Voltage Regulator: 7805	30			
20.	Linear Voltage Regulator: 7812	30			
21.	Linear Voltage Regulator: 7809	30			
22.	Water Pump module	04			
23.	Piezoelectric Plate	30			
24.	Minimum 8*8 LED Matrix Module	10			
25.	Bluetooth	15			
26.	7 Segment Led Display (4 digit)	20			
27.	GSM Module	04			
28.	GPS Module	04			
29.	Laser Diode	10			
30.	LDR Module	30			
31.	Keypad	30			
32.	Joystick	10			
33.	Active Buzzer	40			
34.	Active Buzzer	40			
35.	Motor driver	10			
36.	Sound Playback Module	10			
37.	12V, 150 RPM Motor with Wheel	40			
38.	Node MCU / Wemos D1	06			
39.	Nodemcu/ WeMos D1 R2	06			
40.	Vibrating Motor	20			
41.	Alligator Connectors (12 inches)	200			
42.	Battery clips with DC Jack	40			
43.	Hookup Wires (Red Wire 100 Mtr)	04			
44.	Hookup Wires (Black Wire100 Mtr)	04			
45.	Jumper Cable: Male-Male	1000			

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Sr. No	Name	Unit/ Size	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D=(B+C)*A)
46.	Jumper Cable: Male-Female	600			
47.	Jumper Cable: Female-Female	400			
48.	RGB LEDs	1000			
49.	LEDs (Red)	1000			
50.	LEDs (Green)	1000			
51.	LEDs (Blue)	1000			
52.	LEDs (yellow)	1000			
53.	LEDs (white)	1000			
54.	555 timer ic	30			
55.	Atmega16A PU	10			
56.	Diode & Transistor kit	03			
57.	Button Switch set minimum100 qty.	100			
58.	MPR121: Capacitive touch module	20			
59.	Capacitive Touch Switch	10			
60.	IR Sensors, Obstacle avoider sensor	20			
61.	Triple Axis Magnetometer	10			
62.	Humidity Sensor	10			
63.	Methane Natural Gas Sensor	03			
64.	Alcohol - Ethanol Sensor	03			
65.	High Sensitivity CO Carbon Monoxide Sensor Detector	03			
66.	Smoke Detection	03			
67.	Air Quality Sensor	03			
68.	Methane Liquified Gas Sensor	03			
69.	Liquified Petroleum Gas Sensor	03			
70.	Hydrogen Gas	03			
71.	IR (transmitter) receiver - TSOP 1738	10			
72.	Ultrasonic Sensor	40			
73.	Triple Axis accelerometer	10			
74.	PIR Motion Detector Module	20			
75.	Pulse Rate Heart Sensor	04			
76.	Relay Module 2-channel	20			
77.	Relay Module 1-channel	20			
78.	Big sound Microphone module	10			
79.	Soil Moisture Sensor	06			
80.	Touch Sensor: Capacitive Touch Sensor Module	06			
81.	Metal touch sensor module	06			
82.	Rain Drop Sensor	06			
83.	Flex Sensor	06			
84.	Temperature Sensor	06			
85.	DHT 11	40			
86.	Force Pressure Sensor	04			
87.	Color Recognition Sensor	04			
88.	Water Flow Sensor	04			
89.	Sound Sensor	10			

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Sr. No	Name	Unit/ Size	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D=(B+C)*A)
90.	IR Sensors Array for Line Follwing	10			
91.	Power Bank	05			
92.	RFID Reader – Tags	10			
93.	RF Modules Tx & Rx 315 MHz ASK	10			
94.	Stepper motor with Driver board	10			
95.	DC motor 12V 150 rpm	20			
96.	Position Servo Angle based Metal Gear	10			
97.	Small Servo Metal Gear	10			
98.	Continuous Metal Gear Servo 360	10			
99.	Small Servo Plastic Gear	40			
100.	150 RPM BO Motor	50			
101.	L298P Motor Driver	10			
102.	Servo Motor Tester	04			
103.	Robotics DIY Kit - 4-wheel robotic kit with brain	03			
104.	Mechanical Construction kit	05			
105.	Drone Kit	01			
106.	Toyo Kit	02			
107.	Automobile Kit	01			
108.	Solar Kit	01			
109.	Water/Sanitation Kit	01			
110.	Other potential STEM application kit	01			
	P2 Package: Rapid Prototyping Tools including 3D Printer				
111.	3D Printer Kit and tools	01			
112.	UPS/Power back	01			
113.	Filament for 3D printer	05			
114.	Filament Storage Box	05			
115.	Cardboard	05			
116.	foam core oards/Thermacol	05			
117.	String	05			
118.	Rubberband	01			
119.	popscicle sticks	01			
120.	wood glue	02			
P3 Package: Mechanical, Electrical and Measurement Tools					
121.	Hacksaw	01			
122.	Extra hacksaw blades	10			
123.	Mini Hack Saw	01			
124.	Hacksaw blades Mini	10			
125.	Pliers (Set of 7)	01			
126.	Tweezer set Minimum 6pc. Non-magnetic minimum 6 inch	02			
127.	all Pein Hammer	01			
128.	Steel Shaft Claw Hammer	01			
129.	- C-Clamp	04			

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Sr. No	Name	Unit/ Size	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D=(B+C)*A)
130.	- Allen Key Set	01			
131.	- Drill machine set (Wired)	01			
132.	- Workstation for drilling	01			
133.	- Spanner Set	01			
134.	- Vice Normal	01			
135.	- Precision Screwdriver Set	02			
136.	- Adjustable Universal Multi Wrench Spanner	02			
137.	- Wire Strippers	05			
138.	- Multipurpose Screwdriver (Minimum 40 pcs.)	03			
139.	- Cordless rotary Tool Set	01			
140.	- Air blower	01			
141.	- Drill Bit Set	01			
142.	- File set	01			
143.	- Mini file set	01			
144.	- Flexible Cutting Mat	01			
145.	- Plastic Toolbox with Organizer (Set of 10)	01			
146.	- PegBoard	01			
147.	- Hot glue gun	04			
148.	- Digital Oscilloscope	01			
149.	- Soldering Kit	04			
150.	- Adapters 5V	10			
151.	- Adapters 12V	10			
152.	- Electric Screwdriver Set	01			
153.	- Dual Temperature Heat Gun	01			
154.	- Soldering Helping hand	04			
155.	- Return measuring tape	02			
156.	- Stainless Steel Rule	05			
157.	- Digital Vernier Caliper	02			
158.	- Spirit Level	01			
159.	- Digital Pen electric Tester	01			
160.	- Digital Multi Meter	05			
161.	- Paper Microscope	05			
162.	- Telescope	01			
163.	- Sewing kit	01			
P4 Package: Power Supply & Accessories and Safety Equipment					
164.	- Glue Sticks	100			
165.	- Nuts and Bolts and screw: 5 Types (M4X12MM, M4X20MM, M5X16MM,	40			
166.	- Cable Tie - Small (Pack of minimum 100)	10			
167.	- Cable Tie - Medium (Pack of minimum 100)	10			

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Sr. No	Name	Unit/ Size	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D=(B+C) *A)
168.	- Cable Tie - Big (Pack of minimum 100)	10			
169.	- Sand Paper	12			
170.	- Power Strip Adaptors	05			
171.	- Bulb Holders	10			
172.	- Electric Wires Twisted Red black (Mtr)	01			
173.	- USB TO dc jack cable	10			
174.	- Standard first aid kit	02			
175.	- Fire extinguisher (handy units) - 2KG	02			
176.	- Safety goggles	30			
177.	- Safety Gloves Pairs	10			
178.	- Safety Mask	20			

Annexure: -16 (Stem & Robotic Lab Furniture)

Sr. No	Name	Units	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D= (B+C) *A)
1	Platform	6			
2	Storage cupboards	2			

Annexure: - 17 (LED T.V for Stem & Robotic)

Sr. No	Name	Units	Unit Cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D= (B+C) *A)
1	LED TV	1			

Annexure: -18 (CIVIL WORK)

The successful bidder shall undertake school survey work and submit a report with details such as no. of door/window, nature and quantity of repair work requirement including plaster, floor repairing, colour, door/window work, 3D charts and more as specified in RFP. AMC school board will finalise and approve the civil work in each school.

It is the vendor responsibility to complete the cleaning work of school building and premise as per the satisfaction of school principal and AMC school board authority.

Sr. No	Name of Item	Unit	Qty.	Unit cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D= (B+C) *A)
1	Dismantling tiled or stone floors laid in mortar including stacking of serviceable materials and disposal of under serviceable materials with all lead and lift	SMT	1			
2	Demolition including stacking of serviceable materials and disposal of unserviceable materials with lead and lift. (i) RCC work	CMT	1			

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Sr. No	Name of Item	Unit	Qty.	Unit cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D= (B+C) *A)
3	Demolition of brick work and stone masonry including stacking of serviceable materials and disposal of unserviceable materials with all lead and lift.(i) In Lime mortar (ii) in Cement mortar .	CMT	1			
4	Excavation for foundation up to 1.5m depth including sorting out, stacking of useful materials and disposing of the excavated stuff up to 50mt. lead.	CMT	1			
4 A	(A) Loose soil or soft soil	CMT	1			
4 B	(C) Hard murrum	CMT	1			
5	Providing & Laying Brick bat cement Concrete 1:5:10 (1 Cement: 5Coarse sand: 10 graded brick aggregates 40mm nominal size) and curing complete excluding cost of form work. Foundation and plinth.	CMT	1			
6	Brick work using common burnt clay building bricks having crushing strength not less than 35Kg./sq.cm.In foundation and plinth in cement mortar 1:6 (1 cement :6 Coarse sand) (B) Conventional.	CMT	1			
7	White glazed tiles minimum 6mm thick in flooring, treads of steps, skirting or dado and landings laid on a bed of minimum 12mm thick cement mortar 1:3(1 cement: 3 coarse sand) finishing with flush pointing in white cement.	SMT	1			
8	Providing minimum 15 mm thick cement plaster in single coat on fair side of brick or concrete wall for interior plastering up to floor two level finished even and smooth in cement mortar 1:3(1 cement :3 fine Sand) etc complete.	SMT	1			
9	Providing minimum 20 mm thick cement plaster in single coat on fair side of brick or concrete wall for interior plastering up to floor two level finished even and smooth in cement mortar 1:3(1 cement :3 fine Sand) etc complete.	SMT	1			
10	Minimum 25 mm Kotta stone Polish work, with Polish Kota stone slab flooring over 20mm. (average) base of cement mortar 1:6 (1 cement :6 coarse sand) of L.M. 1:1.5 and laid and jointed with grey cement slurry including rubbing and polishing complete. (Item no.12	SMT	1			
11	Providing and fixing pre-cast Rubber Dye interlocking concrete block minimum 60mm thick with grade of concrete M250 pneumatic compressed by mechanically pressed and as per approved design including 75mm Sand layer for levelling and filling the joint with sand in proper	SMT	1			

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Sr. No	Name of Item	Unit	Qty.	Unit cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D= (B+C) *A)
	line and level etc. complete.I.No.14034 Pg.No.191					
12	Filling in plinth with sand under floors including watering griming, consolidating, and dressing complete (up to 10 ton)	CMT	1			
13	Providing & filing with leveling work Sand in school all children play area	SMT	1			
14	Providing and fixing to wall, ceiling & floor U.P.V.C (SCH 40) of the following Outside dia. Tube fitting and clamps, and testing including making good wall and floor etc. (c)Minimum25mm Dia.	RMT	1			
15	Providing & laying ordinary cement Concrete 1:1.5:3 (1 Cement:1.5 Coarse sand:3 graded stone aggregates) and finishing smooth including curing etc. complete including the cost of formwork but excluding the cost of reinforcement. For RCC work in RCC Slab	CMT	1			
16	Providing & laying kota stone polish work Etc. comp... (Market Rate)	SMT	1			
17	Creating decorative side wall or garden wall as per side location	RMT	1			
18	Providing & Fixing 18 W.led Panel Light etc. comp. (Market Rate as per ssa)	Nos	1			
19	Carrying out wall treatment for termite control including spraying with chemical solution in oil base (0.5 Lit/Sq. m) including labor and material. Using heptachlor concentration 20 Ec. As per IS. 6316_ Paret- II concentration by weight 0.50 percent is recommended i.e., one-liter chemical emulsion dilute with 39-liter of IS concentration total dilute concentration will be 40 liters inclusive of one-liter chemical emulsion application at the rate of 7.5-liter chemical / Sqm of surface is recommended as per I.S.	SMT	1			
20	Major repair of Windows/ventilators Shutters and frames including necessary fitting and fixtures. (As per Market rates)	Nos	1			
21	Providing and fixing 35mm thick shutter and frame for doors and windows and clear story windows including apodised aluminum butt hinges with necessary screws and required fittings. (A) Indian Tick wood (B) Partly paneled and partly glazed (C) Fully glazed (D) Fully	Sqm	1			

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Sr. No	Name of Item	Unit	Qty.	Unit cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D=(B+C)*A)
	Paneled					
22	Handel for doors & windows & cupboards 15 cm	Each	1			
23	SS Doors and Windows Hinges	Nos	1			
24	SS Aldrop 20/25/30 cm long of ASIS 304 Grade	Nos	1			
25	SS Stopper 20/30/60 cm long of ASIS 304 Grade	Nos	1			
26	Providing & laying minimum 36"x36" vitrified minimum 8mm thick tiles flooring over Minimum 20mm (average) base of cement mortar 1:3(1cement:6course sand) on new surface or fixing on exiting flooring by adhesive material including dismantling of existing flooring and jointed with colour cement slurry including finish with flush pointing and cleaning the surface etc. complete.	SMT	1			
27	Clearing and grubbing road including land including Porting rank vegetation grass bushes, shrubs, sapling and trees girth up to 300mm removal of stumps of trees cut earlier and disposal of unserviceable materials etc.comp	HECTARE	1			
28	Providing & erecting Switch board for Computer or electric apparatus consisting of following items in single board erected on PVC / Metal board with minimum 3 mm thick PC (Polycarbonate) / Acrylic sheet erected as directed 1 no. 6A/16A universal plug-switch combined. Minimum 4 nos. 6A Switch Minimum 4 nos. 6A 5 pins Plug. [B] For Modular Type Accessories. Cat.II	NOS	1			
29	Providing and erecting XLPE (IS:7098) (I)-88 ISI armored cable multistrand Aluminum conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (b) 4 core 6 Sq. mm	RMT	1			
30	Providing New Electric Wiring with ISI Mark Cable Electric wiring open fitting with light point,15/5 amp plug point, camera point, lcd point, light, and point speaker point with switch board with ISI Mark wire for 2.5 sq.mm X 3 wire circuit mains, speaker wire, light fitting fixing.	1 Point	1			

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Sr. No	Name of Item	Unit	Qty.	Unit cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D= (B+C) *A)
	(Market Rate as per ssa)					
31	Minimum 15-Watt LED Panel Light with Metal Body (Minimum 600 X 600 MM)	Nos	1			
32	Minimum 1200 MM Ceiling Fan with high Speed	Nos	1			
33	Finishing Ceiling / Wall Surfaces with Plastic Emulsion Paint on Ceiling / Wall Surface (Two Coats) to give a Required shape and even shade after thoroughly brushing the surface to remove all dirt, and remains of loose powdered materials and finishing smooth etc. complete. Rate are inclusive of Applying Two Coats of Lappy (Putty) and One Coat of Primer on New Wall Surfaces to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth. Material shall be used As per Approved make list of SSA	SMT				
34	Finishing walls with Weatherproof Exterior Emulsion Paint on Wall Surfaces (Two Coats) over and above Applying one coat of Primer to give a Required shape and even shade after thoroughly brushing the surface to remove all dirt, and remains of loose powdered materials and finishing smooth etc. complete. Material shall be used As per Approved make list of SSA	SMT				
35	Minimum 3MM ACP sheet board Alu decor Alu Star Plaso (ACP Sheet Carving) Minimum 3MM acrylic Sheet Pasting for making of Carving. LED module: Power Supply, Board Depth – Minimum 3”MS pipe frame of Minimum 1”x1” (4 Kg Pipe of 20 ft length) Back Side GI Sheet Pasting covering Minimum 1 Year warranty on Electricals.	Nos	1			
36	Repair and replacement of all the sanitaryware plumbing accessories in both the male and female washroom and drinking water area etc..	Nos	1			
37	Providing and laying water proofing including 0.23 mts. radius vata with water drip as directed with 3 years written guarantee, by laying 40 mm thick cement mortar 1:4 (1 cement : 4 fine sand) after thoroughly cleaning the base slab and removing all the loose materials with wire brush, applying cement & waterproofing slurry evenly spread on slab and mixing water proofing materials in cement mortar in proportion as	Sq. ft	1			

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Sr. No	Name of Item	Unit	Qty.	Unit cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D= (B+C) *A)
	recommended by manufacture, laying brick bats after thoroughly soaked in water on layer of cement mortar, applying cement slurry on brick between @ 0.08 bag/smt. with mixing water proofing materials in proportion as recommended by the manufactures & finishing top with China mosaic tiles chips with 12 mm thick C.M. 1:3 base and laying by keeping gaps which should be filled with white cement and color pigment including rounding or junction extending up to 15 cm along the wall, including curing etc. complete. Note: The measurement of this item shall be taken as that of the horizontal surface (length x width) that is from inside of the parapet walls, thus, not considering the surface measurement of the rounded vatas.					
38	Museum Quality Bharat Mata and Saraswati Mata Canvas Photo with UV Ray Protective Layer and with Metal Frame (Inside image Size - 724 mm x 896 mm, 3 Side white Boarder Size - 40 mm, bottom Side white Boarder Size - 55 mm with Sanskrit Slok and others, Total Image Size: 804 mm x 1081 mm)	Nos	1			
39	Providing and Fixing MS Cupboard Shutter	Sq. m	1			
40	Providing and fixing smart classroom in wooden box with laminated	Sq. m	1			
41	M.S. angel 35 X 35 X 5 mm 14 X 14g GI Barbed wire 4-line 600mm dia.	RFT	1			
42	Providing & Fixing SS brass bib Cock	Nos	1			
43	Steel work welded in built up sections/ framed work, including cutting, hosting, fixing in position and applying a priming coat of approved steel primer using MS	Kg	1			
44	Providing & fixing Photo Frame size 19"X13"	Nos	1			
45	Providing & fixing Name Plate	Nos	1			

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Sr. No	Name of Item	Unit	Qty.	Unit cost (Without Tax) (B)	Tax per unit (C)	Total Cost (D= (B+C) *A)
46	Providing & fixing of expansion joint system related with wall and floor	Mt	1			
47	Providing & fixing 3D letter for building Names of Stainless steel 1" emboss size of letter in 6 - 10-inch height	Sq. ft.	1			
48	Supplying, fitting, and fixing GI sheet with cost all materials, labor	SMT	1			
49	Supplying, fitting, and fixing fibber sheet with cost all materials, labor	SMT	1			
50	Inauguration Marble Takati 4'X2'6"	Each chart	1			

Annexure C: Agreement Format

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Part I: Undertaking

(The Undertaking as per following format on non-judicial stamp paper of Rs. 100/- is to be furnished by contractor when asked by AMC School Board after opening of tenders/Price bid.)

Name of Work: Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city.

Ref: Tender Notice No. -----

Respected Sir

We had participated for the above-mentioned work, and we were qualified for the criteria mentioned in the subjected works tender.

Upon asked by AMC School Board, we hereby give our consent with this undertaking to carry out and execute the works of Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city, if the same is awarded to _____ above/below the estimated rates.

We hereby agree and abide ourselves and assure AMC School Board that we will not deny to carry out and execute the work if the same is awarded to us by the competent authority of AMC School Board at above mentioned rates and terms mentioned in the subjected work's tender, failing which, competent authority of AMC School Board may take penalty actions like disqualifying or debarring us for future works of AMC School Board for the period as decided by AMC School Board upon their discretion, or any other action as decided by competent authority of AMC School Board.

This undertaking will remain in force up to

Sign and Stamp of Contractor.

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Part II: Master Service Agreement

(To be printed on Rs. 100/- Stamp Paper)

This AGREEMENT is made at _____, Ahmedabad, Gujarat on this ____ day of _____, _____, BETWEEN

-----, hereinafter referred to as "Client", or "AMC School Board" (which expression unless repugnant to the context therein shall include its administrator and permitted assignees) of the FIRST PART.

AND

-----, a company registered under the Companies Act, 1956 or partnership firm registered under Indian Partnership Act 1932 or Proprietary Firm having its registered office at -----, hereinafter referred to as "Service Provider" or "SP" or "Vendor" or "Bidder" or "SI", (which expression unless repugnant to the context therein, shall include its successors, administrators, executors and permitted assignees), of the SECOND PART.

Whereas AMC School Board has envisaged to Selection of Bidder for Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city. (Hereinafter referred to as the "Project");

And whereas AMC School Board published the RFP for Selection of Bidder for Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city.

And whereas M/s. ----- has submitted its proposal for "Selection of Implementation Agency for upgradation of AMC Municipal Schools to Smart School in Ahmedabad city".

AND whereas AMC School Board has selected M/s.....as successful bidder and issued Letter of Intent datedto the successful bidder who in turn signed and returned the same as a token of acceptance of Letter of Intent.

And whereas AMC School Board and M/s. ----- have decided to enter into this Agreement on the terms and conditions stipulated hereinafter.

NOW, THEREFORE, in consideration of the premises covenants and promises contained herein and other good and valuable considerations, the receipt and adequacy of which is hereby acknowledged, the parties intending to be bound legally, IT IS HEREBY AGREED between the Parties as follows:

Definitions

In this Agreement, the following terms shall be interpreted as indicated, -

"AMC School Board" means Ahmedabad Municipal Corporation School Board.

"Contract" means this Agreement entered into between AMC School Board and the Bidder including all attachments and annexure thereto and all documents incorporated by reference therein.

"Bidder" means M/s. ----- interchangeably referred to as "SI" in the contract; and

"RFP" means the Tender Published by AMC School Board (Ref. No. -----) and the subsequent Corrigenda / Clarifications issued.

"Go Live or successful completion of implementation of the project" date means the day after the date on which the proposed project stream becomes operational after successful conclusion of all acceptance tests to the satisfaction of AMC School Board.

"Deliverable" means any action / output generated by the SI while discharging their contractual obligations. This would include information and all the other services rendered as per the scope of work.

"Assets" refer to all the hardware / Software / furniture / data / documentations / manuals / catalogs /

Selection of Implementation Agency for upgradation of Ahmedabad Municipal Schools to Smart School in Ahmedabad city brochures / or any other material procured, created or utilized by the SI for this Project.
Interpretation

The documents forming this Agreement are to be taken as mutually explanatory of one another. The following order shall govern the priority of documents constituting this Agreement, in the event of a conflict between various documents, the documents shall have priority in the following order:
this Agreement.

- Scope of Services for the Service Provider (hereby annexed as Annexure I)
- Detail Commercial proposal of the Service Provider accepted by AMC School Board (hereby annexed as Annexure II)
- Clarification & Corrigendum Documents published by AMC School Board subsequent to the RFP for this work (hereby annexed as Annexure III)
- RFP Document of AMC School Board for this work (hereby annexed as Annexure IV)
- LoI issued by the AMC School Board to the successful bidder (hereby annexed as Annexure V); and
- Successful bidder's "Technical Proposal" and "Commercial Proposal" submitted in response to the RFP (hereby annexed as Annexure VI).
- Payment Terms (hereby annexed as Annexure VII).
- Term of the Agreement
- The term of this agreement shall be a period of 3 Years (inclusive 3 Years of warranty) post acceptance

In the event of implementation period getting extended beyond implementation timelines, for reasons not attributable to the Service Provider, AMC School Board reserves the right to extend the term of the Agreement by corresponding period to allow validity of contract for 3 years post 3 months of successful running of complete network. (Note: Delay caused due to any reason not in control of the SI would not be attributed to the project period.)

AMC School Board also reserves the right to extend the contract at its sole discretion for additional duration, beyond the 3 years of post-implementation period. Terms and conditions of such an extension shall be prepared by AMC School Board and finalized in mutual discussion with the SI.

Payment Schedule & Milestone

The Payment Schedule & Milestone is as per the RFP and subsequent Addendum & Corrigendum released, if any. The same will form as Annexure VII of the Contract

Scope Extension

AMC School Board reserves right to extend the scope of services for the price & timelines as given in Annexure I & Annexure II to this Agreement.

Use & Acquisition of Assets during the term

Service Provider shall

take all reasonable & proper care of the entire hardware & software, network or any other information technology infrastructure components used for the project & other facilities leased/owned by the bidder exclusively in terms of the delivery of the services as per this Agreement (hereinafter the "Assets" which include all the hardware / Software / furniture / data / documentations / manuals / catalogs / brochures / or any other material procured, created or utilized by the SI or AMCs or AMC School Board) in proportion to their use & control of such Assets which will include all upgrades/enhancements & improvements to meet the needs of the project arising from time to time; Note: Hardware upgrades outside the RFP scope would not be part of the original contract and would be catered through change request. Assets would be owned by the AMC School Board however, the Service Provider would be custodian of the same during the entire contract period including O & M and would take care of all damage, insurance, theft etc.

Maintain sufficient spare inventory at all times, for all items of importance;

keep all the tangible Assets in good & serviceable condition (reasonable wear & tear excepted) &/or the intangible Assets suitably upgraded subject to the relevant standards as stated in of the RFP

ensure that any instructions or manuals supplied by the manufacturer of the Assets for use of Assets & which are provided to the bidder will be followed by the Bidder & any person who will be responsible for the use of the Asset;

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take such steps as may be recommended by the manufacturer of the Assets & notified to the bidder or as may be necessary to use the Assets in a safe manner.

provide a well-prepared documentation for users in the manual, a clear plan for training, education & hand holding the users & shall form part of hand holding phase until bringing up the users to use software solution with speed & efficiency.

To the extent that the Assets are under the control of the bidder, keep the Assets suitably housed & in conformity with any statutory requirements from time to time applicable to them,

Provide and facilitate access to AMC School Board/AMC or its nominated agencies & any persons duly authorized by him/her to enter any land or premises on which the Assets are for the time being sited so as to inspect the same, subject to any reasonable requirements.

Not, knowingly or negligently use or permit any of the Assets to be used in contravention of any statutory provisions or regulation or in any way contrary to law;

Use the Assets exclusively for the purpose of providing the Services as defined in the contract;

Obtain a sign off from AMC School Board or its nominated agencies at each stage as is essential to close each of the above considerations.

Ownership of the Assets shall vest with AMC School Board on Go Live of the project. Ownership of any asset, created during the contractual period after go Live, shall also vest with AMC School Board upon creation of such asset. Bidder shall not use AMC School Board data to provide services for the benefit of any third party, as a service bureau or in any other manner. If damage to the assets is found unacceptable to the AMC School Board, then corresponding penalty/liquidated damages shall be recovered from SI from the fees payable.

Security and safety

The Service Provider will comply with the directions issued from time to time by AMC School Board and the standards related to the security and safety in so far as it applies to the provision of the Services.

Bidder shall also comply with the AMC School Board Project's information technology security and standard policies in force from time to time as applicable.

Service Provider shall use reasonable endeavors to report forthwith in writing to all the partners / contractors about the civil and criminal liabilities accruing due to by unauthorized access (including unauthorized persons who are employees of any Party) or interference with AMC School Board's/ AMC's' data, facilities or Confidential Information.

The Service Provider shall upon reasonable request by AMC School Board or his/her nominee(s) participate in regular meetings when safety and information technology security matters are reviewed.

Bidder and its partners / sub-contractors shall promptly report in writing to each other and AMC School Board any act or omission which they are aware that could have an adverse effect on the proper conduct of safety and information technology security at AMC School Board's/AMC's Facilities.

Indemnity

The Service Provider agrees to indemnify and hold harmless AMC School Board/AMC/AMC School board, its officers, employees and agents(each a "Indemnified Party") promptly upon demand at any time and from time to time, from and against any and all losses , claims, damages, liabilities, costs (including reasonable attorney's fees and disbursements) and expenses (collectively, "Losses") to which the Indemnified Party may become subject, in so far as such losses directly arise out of, in any way relate to, or result from any mis-statement or any breach of any representation or warranty made by the Bidder or

The failure by the Service Provider to fulfil any covenant or condition contained in this Agreement, including without limitation the breach of any terms and conditions of this Agreement by any employee or agent of the Service Provider. Against all losses or damages arising from claims by third Parties that any Deliverable (or the access, use or other rights thereto), created Service Provider pursuant to this Agreement, or any equipment, software, information, methods of operation or other intellectual property created by Service Provider or sub-contractors pursuant to this Agreement, or the PERFORMANCE STANDARDSs (I) infringes a copyright, trade mark, trade design enforceable in India, (II) infringes a patent issued in India, or (III) constitutes misappropriation or unlawful disclosure or use of another Party's trade secretes under the laws of India (collectively, "Infringement Claims"); provided, however, that this will not apply to any Deliverable (or the access, use or other rights thereto) created by (A) "Implementation of Project by itself or through other persons other than Service Provider or its sub-contractors; (B) Third Parties (i.e., other than Service Provider or sub-contractors) at the direction of AMC School Board, or

any compensation / claim or proceeding by any third party against AMC School Board arising out of any act, deed or omission by the Service Provider or

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Claim filed by a workman or employee engaged by the Service Provider for carrying out work related to this Agreement. For the avoidance of doubt, indemnification of Losses pursuant to this section shall be made in an amount or amounts sufficient to restore each of the Indemnified Party to the financial position it would have been in had the losses not occurred.

Any payment made under this Agreement to an indemnity or claim for breach of any provision of this Agreement shall include applicable taxes.

Third Party Claims

a. Subject to Sub-clause (b) below, the Service Provider (the "Indemnified Party") from and against all losses, claims litigation and damages on account of bodily injury, death or damage to tangible personal property arising in favor or any person, corporation or other entity (including the Indemnified Party) attributable to the Indemnifying Party's performance or non-performance under this Agreement or the PERFORMANCE STANDARDSs.

b. The indemnities set out in Sub-clause (a) above shall be subject to the following conditions:
The Indemnified Party, as promptly as practicable, informs the Indemnifying Party in writing of the claim or proceedings and provides all relevant evidence, documentary or otherwise;

The Indemnified Party shall, at the cost and expenses of the Indemnifying Party, give the Indemnifying Party all reasonable assistance in the defense of such claim including reasonable access to all relevant information, documentation and personnel. The indemnifying party shall bear cost and expenses and fees of the Attorney on behalf of the Indemnified Party in the litigation, claim.

if the Indemnifying Party does not assume full control over the defense of a claim as provided in this Article, the Indemnifying Party may participate in such defense at its sole cost and expense, and the Indemnified Party will have the right to defend the claim in such manner as it may deem appropriate, and the cost and expense of the Indemnified Party will be borne and paid by the Indemnifying Party.

The Indemnified Party shall not prejudice, pay or accept any proceedings or claim, or compromise any proceedings or claim, without the written consent of the Indemnifying Party;

bidder hereby indemnify & hold indemnified the AMC School Board harmless from & against any & all damages, losses, liabilities, expenses including legal fees & cost of litigation in connection with any action, claim, suit, proceedings as if result of claim made by the third party directly or indirectly arising out of or in connection with this agreement.

all settlements of claims subject to indemnification under this Article will: (a) be entered into only with the consent of the Indemnified Party, which consent will not be unreasonably withheld & include an unconditional release to the Indemnified Party from the claimant for all liability in respect of such claim; & (b) include any appropriate confidentiality agreement prohibiting disclosure of the terms of such settlement; the Indemnified Party shall take steps that the Indemnifying Party may reasonably require to mitigate or reduce its loss as a result of such a claim or proceedings; &

In the event that the Indemnifying Party is obligated to indemnify an Indemnified Party pursuant to this Article, the Indemnifying Party will, upon payment of such indemnity in full, be subrogated to all rights & defenses of the Indemnified Party with respect to the claims to which such indemnification relates;

in the event that the Indemnifying Party is obligated to indemnify the Indemnified Party pursuant to this Article, the Indemnified Party will be entitled to invoke the Performance Bank Guarantee, if such indemnity is not paid, either in full or in part, & on the invocation of the Performance Bank Guarantee, the Indemnifying Party shall be subrogated to all rights & defenses of the Indemnified Party with respect to the claims to which such indemnification relates.

Publicity

Any publicity by the bidder in which the name of AMC School Board is to be used should be done only with the explicit written permission from AMC School Board.

Warranties

a. The Service Provider warrants and represents that:

It has full capacity and authority and all necessary approvals to enter into and to perform its obligations under this Agreement;

This Agreement is executed by a duly authorized representative of the Service Provider;

It shall discharge its obligations under this Agreement with due skill, care and diligence so as to comply with the service level agreement.

b. In the case of the PERFORMANCE STANDARDSs, the Service Provider warrants and represents, that:

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the Service Provider has full capacity and authority and all necessary approvals to enter into and perform its obligations under the PERFORMANCE STANDARDSs and to provide the Services;

The PERFORMANCE STANDARDSs have been executed by a duly authorized representative of the Service Provider;

The Service Provider is experienced in managing and providing works similar to the Services and that it will perform the Services with all due skill, care and diligence so as to comply with service level agreement;

The Services will be provided and rendered by appropriately qualified, trained and experienced personnel as mentioned in the RFP;

Service Provider has and will have all necessary licenses, approvals, consents of third Parties free from any encumbrances and all necessary technology, hardware and software to enable it to provide the Services;

The Services will be supplied in conformance with all laws, enactments, orders and regulations applicable from time to time;

Service Provider will warrant that the goods supplied under the contract are new, unused, of the most recent higher version /models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. The Service Provider further warrants that the goods supplied under this contract shall have no defects arising from design, materials or workmanship.

The overall system design shall be such that there is no choking point / bottleneck anywhere in the system (end-to-end) which can affect the performance / PERFORMANCE STANDARDSs.

Subject to the fulfillment of the obligations of the Service Provider as provided for in sub clause (viii) above, in the event that such warranties cannot be enforced by AMC School Board, the Service Provider will enforce such warranties on behalf of AMC School Board and pass on to AMC School Board, the benefit of any other remedy received in relation to such warranties.

c. Notwithstanding what has been stated elsewhere in this Agreement and the Schedules attached herein, in the event the Service Provider is unable to meet the obligations pursuant to the implementation of the Project, Operations and Maintenance Services and any related scope of work as stated in this Agreement and the Schedules attached herein, AMC School Board will have the option to invoke the Performance Guarantee after serving a written notice of thirty (30) days on the bidder.

Force Majeure & Vandalism

In the event that any Damages to items due to Vandalism (physical Majeure attack by public, tampering of equipment by AMC School Board / AMC School Board staff and damage due to accidents) or due to Force Majeure events (such as earthquake, fire, natural calamities, war, act of God) of any kind during Warranty Period and Maintenance Period shall be the liability of AMC School Board. In such case, AMC School Board/AMC shall request the successful Bidder to repair/replace the damaged unit and reinstall the same. All costs towards the same shall be reimbursed by AMC School Board to the successful Bidder less of insurance proceeds if need of replacement so arise then replacement shall be on tender rates only.

The Service Provider shall not be liable for forfeiture of its Performance Guarantee, imposition of liquidated damages or termination for default, if and to the extent that it's delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure. For purposes of this Clause, "Force Majeure" means an event beyond the "reasonable" control of the Service Provider, not involving the Service Provider's fault or negligence and not foreseeable. Such events may include Acts of God & acts of Government of India in their sovereign capacity.

For the SI to take benefit of this clause it is a condition precedent that the SI must promptly notify the AMC School Board, in writing of such conditions and the cause thereof within 2 calendar days of the Force Majeure event arising. AMC School Board, or the consultant / committee appointed by the AMC School Board shall study the submission of the SI and inform whether the situation can be qualified one of Force Majeure. Unless otherwise directed by the AMC School Board in writing, the SI shall continue to perform its obligations under the resultant Agreement as far as it is reasonably practical, and shall seek all reasonable alternative means for performance of services not prevented by the existence of a Force Majeure event.

In the event of delay in performance attributable to the presence of a force majeure event, the time for performance shall be extended by a period(s) equivalent to the duration of such delay. If the duration of delay continues beyond a period of 30 days, AMC School Board and the SI shall hold consultations with each other in an endeavor to find a solution to the problem.

Notwithstanding anything to the contrary mentioned above, the decision of the AMC School Board shall be final and binding on the SI.

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Resolution of Disputes

The AMC School Board and the SI shall make every effort to resolve amicably, by direct informal negotiation, any disagreement or dispute arising between them under or in connection with the Agreement. If after 30 days from the commencement of such informal negotiations, the AMC School Board and the SI are unable to resolve amicably such dispute, the matter will be referred to the The Administrative Officer, AMC School Board his / her opinion shall be taken.

If the SI doesn't agree with the opinion of the The Administrative Officer, AMC School Board, matter shall be referred to two Arbitrators: one Arbitrator to be nominated by AMC School Board/ AMC and the other one to be nominated by the SI. In the case of the said Arbitrators not agreeing, then the matter will be referred to an umpire to be appointed by the Arbitrators in writing before proceeding with the reference. The award of the Arbitrators, and in the event of their not agreeing, the award of the Umpire appointed by them shall be final and binding on the parties. Proceedings under this clause shall be subject to applicable law of the Arbitration and Reconciliation Act, 1996 and the venue of such arbitration shall be Ahmedabad.

Cost of arbitration shall be borne by each party proportionately. However, expenses incurred by each party in connection with the preparation, presentation shall be borne by the party itself. The provisions of this clause shall survive termination of this Agreement.

Limitation of Liability towards AMC School Board/ AMC/AMC Schools

The SI's liability under the resultant Agreement shall be determined as per the Law in force for the time being. The SI shall be liable to the AMC School Board/ AMC for loss or damage occurred or caused or likely to occur on account of any act of omission on the part of the SI and its employees, including loss caused to AMC School Board/ AMC on account of defect in goods or deficiency in services on the part of SI or his agents or any person / persons claiming through or under said SI. However, such liability of SI shall not exceed the contract value.

This limitation of liability shall not limit the SI's liability, if any, for damage to Third Parties caused by the SI or any person or firm acting on behalf of the SI in carrying out the scope of work envisaged herein.

Conflict of Interest

A conflict of interest is any situation that might cause an impartial observer to reasonably question whether SI actions are influenced by considerations of your firm's interest at the cost of Government.

The SI shall disclose to the AMC School Board/ AMC in writing, all actual and potential conflicts of interest that exist, arise or may arise (either for the Service Provider or its Team) in the course of performing Services as soon as it becomes aware of such a conflict. However, SI shall hold AMC School Board's/ AMC's interest paramount, without any consideration for future work, and strictly avoid conflict of interest with other assignments.

Data Ownership

All the data created as the part of the project shall be owned by AMC School Board/ AMC. The SI shall take utmost care in maintaining security, confidentiality and backup of this data. Access to the data / systems shall be given by the SI only as per the IT Security Policy, approved by AMC School Board. AMC School Board / its authorized representative(s) shall conduct periodic / surprise security reviews and audits, to ensure the compliance by the SI Vendor to data / system security.

Intellectual Property Rights

For the customized solution developed for the project, IPR of the solution would belong exclusively to the AMC School Board/ AMC. The SI shall transfer the source code to AMC School Board/ AMC at the stage of successful implementation of the respective smart element. SI shall also submit all the necessary instructions for incorporating any modification / changes in the software and its compilation into executable / installable product. AMC School Board/ AMC may permit the SI, right to use the customized software for any similar project being executed by the same SI, with payment of reasonable royalty to AMC School Board/ AMC for the same.

Deliverables provided to AMC School Board/ AMC by Service Provider during the course of its performance under this Agreement, all rights, title and interest in and to such Deliverables, shall, as between Service Provider and AMC School Board/ AMC, immediately upon creation, vest in AMC School Board/ AMC. To the extent that the Service Provider Proprietary Information is incorporated within the Deliverables, Service

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Provider and its employees engaged hereby grant to AMC School Board a worldwide, perpetual, irrevocable, non-exclusive, transferable, paid-up right and license to use, copy, modify (or have modified), use and copy derivative works for the benefit of and internal use of AMC School Board.

Fraud and Corruption

AMC School Board/ AMC requires that SI must observe the highest standards of ethics during the execution of the contract. In pursuance of this policy, AMC School Board/ AMC/ AMC Libraries defines, for the purpose of this provision, the terms set forth as follows:

“Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of AMC School Board/ AMC/ AMC libraries in contract executions.

"Fraudulent practice" means a mis-presentation of facts, in order to influence a procurement process or the execution of a contract, to AMC School Board/ AMC/ AMC libraries, and includes collusive practice among bidders (prior to or after Proposal submission) designed to establish Proposal prices at artificially high or non-competitive levels and to deprive AMC School Board of the benefits of free and open competition.

“Unfair trade practices” means supply of services different from what is ordered on, or change in the Scope of Work which is given in the contract.

“Coercive Practices” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the execution of contract.

If it is noticed that the SI has indulged into the Corrupt / Fraudulent / Unfair / Coercive practices, it will be a sufficient ground for AMC School Board for termination of the contract and initiate black-listing of the vendor.

Exit Management

Exit Management Purpose

This clause sets out the provisions, which will apply during Exit Management period. The Parties shall ensure that their respective associated entities carry out their respective obligations set out in this Exit Management Clause.

The exit management period starts, in case of expiry of contract, at least 6 months prior to the date when the contract comes to an end or in case of termination of contract, on the date when the notice of termination is sent to the SI. The exit management period ends on the date agreed upon by the AMC School Board or Six months after the beginning of the exit management period, whichever is earlier.

Confidential Information, Security and Data

Service Provider will promptly on the commencement of the exit management period, supply to the AMC School Board or its nominated agencies the following:

Information relating to the current services rendered and performance data relating to the performance of the services; Documentation relating to Surveillance Project, Project’s Intellectual Property Rights; any other data and confidential information related to the Project;

Project data as is reasonably required for purposes of the Project or for transitioning of the services to its Replacing Successful Bidder in a readily available format.

All other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable the AMC School Board and its nominated agencies, or its Replacing Vendor to carry out due diligence in order to transition the provision of the Services to AMC School Board/ AMCor its nominated agencies, or its Replacing Vendor (as the case may be).

Employees

Promptly on reasonable request at any time during the exit management period, the Successful Bidder shall, subject to applicable laws, restraints and regulations (including in particular those relating to privacy) provide to AMC School Board/ AMCa list of all employees (with job titles and communication address) of the Successful Bidder, dedicated to providing the services at the commencement of the exit management period; To the extent that any Transfer Regulation does not apply to any employee of the Successful Bidder, AMC School Board/ AMCor Replacing Vendor may make an offer of contract for services to such employee of the Successful Bidder and the Successful Bidder shall not enforce or impose any contractual provision that would prevent any such employee from being hired by the AMC School Board/ AMCor any Replacing Vendor.

Rights of Access to Information

At any time during the exit management period, the Successful Bidder will be obliged to provide an access of

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information to AMC School Board/ AMCand / or any Replacing Vendor in order to make an inventory of the Assets (including hardware / Software / Active / passive), documentations, manuals, catalogs, archive data, Live data, policy documents or any other material related to the Surveillance Project.

Exit Management Plan

Successful Bidder shall provide AMC School Board/ AMC with a recommended exit management plan ("Exit Management Plan") within 90 days of signing of the contract, which shall deal with at least the following aspects of exit management in relation to the PERFORMANCE STANDARDS as a whole and in relation to the Project Implementation, the Operation and Management PERFORMANCE STANDARDS and Scope of work definition.

A detailed program of the transfer process that could be used in conjunction with a Replacement Vendor including details of the means to be used to ensure continuing provision of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer;

Plans for the communication with such of the Successful Bidder, staff, suppliers, customers and any related third party as are necessary to avoid any material detrimental impact on Project's operations as a result of undertaking the transfer;

Plans for provision of contingent support to the Surveillance Project and Replacement Vendor for a reasonable period (minimum one month) after transfer.

Successful Bidder shall re-draft the Exit Management Plan annually to ensure that it is kept relevant and up to date.

Each Exit Management Plan shall be presented by the Successful Bidder to and approved by AMC School Board or its nominated agencies.

The terms of payment as stated in the Terms of Payment Schedule include the costs of the Successful Bidder complying with its obligations under this Schedule.

During the exit management period, the Successful Bidder shall use its best efforts to deliver the services.

Payments during the Exit Management period shall be made in accordance with the Terms of Payment Schedule.

Termination of Contract

AMC School Board may, without prejudice to any other remedy under this Contract and applicable law, reserves the right to terminate for breach of contract by providing a written notice of 30 days stating the reason for default to the SI and as it deems fit, terminate the contract either in whole or in part:

If the SI fails to deliver any or all of the project requirements / operationalization / go-live / performance parameters (PERFORMANCE STANDARDS) of the project within the time frame specified in the contract; or

If the SI fails to perform any other obligation(s) under the contract.

Prior to providing a notice of termination to the SI, AMC School Board shall provide the SI with a written notice of 30 days instructing the SI to cure any breach/ default of the Contract, if AMC School Board is of the view that the breach may be rectified.

On failure of the SI to rectify such breach within 30 days, AMC School Board may terminate the contract by providing a written notice of 30 days to the SI, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to AMC School Board. In such event the SI shall be liable for penalty/liquidated damages imposed by the AMC School Board. The performance Guarantee shall be forfeited by the AMC School Board

Consequences of Termination

In the event of termination of this contract, AMC School Board is entitled to impose any such obligations and conditions and issue any clarifications as may be necessary to ensure an efficient transition and effective continuity of the services which the SI shall be obliged to comply with and take all available steps to minimize the loss resulting from that termination/ breach, and further allow and provide all such assistance to AMC School Board and/ or succeeding vendor, as may be required, to take over the obligations of the SI in relation to the execution / continued execution of the requirements of this contract.

In the event of the SI being unable to service the contract for whatever reason, AMC School Board would evoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of department under the Contract in the matter, the proceeds of the PBG shall be payable to department as compensation for any loss resulting from the Bidder's failure to complete its obligations under the Contract. Department shall notify the Bidder in writing of the exercise of its right to receive such compensation within 14 days, indicating the

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contractual obligation(s) for which the Bidder is in default.

AMC School Board shall also be entitled to make recoveries from the Bidder's bills, performance bank guarantee, or from any other amount due to him, the equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement

Plans and drawings

All plans, drawings, specifications, designs, reports and other documents prepared by the Vendor in the execution of the contract shall become and remain the property of AMC School Board/ AMC and before termination or expiration of this contract the SI shall deliver all such documents, prepared under this contract along with a detailed inventory thereof, to AMC School Board/ AMC.

Miscellaneous

Confidentiality

"Confidential Information" means all information including Project Data (whether in written, oral, electronic or other format) which relates to the technical, financial and operational affairs, business rules, citizen information, video footages, alert information, any police department data, products, processes, data, crime / criminal secrets, design rights, know-how and personnel of each Party and its affiliates which is disclosed to or otherwise learned by the other Party or subcontractors (whether a Party to the contract or to the PERFORMANCE STANDARDS) in the course of or in connection with the contract (including without limitation such information received during negotiations, location visits and meetings in connection with the contract or to the PERFORMANCE STANDARDS) or pursuant to the contract to be signed subsequently.

Except with the prior written permission of AMC School Board/ AMC, the Service Provider and its Personnel shall not disclose such confidential information to any person or entity not expected to know such information by default of being associated with the project, nor shall the Service Provider and its Personnel make public the recommendations formulated in the course of, or as a result of the Project.

The Service Provider recognizes that during the term of this Agreement, sensitive data will be procured & made available to it, its Sub contractors & agents & others working for or under the Service Provider. Disclosure or usage of the data by any such recipient may constitute a breach of law applicable causing harm not only to AMC School Board/ AMC whose data is used but also to its stakeholders. Service Provider, its Subcontractors & agents are required to demonstrate utmost care, sensitivity & strict confidentiality. Any breach of this Article will result in AMC School Board & its nominees receiving a right to seek injunctive relief & damages from the Service Provider.

Each Party agrees as to any Confidential Information disclosed by a Party to this Agreement (the "Discloser") to the other Party to this Agreement (the "Recipient") &

to take such steps necessary to protect the Discloser's Confidential information from unauthorized use, reproduction & disclosure, as the Recipient takes in relation to its own Confidential Information of the same type, but in no event less than reasonable care;

to use such Confidential Information only for the purposes of this Agreement or as otherwise expressly permitted or expressly required by this Agreement or as otherwise permitted by the Discloser in writing; &

not, without the Discloser's prior written consent, to copy the Confidential Information cause or allow it to be copied, directly or indirectly, in whole or in part, except as otherwise expressly provided in this Agreement, or as required in connection with Recipient's use as permitted under this Article, or as needed for the purposes of this Agreement, or as needed for the purposes of this Agreement, provided that any proprietary legends & notices (whether of the Discloser or of a Third Party) are not removed or obscured; &

Not, to disclose, transfer, publish or communicate the Confidential Information in any manner, without the Discloser's prior written consent, to any person except as permitted under this Agreement.

The restrictions of this Article shall not apply to confidential Information that:

is or becomes generally available to the public through no breach of this Article by the Recipient; &

Was in the recipient's possession free of any obligation of confidence prior to the time of receipt of it by the Recipient hereunder; &

Is developed by the Recipient independently of any of discloser's Confidential Information; &

Is rightfully obtained by the Recipient from third Parties authorized at that time to make such disclosure without restriction; &

is identified in writing by the Discloser as no longer proprietary or confidential; or vi. Is required to be disclosed by law, regulation or Court Order, provided that the recipient gives prompt written notice to the

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Discloser of such legal & regulatory requirement to disclose so as to allow the Discloser reasonable opportunity to contest such disclosure.

to the extent that such disclosure is required for the purposes of this Agreement, either Party may disclose Confidential Information to:

its employees, agents & independent contractors & to any of its affiliates & their respective independent contractors or employees; &

its professional advisors & auditors, who require access for the purposes of this Agreement, whom the relevant Party has informed of its obligations under this Article & in respect of whom the relevant Party has informed of its obligations under this Article has used commercially reasonable efforts to ensure that they are contractually obliged to keep such Confidential Information confidential on terms substantially the same as set forth in this Article. Either Party may also disclose confidential Information or any entity with the other Party's prior written consent.

The provisions of this Article shall survive three years post expiration or any earlier termination of this Agreement.

confidential Information shall be & remain the property of the Discloser & nothing in this Article shall be construed to grant either Party any right or license with respect to the other Party's confidential Information otherwise than as is expressly set out in this Agreement.

Subject as otherwise expressly provide in this Agreement all Confidential information in tangible or electronic form under the control of the Recipient shall either be destroyed, erased or returned to the Discloser promptly upon the earlier of: (i) the written request of the Disclose, or, (ii) termination or expiry of this Agreement or, in respect of the PERFORMANCE STANDARDSs, the termination or expiry of the PERFORMANCE STANDARDSs. Notwithstanding the forgoing, both Parties may retain, subject to the terms of this Article, reasonable number of copies of the other Party's Confidential Information solely for confirmation of compliance with the confidentiality obligations of this Agreement.

Neither Party is restricted by the provisions of this clause from using (including using to provide products or perform services on behalf of third Parties) any ideas, concepts, know-how & techniques that are related to the Recipient's employees or agents (and not intentionally memorized for the purpose of later recording or use) (collectively, the "residuals"). This Article shall not permit the disclosure or use by either Party or any financial (including business plans), statistical, product, personnel or customer data or the other Party. Each party agrees not to disclose the source of the Residuals.

Both Parties agree that monetary damages would not be a sufficient remedy for any breach of this clause by the other Party & that AMC School Board/ AMC& bidder, as appropriate, shall be entitled to equitable relief, including injunction & specific performance as a remedy for any such breach. Such remedies shall not be deemed to be the exclusive remedies for a breach by a Party of this clause, but shall be in addition to all other remedies available at law or equity to the damaged Party.

in connection with the Services, Service Provider may from time to time undertake one or more quality assessment reviews for the purpose of improving the Project. In order for such reviews to be frank & candid, for the greatest benefit to both AMC School Board/ AMC& Service Provider, they shall be kept confidential to the greatest extent possible. The Parties agree that any documentation created in connection with such quality assessment reviews shall be confidential Information of Service Provider which is licensed to AMC School

Board/ AMCfor any internal use except that in no event shall such documentation or the results of such reviews be discoverable or admissible (or used for any purpose) in any arbitration or legal proceedings against Bidder related to this Agreement or the Services.

Standards of Performance

The SI shall provide the services and carry out their obligations under the Contract with due diligence, efficiency and professionalism/ethics in accordance with generally accepted professional standards and practices. The SI shall always act in respect of any matter relating to this contract. The SI shall abide by all the provisions/Acts/Rules/Regulations, Standing orders, etc. of Information Technology as prevalent in the country.

The SI shall also conform to the standards laid down by AMC School Board or AMC School Board or Government of Gujarat or Government of India from time to time.

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Subcontracts

Sub-contracting / outsourcing would be allowed only in O&M phase for work like Provisioning of technical manpower for operations and maintenance of application, hardware and cloud. The bidder is expected to provide details of the sub-contractors for the work which is allowed as mentioned in the clause. Use of personnel not on payroll of the SI shall be considered as sub-contracting. The SI shall solely responsible for the work carried out by subcontracting under the contract. SI shall be the sole point of contact for the entire project throughout the project period.

Care to be taken while working at Public Place

SI should follow instructions issued by concerned Competent Authority and AMC School Board from time to time for carrying out work at public places. SI should ensure that there is no damage caused to any private or public property. In case such damage is caused, SI shall immediately bring it to the notice of concerned organization and AMC School Board in writing and pay necessary charges towards fixing of the damage. SI should also ensure that no traffic congestion/public inconvenience is caused while carrying out work at public places.

SI shall ensure that its employees/representatives don't breach privacy of any citizen or establishment during the course of execution or maintenance of the project.

Compliance with Labor regulations

The SI shall pay fair and reasonable wages to the workmen employed by him, for the contract undertaken by him and comply with the provisions set forth under the Minimum wages Act and the Contract Labor Act 1970.

Independent Contractor

Nothing in this Agreement shall be construed as establishing or implying any partnership or joint venture or employment relationship between the Parties to this Agreement. Except as expressly stated in this Agreement nothing in this Agreement shall be deemed to constitute any Party as the agent of any other Party or authorizes either Party (i) to incur any expenses on behalf of the other Party, (ii) to enter into any engagement or make any representation or warranty on behalf of the other Party, (iii) to pledge the credit of or otherwise bind or oblige the other Party, or (iv) to commit the other Party in any manner whatsoever in each case without obtaining the other Party's prior written consent.

Waiver

A waiver of any provision or breach of this Agreement must be in writing and signed by an authorized official of the Party executing the same. No such waiver shall be construed to affect or imply a subsequent waiver of the same provision or subsequent breach of this Agreement.

Performance Guarantee

The SI shall submit performance guarantee which is unconditional & irrevocable bank guarantee equal to an amount equivalent of 10% of the Project Value (CAPEX). However, for Operation & Maintenance phase, SI will submit the yearly bank guarantee of amount equivalent of 10% of the Project Value (OPEX). in the format prescribed in RFP issued by any of the Nationalized Banks Only. The performance bank guarantee shall be from Nationalized or Scheduled Banks except Co-operative Banks in favor of "Administrative Officer, Ahmedabad Municipal Corporation School Board".

The performance guarantee shall be valid for the term agreement & shall be renewed & maintained by the SI for the term of the agreement & extension, if any. The performance guarantee shall be forfeited / liquidated by the AMC School Board as a penalty in the event of failure to complete obligations or breach of any of the conditions by the SI.

Personnel/Employees

Personnel/employees assigned by Service Provider to perform the services shall be employees of Service Provider or its sub-contractors, & under no circumstances will such personnel be considered as employees of AMC School Board. Service Provider shall have the sole responsibility for supervision & control of its personnel & for payment of such personnel's employee's entire compensation, including salary, legal

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deductions withholding of income taxes & social security taxes, worker's compensation, employee & disability benefits & the like & shall be responsible for all employer obligations under all laws as applicable from time to time. The AMC School Board shall not be responsible for the above issues concerning to personnel of Service Provider.

Service Provider shall use its best efforts to ensure that sufficient Service Provider personnel are employed to perform the Services, & that, such personnel have appropriate qualifications to perform the Services.

Each Party shall be responsible for the performance of all its obligations under this Agreement & shall be liable for the acts & omissions of its employees & agents in connection therewith.

Variations & Further Assurance

a. No amendment, variation or other change to this Agreement or the PERFORMANCE STANDARDSs shall be valid unless made in writing & signed by the duly authorized representatives of the Parties to this Agreement.

b. Each Party to this Agreement or the PERFORMANCE STANDARDSs agree to enter into or execute, without limitation, whatever other agreement, document, consent & waiver & to do all other things which shall or may be reasonably required to complete & deliver the obligations set out in the Agreement or the PERFORMANCE STANDARDSs.

Severability & Waiver

if any provision of this Agreement or the PERFORMANCE STANDARDSs, or any part thereof, shall be found by any court or administrative body of competent jurisdiction to be illegal, invalid or unenforceable the illegality, invalidity or unenforceability of such provision or part provision shall not affect the other provisions of this Agreement or the PERFORMANCE STANDARDSs or the remainder of the provisions in question which shall remain in full force & effect. The relevant Parties shall negotiate in good faith in order to agree to substitute any illegal, invalid or unenforceable provision with a valid & enforceable provision which achieves to the greatest extent possible the economic, legal & commercial objectives of the illegal, invalid or unenforceable provision or part provision within 7 working days.

No failure to exercise or enforce & no delay in exercising or enforcing on the part of either Party to this Agreement or the PERFORMANCE STANDARDSs of any right, remedy or provision of this Agreement or the PERFORMANCE STANDARDSs shall operate as a waiver of such right, remedy or provision in any future application nor shall any single or partial exercise or enforcement of any right, remedy or provision preclude any other or further exercise or enforcement of any other right, remedy or provision.

Entire Agreement

This MSA, the PERFORMANCE STANDARDSs & all schedules appended thereto & the contents of the RFP subsequent corrigenda issued thereon & clarification (undertakings) accepted by the AMC School Board constitute the entire agreement between the Parties with respect to their subject matter.

Survivability

The termination or expiry of this Agreement or the PERFORMANCE STANDARDSs for any reason shall not affect or prejudice any terms of this Agreement, or the rights of the Parties under them which are either expressly or by implication intended to come into effect or continue in effect after such expiry or termination.

The stamp duty payable for the contract shall be borne by the Service Provider.

Applicable Law

The contract shall be governed by the laws and procedures prescribed by the Laws prevailing and in force in India, within the framework of applicable legislation and enactment made from time to time concerning such commercial dealings/processing. All legal disputes are subject to the jurisdiction of Ahmedabad courts only.

IN WITNESS whereof the parties hereto have signed this on the day, month and year first herein above written.

Signed, sealed and delivered

By _____,

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For and on behalf of the AMC School Board. Ahmedabad

Signed, sealed and delivered

By -----

For and on behalf of the "Service Provider",

Witnesses:

(1)

(2)

Attachments to the Agreement:

- i. Scope of Services for the Service Provider
- ii. Detail Commercial proposal of the Service Provider accepted by AMC School Board
- iii. Corrigendum Document published by AMC School Board subsequent to the RFP for this work
- iv. RFP Document of AMC School Board for this work
- v. LoI issued by the AMC School Board to the successful bidder
- vi. The successful bidder's "Technical Proposal" and "Commercial Proposal" submitted in response to the RFP
- vii. Payment Schedule and Milestones

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Part III: Format for Performance Bank Guarantee

<< To be printed on Rs. 100/- Stamp Paper >>

IN CONSIDERATION OF Through

AMC School Board, Ahmedabad (Ahmedabad Municipal Corporation School Board) for Selection of Bidder for RFP for Smart School Project to enhance teaching-learning process in municipal schools through use of ICT technology and support infrastructure in Ahmedabad City (hereinafter referred to as the "said work") on the terms and conditions of the AGREEMENT dated theday of 2022 executed between AMC School Board on the one part and the Company (Name of the Company) on the other part (hereinafter referred to as "the said AGREEMENT") and on the terms and conditions specified in the Contract, Form of Offer and Form of acceptance of Offer, true and complete copies of the offer submitted by the Company, the said Acceptance of Offer and the said AGREEMENT are annexed hereto.

The Company has agreed to furnish AMC School Board in Guarantee of the Nationalized Bank for the sum of Rs (Agreement in Words and Figures) only which shall be the Security Deposit for the due performance of the terms covenants and conditions of the said AGREEMENT. We..... Bank Registered in India under Act and having one of our Local Head Office at..... do hereby guarantee to AMC School Board in Department.

Due performance and observances by the Company of the terms covenants and conditions on the part of the Company contained in the said AGREEMENT, AND

Due and punctual payment by the Company to AMC School Board of all sum of money, losses, damages, costs, charges, penalties and expenses that may become due or payable to AMC School Board by or from the Company by reason of or in consequence of any breach, non-performance or default on the part of the Company of the terms covenants and conditions under or in respect of the said AGREEMENT.

AND FOR THE consideration aforesaid, we do hereby undertake to pay to AMC School Board on demand without delay demur the said sum of Rs. (Rupees only) together with interest thereon at the rate prescribed under from the date of demand till payment or such lesser sum, as may be demanded by AMC School Board from us as and by way of indemnity on account of any loss or damage caused to or suffered by AMC School Board by reason of any breach, non-performance or default by the Company of the terms, covenants and conditions contained in the said AGREEMENT or in the due and punctual payment of the moneys payable by the Company to AMC School Board thereunder and notwithstanding any dispute or disputes raised by the Company in any suit or proceeding filed before the Court relating thereto our liability hereunder being absolute and unequivocal and irrevocable AND WE do hereby agree that –

The guarantee herein contained shall remain in full force and effect during the subsistence of the said AGREEMENT and that the same will continue to be enforceable till all the claims of AMC School Board are fully paid under or by virtue of the said AGREEMENT and its claims satisfied or discharged and till AMC School Board certifies that the terms and conditions of the said AGREEMENT have fully and properly carried out by the Company.

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We shall not be discharged or released from liability under this Guarantee by reason of any change in the Constitution of the Bank or any arrangement entered into between AMC School Board and the Company with or without our consent; any forbearance or indulgence shown to the Company, any variation in the terms, covenants or conditions contained in the said AGREEMENT; any time given to the Company, OR any other conditions or circumstances under which in a law a surety would be discharged.

Our liability hereunder shall be joint and several with that of the Company as if we were the principal debtors in respect of the said sum of Rs..... (Rupees Only).

We shall not revoke this guarantee during its currency except with the previous consent of AMC School Board in department in writing;

Provided always that notwithstanding anything herein contained our liabilities under this guarantee shall be limited to the sum of Rs..... (Rupees..... only) and shall remain in force until AMC School Board certifies that the terms and conditions of the said AGREEMENT have been fully and properly carried out by the Company.

Bank hereby agrees and covenants that if at any stage default is made in payment of any instalment or any portion thereof due to AMC School Board under the said AGREEMENT or if the Company fails to perform the said AGREEMENT or default shall be made in fulfilling any of the terms and conditions contained in the said AGREEMENT by the Company, the Bank shall pay to AMC School Board demand without any demur, such sum as may be demanded, not exceeding Rs..... (Rupees.....) and that the Bank will indemnify and keep AMC School Board indemnified against all the losses pursuant to the said AGREEMENT and default on the part of the Company. The decision of AMC School Board that the default has been committed by the Company shall be conclusive and final and shall be binding on the Bank/Guarantor. Similarly, the decision of AMC School Board as regards the Agreement due and payable by the Company shall be final and conclusive and binding on the Bank /Guarantor.

AMC School Board shall have the fullest liberty and the Bank hereby gives its consent without any way affecting this guarantee and discharging the Bank/Guarantor from its liability hereunder, to vary or modify the said AGREEMENT or any terms thereof or grant any extension of time or any facility or indulgence to the Company and Guarantee shall not be released by reason of any time facility or indulgence being given to the Company or any forbearance act or omission on the part of AMC School Board or by any other matter or think whatsoever which under the law, relating to sureties so releasing the guarantor and the Guarantor hereby waives all suretyship and other rights which it might otherwise be entitled to enforce.

That the absence of powers on the part of the Company or AMC School Board to enter into or execute the said AGREEMENT or any irregularity in the exercise of such power or invalidity of the said AGREEMENT for any reason whatsoever shall not affect the liability of the Guarantor/Bank and binding on the bank notwithstanding any abnormality or irregularity

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The Guarantor agrees and declares that for enforcing this Guarantee by..... against it, the Courts at Ahmedabad only shall have exclusive jurisdiction and the Guarantor hereby submits to the same

1.....

2.....

Being respectively the Director of the Company, who in token thereof, has hereto set his respective hands in the presence of –

1.....

2.....

Annexure D: Technical / Functional Specifications (as per the approved technical specification under MP Grant Project)

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Annexure – 1 (Joyful Learning Class) (No. of 1 to 3)

Scope of Work of Joyful Learning Class

Sr. No	DETAILS	Unit/Size
1	Pre-Educational Kit	01
2	3D Educational Chart	1000sq.ft

Sr. No 1: Pre-Educational Kit

Sr. No.	Pre-Educational Kit TECHNICAL SPECIFICATIONS	Unit/Size
		(i)
1	Ring Toss (Six different colour rings, five sticks to hang rings and 2 base, plastic material)	2
2	Linking Toys (Different color blocks to join all blocks to make different shapes; size of each block minimum 3"x3")	2
3	Jingle Bell Roller (Roller with music, 1' stick, plastic material, when moves it should produce a melodious bell sound)	2
4	Dafli (Round shape, minimum 18 cm diameter, plastic material)	6
5	Ring Ball (Multicolor, minimum 12 cm diameter, should be made from abs virgin plastic granules)	6
6	Twin Teddy Toys (Two different color teddy toys with wheels to pull with rope, also produces sound while moving, should be made from virgin plastic granules)	2
7	Counting Frame (Minimum Size 14" x 14", 2 stands with printed ABCD stickers, minimum 10 rods with counting beads, each rod should have increased number of beads in ascending order)	2
8	New Business board game (Hard paper material board, Minimum board size 14" x 14", folding board, plastic coins, Gujarati language)	2
9	Snakes and Ladder board game (One board, plastic coins)	2
10	Carry Bowling Pin (One basket with net, one ball, stand to hook the net)	3
11	Small Carrom Board (Carrom board minimum size 17"x17" with cookies, plastic material)	2
12	Cricket Set (One bat, one ball, three stumps with base, plastic material)	2
13	Small Hockey (Minimum 22" multicolor hockey stick, two balls, plastic material)	2
14	Skipping Rope	10

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Sr. No.	Pre-Educational Kit TECHNICAL SPECIFICATIONS	Unit/ Size (i)
	(Plastic material handle with rope)	
15	Timer (Sand timer, transparent side made of polystyrene virgin granules; rest in pp virgin plastic)	2
16	Teddy Rider (Minimum stick L50 cm, Teddy shaped toys with wheel; should produce a sound when it moves, made of plastic material)	2
17	Musical Drum (Minimum 28cm Diameter, round shape, plastic material)	5
18	Flying Disc (Minimum 28 cm diameter, round shape, plastic material)	12
19	Table Tennis (Two rackets, two balls, one racket l minimum 11", virgin plastic material)	3
20	Pre-Education Stand (Minimum h-58", plastic material, washable material colour, easy to assemble, five shelves, easily movable with wheel)	1
21	Flower Puzzle (Total four sets, each set should have fourteen blocks, Minimum size of one set 17x17 cm, hard paper material)	4
22	Vegetable Puzzle (Total four sets, each set should have fourteen blocks, Minimum size of one set 17 x 17 cm, hard paper material)	4
23	Fruit Puzzle (Total four sets, each set should have fourteen blocks, Minimum size of one set 17 x 17 cm, hard paper material)	4
24	Transport Puzzle (Total four sets, each set should have fourteen blocks, Minimum size of one set 17 x 17 cm, hard paper material)	4
25	Teddy Ring (One base with rod stand, 7 rings with 7 different colours, all to be made in virgin blow molding plastic granules)	2
26	Xylophone (Butterfly shape, eight colored musical bands, two drumsticks, body made in virgin plastic material)	2
27	Baby Chair (Should be made of plastic material; minimum h50 cm x Minimum w 20 cm)	20
28	Baby Mission Car (Should be made of virgin plastic granules, weight 2 to 3k.g)	1
29	Baby Tricycle (Plastic and steel material; weight 2 to 3k.g)	2
30	Slide and Swing with Safety Flooring Mat (Minimum dimension L 64" X W 64 X H 43" X T 54")	1 set
31	Alpha Genius Board (Minimum dimension H 1' X W 16", with back side green board, duster chalk, different colour alphabets and numbers)	1
32	Education Train (Square shaped train buggies with two side printed alphabets, one engine, plastic material)	1
33	Front Rounded Table (Minimum dimension: L54" x W 30" xH20")	2

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Sr. No.	Pre-Educational Kit TECHNICAL SPECIFICATIONS	Unit/ Size (i)
34	Shape Shorter Ball Total 9 shapes and 6 outer body parts	5
35	Link Designer Minimum 200 pieces of connectors, 20 small rings, 20 big rings	2
36	Magic Pegs With back stand to display art on table and hanging pin to display art as a wall piece.	2

Sr. No 2 3D Educational Chart

Sr. No.	3D Educational Chart TECHNICAL SPECIFICATIONS	Unit/ Sq ft (i)
1	<p>Design, approve, provide, and fix the thematic 3D Educational PVC wallpaper of minimum 250-micron PVC sheet with minimum 100-micron matte lamination. Certified by Cipet Lab or any reputed lab, printing should be done by water base, odorless, eco-friendly Latex ink Certified by Green Guard, Green Guard Gold, Eco Logo Lab or similar.</p> <p>Providing and applying 2coat waterproofing of high elongation acrylic based liquid membrane.</p> <p>Providing and applying base coat of acrylic primer as per manufacturer's application guideline, after removal of existing lime coat and surface preparation needed.</p> <p>Content for wallpaper should be in line with the curriculum of respective grade. Bidder is requested to propose the wallpaper design during the requirement gathering phase and same should be approved from competent authority. Bidder would be required to amend the design as per the suggestions received from client – AMC School Board. Bidder is requested to install 3D educational chart on 3 walls of a room only and remaining wall should be kept free for the installation of soft board. This wallpaper should be temper and tear proof.</p> <p>Prior to the printing and installation of the 3D Educational Chart in the smart school, the vendor is required to obtain approval for the wallpaper design from the AMC School Board. Furthermore, testing of the printed 3D chart/wallpaper must be conducted in a government-affiliated laboratory or a private laboratory, and the associated testing costs shall be borne by the vendor.</p>	11000 Sq ft

Annexure: -2 (Smart Panel)

The smart panel should come fully installed with all necessary software, hardware and firmware which are required to run the smart panel; no additional expenses should be incurred by AMC school boards for any extra items.

Category	Spec Attribute	Interactive Flat Panel
Panel	Screen Size	Minimum 65"
	Panel Type	IPS
	Resolution (pixel)	UHD 3840 x 2160
	Aspect Ratio	16:9
	Brightness (typical) (nits; cd/m2)	350 nits or Higher



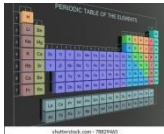


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Category	Spec Attribute	Interactive Flat Panel
	Response Time (ms)	8 ms or faster
	Light Life (typical) (hrs)	50000 hrs or Higher
	Panel Bit	10 bit
In Built Device Configuration	SOC	1.5 Ghz or Higher
	System Memory	3GB RAM or Higher
	Storage	32GB Storage or Higher
	Operating System	Latest Android or equivalent (Bidder to ensure that the Operating System should be updated over the course of time to stay relevant to the industry standard).
Power	Maximum (Watt)	200W or lower
Tempered Glass	Tempered Glass (Thickness)	4mm or Higher
	Tempered Glass Hardness	9H or Higher
Touch	Germ-resistant technology	As per industry practice
	Capacity	20 point or higher Windows 10 Point Android or equivalent
	Accuracy	±2.0mm over 90% of touchable area
	Touch Output	Minimum 2 × USB Type B or Type C
Input/ Output	VGA Input	x1
	HDMI Input/ Output	x3 (2.0) / x1 (2.0)
	Line in/out (3.5mm)	x1 / x1
	RJ45 Port	x1
	USB (Type A)	x7 or more (2.0 x 2; 3.0 x 5)
	USB (Type B)	x3 (2.0 x 3) or more
Built-in peripherals	Internal Speaker	2 x 16W or Higher with in-built Sound Bar
Accessory	Stylus (With Shipment)	x2
	Wall Mount (with shipment)	x1
Feature	I/O Ports	Easily accessible I/O Ports
Eye Care	Flicker Free	Protect for Eye Damage Purpose
	Low Blue Light	Protect Eye & Health Care Purpose
SW support	Device Management Solution (DMS)	DMS
	Floating tool	Floating Tool
	WPS (office viewer APP)	WPS
	While Board Software	Fee and Inbuilt for Android, Windows freely
	Sharing & Casting Application	2 way Annotation and 2 way Mirroring
	Screen Sharing on Panel	Option to have up to 4 simultaneous source feed shared on Panel
	Account Management System (AMS)	Authentication via Active Directory or similar Integration for Individual account login & Email configuration for Panel
	Broadcast Software Solution	In Built with option for Having Text, Audio, Video message Broadcast
Connectivity	Wi-Fi	Latest version
	Bluetooth	Bluetooth 4.0 or higher





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Annexure: - 3 (Math's and Science Lab with working Models with Teachers Training)

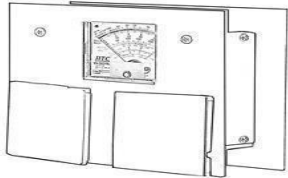

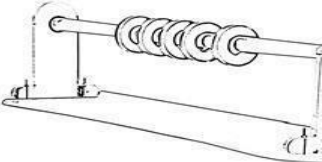
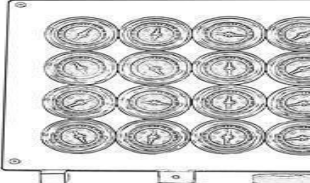
Bidder should align various Mathematics and Science Lab working models with syllabus of school. Bidder is required to submit a document in this regard in hard copy to AMC school board and also to the respective school officials. Bidder should also provide raw material and / or consumables for all the items procured under this RFP, wherever required during the course of entire contractual agreement period.

Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
Details			
1	<p>Waterproof Magnascope</p> 	<p>Can visualize tiny objects like bacteria and microorganism as well as samples like insects, plants, fabrics and tissues. It can also be attached to mobile phones for imaging. It should be portable and waterproof.</p> <p>Specification: This model is to be made with high quality materials with precision optics. Plastic, PVC. Minimum 135 X magnification. Minimum Requirement:13 X 15 X 20 CM.</p>	1
2	<p>Probability with manipulative</p> 	<p>Minimum Size: 16"X10"X 2"</p> <p>MATERIAL: Colored Spinner, Dice, Jar Of Marbles, 80 Marbles, Coin, Standard Playing Card, Probability Wooden Board</p>	1
3	<p>Dimension Modern Periodic Table</p> 	<p>Model of Periodic Table study resources provides everything a young scientist needs to learn and memorize all 118 elements. All 118 elements squares should be detachable and can be fixed for study purpose. Must be made with wood, plastic, MDF, Mild steel etc.</p> <p>Specification: It should be made of high quality materials with precision optics. Plastic, PVC. Minimum 135 X magnification. Minimum Requirement: 30X 24 X 3 inches.</p>	
4	<p>Human eye model</p> 	<p>Minimum size: 30 cm x 24 cm x 6cm. Display stand to be included. Material: this exhibit must consist of a human eye model made in plastic or fir. It should have a moving mechanism for the eye-ball. A conceptual chart in gujarati language of a3 size must be provided in 6 colours printed on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
5	<p>Human brain & skull</p> 	<p>Minimum size: 30x24x6 cm. A three dimensional model; half skull with removable brain section for observation and study. Display stand must be included. Material: this exhibit must be a table top model of the human brain made with plastic. An instruction manual must also be provided.</p>	1

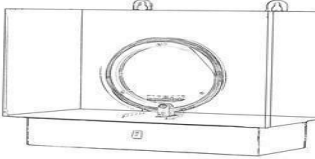
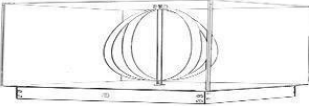
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
6	<p>Human ear</p> 	<p>Minimum requirement: 30x24x6 cm. Larger than life size inner ear sections exposed for observation and study of canals, drum and nerves. Material: anatomically accurate plastic kit. Must be a table top model of human ear. An instruction manual must also be provided.</p>	1
7	<p>Micro scale experiments in environmental chemistry</p> 	<p>Minimum size: 24x18x6 cm. Material: plastic petri-dish, white grid, plastic wash bottle, 0.03% brome, cresolgreen indicator, 0.5m barium chloride etc.</p>	1
8	<p>Barometer, digital clock and calendar and weather forecast receiver</p> 	<p>Minimum size: 8"x4"x1.25". Material: plastic body must contain electronics circuit, lcd display, controls use: indication of current weather along with atmospheric pressure digital circuit. Base station for item no. 9, 22, 7 25. Minimum size: 7.6" x 1.1" x 4.5". Data storage for weather forecast.</p>	1
9	<p>WIND SPEED AND DIRECTION METER</p> 	<p>Minimum Requirement: 7" x 13" x 5" MATERIAL: Plastic, Aluminum, Electronics Transmitter CONCEPT: Information received from Anemometer USE : Weather Forecast</p>	1


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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
10	<p>Human battery</p> 	<p>Size: the working model should be provided with a molded hd plastic stand & unbreakable banded ms base minimum size: 12" x 14" x 3.5" with white/gray insulated material of minimum size: 10.5" x 10.5" x 4" and 3mm wall thickness. It must also have a molded hd plastic stand & unbreakable banded ms base with white/gray insulated material bottom casing of minimum 1mm wall thickness to encase electrical connection and/or mechanism if needed. Material: the working model should consist of two metallic plates of minimum 4" x 4" each with rounded edges, one being copper and other being galvanized iron. A good quality millimeter must properly be fixed inside the protective casing and connected to a 9v battery provided. An open able section should be provided to replace the battery. A conceptual chart in gujarati language of a3 size should also be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
11	<p>Solar vapor tower</p> 	<p>Size : this working model must have base minimum of 2 x 2 x 4 (feet) of wooden sheet and metal tower . Material : the working model should consist of metal updraft tower of thickness of minimum 2.5mm. Consist of minimum 4 fan, solar panels and zig zag bars. A conceptual chart in gujarati language of a3 size should be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video</p>	1
12	<p>Magnetic spring</p> 	<p>Size: the working model provided on a plastic/acrylic base of minimum 510mm x 305mm and 2.7mm thickness and height of 160 mm. Material: the working model must consist of an acrylic/plastic rod of minimum 20 mm diameter. It has 5 ring magnets i.d. minimum 25mm, o.d. 52 mm and 8 mm thick. It should have two vertical supports to hold the acrylic rod horizontally. A conceptual chart in Gujarati language of a3 size must be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video</p>	1
13	<p>Magnetic field visualization with compasses</p> 	<p>Size: the model should comprise of a molded hd plastic stand & unbreakable banded ms base size: minimum 12" x 14" x 3.5" with white/gray insulated material & transparent casing of size: minimum 10.5" x 10.5" x 4" and 1mm wall thickness. It must also have a bottom casing of 2.7mm wall thickness to encase electrical connection and/or mechanism if needed. (Front loading style which is fix in modular platform) material: this working model must contain minimum 16 magnetic compasses fixed inside the casing and 3 types of magnets, bar magnet minimum 10mm x 10mm x 75mm, ring magnet minimum i.d. 25mm o.d. 50mm and 10mm thick, horse shoe magnet. All magnet provided in a plastic box. A conceptual chart in gujarati language of a3 size must be provided in 6 colour print on minimum 3mm pvc</p>	1

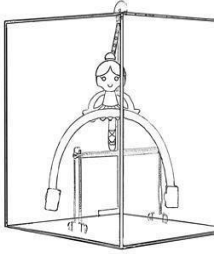

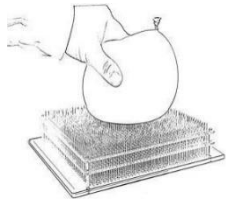

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
		base having a qr code that can be linked to an application for seeing conceptual video	
14	<p>Magnetic effect of electric current with compass</p> 	<p>Size: the model should be provided with a molded hd plastic stand & unbreakable banded ms base size: minimum 12" x 14" x 3.5" with white/gray insulated material & transparent & transparent casing of size: minimum 10.5" x 10.5" x 10" and 3mm wall thickness. It must also have a bottom casing to encase electrical connection and/or mechanism. (Front loading style which is fix in modular platform) material: the working model should have a tangent coil using 20swg copper wire and a magnetic compass. A ce mark electric push button switch must be provided. Electrical connection and ac to dc adapter to be provided. Wall hooks and fittings provided. A conceptual chart in gujarati language of a3 size to be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
15	<p>Shape of earth due to rotation</p> 	<p>Size: the model must be provided with a transparent casing of minimum size: 10.5" x 10.5" x 10" and 1mm wall thickness. It also has a bottom casing to encase electrical connection and/or mechanism if needed. The model must be provided with a molded hd plastic stand & unbreakable banded ms base minimum size: 12" x 14" x 3.5" (front loading style which is fix in modular platform) material: this exhibit should consist of a minimum 300 r.p.m. Gear motor connected to an aluminum pipe minimum i.d. 5.7 mm o.d. 10mm. A 1-meter plastic strip, a ce mark electric push button switch to be provided. Electrical connection and a ce mark 12v 1a ac to dc adapter to be provided. . A conceptual chart in gujarati language of a3 size to be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1

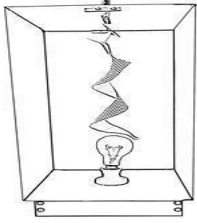
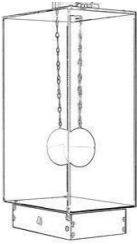

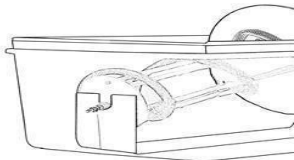
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
16	<p>Solar water heater</p> 	<p>Minimum size : 15 x 15 x 8 (inch) material : this working model must consist of a solar black heated pipe, with a storage tank . A conceptual chart in gujarati language of a3 size to be provided provided in 6 color print having a qr code that can be linked to an application for seeing conceptual video.</p>	1
17	<p>Conservation of momentum – marbles slide</p>	<p>Minimum requirement: 410mm x 80mm x 210mm material: the exhibit should consist of a molded hd plastic stand & unbreakable banded ms base with white/gray insulated material & powdered coated metal slide and 5 marbles. A wall boundary should be provided to avoid the marbles from falling down on floor. A conceptual chart in gujarati language of a3 size to be provided in 6 colour print having a qr code that can be linked to an application for seeing conceptual video</p>	1
18	<p>Barometer, digital clock and calendar weather forecast receiver</p>	<p>When an object is placed at infinity, the real image should be formed at the focus. The size of the image should be much smaller than that of the object. Specification: this model should be made with smoke produce, glass, pvc & plastic, laser etc. Work on 12 vdc or 230 vac. Minimum size : 33 x 60 x 20 cm.</p>	1
19	<p>Smoke Based Optical Bench for Concave Lens</p>	<p>When an object is placed at infinity, a virtual image should be formed at the focus. The size of the image should be much smaller than that of the object. Specification : This model is made with Smoke produce, Glass, PVC & Plastic, Laser etc. Work on 12 VDC or 230 VAC. Minimum size: 33 X 60 X 20 CM.</p>	1
20	<p>Smoke Based Optical Bench for Convex Mirror</p>	<p>When an object is placed at infinity, a virtual image should be formed at the focus. The size of the image should be much smaller than compared to that of the object. Specification : This model is to be made with Smoke produce, Mirror Glass, PVC & Plastic, Laser etc. Work on 12 VDC or 230 VAC. Minimum Size: 33 X 60 X 20 CM.</p>	1
21	<p>Smoke Based Optical Bench for Concave Mirror</p>	<p>Concave Mirror Ray Diagram lets us understand that, when an object is placed at infinity, a real image is formed at the focus. The size of the image is to be much smaller compared to that of the object. Specification : This model is made with Smoke produce, Mirror Glass, PVC & Plastic, Laser etc. Work on 12 VDC or 230 VAC. Minimum size : 33 X 60 X 20 CM.</p>	1


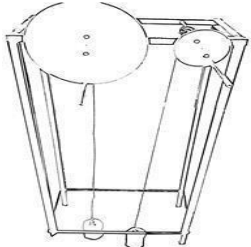
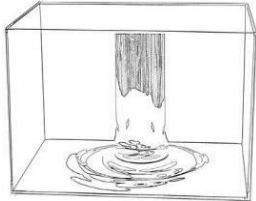
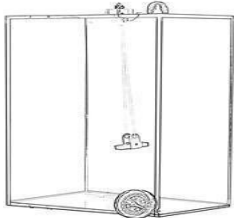
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
22	<p>Self balancing doll</p> 	<p>Minimum requirement: the model should be provided with a transparent casing of size: 10.5" x 10.5" x 10" and 2.7mm wall thickness. It should also have a plastic stand & unbreakable banded ms base size: 12" x 14" x 3.5" with white/gray insulated material bottom casing to encase electrical connection and/or mechanism if needed. Material: this exhibit should consist of a balancing doll with counterweights placed over a horizontal support. A conceptual chart in gujarati language of a3 size to be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video. Use: this working model should consist of a mechanism in which a doll balances on a thin rope and even if it is given a deflection, it does not fall down.</p>	1
23	<p>Tower of pisa</p> 	<p>Minimum requirement: 260mm x 260mm x 400mm material: this exhibit should consist of 8 mm square section solid rod metal frame – ms, and a metal ball with hook. The ball should hang such that it is exactly at the center of gravity of the frame. A conceptual chart in gujarati language of a3 size provided in 6 colour print on minimum 3mm pvc base having a qr code that linked to an application for seeing conceptual video.</p>	1
24	<p>D of nails</p> 	<p>Minimum requirement: the model provided with a transparent casing of size: 12" x 12" x 2" and 2.7mm wall thickness. Material: this exhibit consist of 2" nails minimum 2mm diameter anti-rust quality and more than 750 units neatly arranged in a square pattern. The nails locked within the casing such that it does not fall out. Minimum 10 balloons provided along-with in a separate plastic box. A conceptual chart in gujarati language of a3 size to be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
25	<p>The floating ball</p> 	<p>Minimum requirement: 400mm x 410mm x 1220mm material: this exhibit should consist of 8 mm square section solid rod – ms frame. A high-speed air blower must be provided connected to an external on- off switch, a light-weight ball, an electric wire with 2 pin plug 1.5 meter provided. A conceptual chart in gujarati language of a3 size to be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1

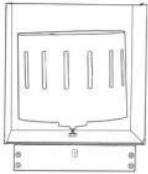

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
26	<p>Heat spiral</p> 	<p>Minimum requirement: the model should be provided with a transparent casing of size: 10.5" x 10.5"x 18" and minimum 2.7mm wall thickness. It should also have a bottom casing to encase electrical connection and/or mechanism if needed. The model should be provided with a molded hd plastic stand & unbreakable banded ms base size: 12" x 14" x 3.5" (front loading style which is fix in modular platform) . Material: the exhibit must consist of a standard 200 watt bulb properly fitted inside the casing using a bulb holder and a 2pin plug with wire minimum 1.5 meter and a spiral snake template on 80 gsm paper hung from the top using thread. The bulb must be operated by a ce mark push button switch. A conceptual chart in gujarati language of a3 size to be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
27	<p>Rnoulli balls</p> 	<p>Minimum requirement: the model must be provided with a transparent casing of size: 10.5" x 10.5" x 18" and 2.7mm wall thickness. It should also have a bottom casing to encase electrical connection and/or mechanism if needed. The model must be provided with a molded hd plastic stand & unbreakable banded ms basesize: 12" x 14" x 3.5" material: the exhibit should consist of two molded hollow plastic hdpe balls hung using metal chains and cup hooks. A high speed air blower must be provided connected to an external ce mark push button switch, a 2 pin plug with electric wire minimum 1.5 meter. A conceptual chart in gujarati language of a3 size to be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
28	<p>Magic water tap</p> 	<p>Minimum requirement: the model should be provided with a transparent casing of size 305mm x 305mm x 620mm. Material: the model must consist of a plastic tap and acrylic pipe connected to it at one end and a pump on the other end. The entire assembly must be water tight so that no water leaks out. An on off electric switch with 2 pin plug and minimum 1.5 meter wire should be provided. A conceptual chart in gujarati language of a3 size must be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
29	<p>Archemedes screw</p> 	<p>Minimum requirement: 230mm x 310mm x 125mm material: the exhibit must consist of a metal handle and frame fixed inside the plastic casing. The entire assembly must be watertight so that no water leaks out. A conceptual chart in gujarati language of a3 size to be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1

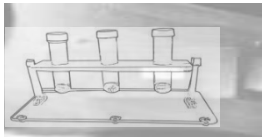
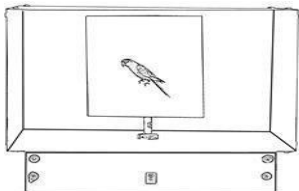
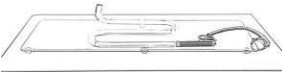
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
30	<p>Simple Machines - To understand the functions of Lever – Pulley</p> 	<p>Type: Activity to prepared by teacher Material & Size: This activity must contain 5 pulleys of ABS plastic material, 30 marbles, rope looped, 8 coated steel screws, 5 polished wooden strips, 3 hooks, 6 net bags Minimum 21.2 x 16.8 x 5.2 cm. A conceptual chart in Gujarati language of A3 size must be provided in 6 colour print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
31	<p>Wheel and axle load lifting</p> 	<p>Minimum requirement: 20" x 12" x 36" material: this exhibit must consist of a metal frame with powder coating and two identical 5 kg weights with hooks and two metal rods connected to two plastic/acrylic wheels 5" and 10" both having handle for rotation. The weights must be connected to the rod using standard quality 6mm nylon rope. A rubber mat should be provided at the base to absorb impact of weight. A conceptual chart in gujarati language of a3 size should be provided in 6 color print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
32	<p>Anamorphose</p> 	<p>Minimum requirement: the model must be provided with a transparent casing of size: 10.5" x 10.5" x 10" and 2.7mm wall thickness. The model should be provided with a molded hd plastic stand & unbreakable banded ms basesize: 12" x 14" x 3.5" material: the exhibit should consist of a 75mm o.d., 175 mm height cylindrical pipe with highly reflective surface, a template of a distorted image proper fixed inside the protective plastic casing. A conceptual chart in gujarati language of a3 size to be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
33	<p>Freely suspended magnet</p> 	<p>Minimum requirement: the model must be provided with a molded hd plastic stand & unbreakable banded ms base with white/gray insulated material & transparent casing of size: 8.5" x 8.5" x 10" and 1mm wall thickness. It should also have a bottom casing of 1mm wall thickness to encase electrical connection and/or mechanism. The model should be provided with a molded hd plastic stand & unbreakable banded ms base with white/gray insulated material size: 10" x 3.5" x 12" and 1mm wall thickness. (Front loading style which is fix in modular platform) material: the working model should consist of a freely suspended bar magnet of 38mm x 13mm x 8mm size with vertical axial rotation mechanism and a magnetic compass. If needed wall hook and fittings must be provided. A conceptual chart in gujarati language of a3 size must be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual</p>	1



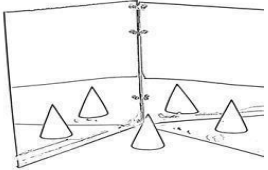

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
		video	
34	<p>Zoetrope</p> 	<p>Minimum requirement: the model should be provided with a transparent casing of size: 10.5" x 10.5" x 10" and 2.7mm wall thickness. The model must be provided with a molded hd plastic stand & unbreakable banded ms base size: 12" x 14" x 3.5" with white/gray insulated material; bottom casing to encase electrical connection and/or mechanism.</p> <p>Material: the exhibit should consist of a plastic/wooden wheel connected to a 300 rpm geared motor. A printed template 300gsm should be stuck on the wheel. The motor should be connected to a ce marked push button switch and electrical connectors. A ce marked 9v 1a ac to dc adapter must be provided along-with. A conceptual chart in gujarati language of a3 size must be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
35	<p>Colored shadows</p> 	<p>Minimum requirement: 381mm x 605mm x 305mm</p> <p>material: this exhibit must consist of three leds – red, blue and green fixed on a frame. The angle of the lights must be individually adjustable. A 2-pin plug with minimum 1.5 meter wire should be provided. If needed, wall fittings – pointed screws and plugs must be provided. A conceptual chart in gujarati language of a3 size must be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1

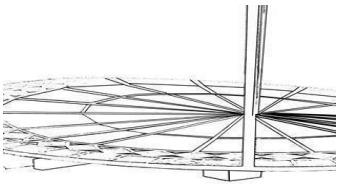
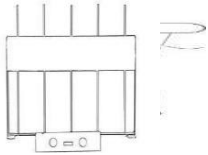


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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
36	<p>BAROMETER, DIGITAL CLOCK AND calendar weather Forecast Receiver</p> 	<p>Minimum Requirement: 12" x 8" & 2.7mm wall thickness MATERIAL: This exhibit must consist of 3 transparent tubes fixed inside a flipping frame attached on a 12" x 8" molded HD plastic stand & unbreakable banded MS base with white/Gray insulated material base. The three tubes must contain water, vegetable oil and glycerin and a marble each. The tubes must be leak proof. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video. USE: The working model must consist of 3 large tubes containing fluids of different viscosity and each must have a marble inside. When flipped, the marbles must start falling down with a different speed. The tube with the slowest falling marble would have the highest viscosity amongst the three fluids.</p>	1
37	<p>Thaumatrope</p> 	<p>Minimum requirement: the model must be provided with a transparent casing of size: 10.5" x 10.5" x 10" and 2.7mm wall thickness. It also must have a molded hd plastic stand & unbreakable banded ms base size: 12" x 14" x 3.5" with white/gray insulated material bottom casing to encase electrical connection and/or mechanism if needed. (front loading style which is fix in modular platform) material: the exhibit should contain a 500 rpm motor, aluminum tubes 5.7mm i.d. 10mm o.d. 160mm long, colour template with bird on one side and a cage on the other side stuck on pvc sheet. The motor should be connected to a ce mark push button switch and electrical connectors. Ac to dc adapter must be provided along-with. A conceptual chart in gujarati language of a3 size to be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
38	<p>Internal reflection tu</p> 	<p>Minimum requirement: the exhibit must be provided on a transparent base of 10.5" x 10.5" x 4" wall thickness. The model should be provided with a molded hd plastic stand & unbreakable banded ms base size: 12" x 14" x 3.5" material: the exhibit must contain a laser light, attached on to the base. A transparent acrylic rod 10mm diameter must be provided with minimum 3 nds – 90 degrees each. A conceptual chart in gujarati language of a3 size must be provided in 6 color print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1


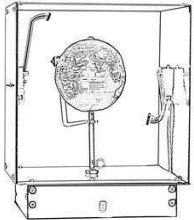
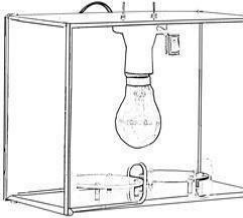
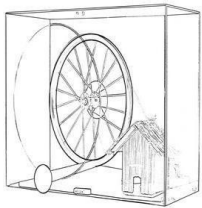
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
39	<p>Newton's disc</p> 	<p>Minimum requirement: material & size: this activity should contain of a wheel and color template, motor and stand. It must work on electricity. Minimum 10.5" x 10.5" x 4" a conceptual chart in gujarati language of a3 size must be provided in 6 color print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video. The model must be provided with a molded hd plastic stand & unbreakable banded ms base size: minimum 12" x 14" x 3.5" (front loading style which is fix in modular platform)</p> <p>use: the newton disc is a well-known physics experiment with a rotating disc with segments in different colours(usually newton's primary colours: red, orange, yellow, green, blue, indigo, and violet) appearing as white (or off-white or gray) when it spins very fast. This type of mix of light stimuli is called temporal optical mixing, a version of additive-averaging mixing.</p>	1
40	<p>Solar cooker</p> 	<p>Minimum requirement: 12 x 12 x 8 (inch) material : this exhibit must consist of wooden and glass box with fully coated aluminum sheet and black layer polymer sheet. It must also have a double layer glass form. A conceptual chart in gujarati language of a3 size must be provided in 6 color print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
41	<p>Multiple reflection of light</p> 	<p>Minimum requirement: 10" x 20" x 2.7mm. Material: this exhibit must consist of three mirrors 10" x 10" x 2.7mm. Two of the mirrors should be attached to each other using a metal hinge such that the angle between them can vary from 0 to 180 degree. A base depicting the angle 0 to 180 degree must be provided. Any loose items should be packed inside a plastic box. A conceptual chart in gujarati language of a3 size must be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
42	<p>Human kaleidoscope</p> 	<p>Minimum requirement: 4 feet triangular side, 5 feet height. Material: the exhibit must be made with 16-to-18-gauge 1 bracket metal frame. Three acrylic mirrors of 2 feet x 4 feet should be attached to form a triangular framework. Rubberr/pvc corks provided at the base of the metal brackets. A conceptual chart in gujarati language of a3 size to be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1

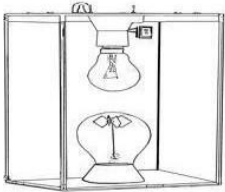
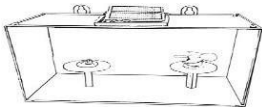


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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
43	<p>The odd dining table</p> 	<p>Minimum requirement: the working model must be provided in a transparent casing of size: 8.5" x 8.5" x 10" and 2.7mm wall thickness. The model should be provided with a molded hd plastic stand & unbreakable banded ms base size: 12" x 10" x 3.5" material: the exhibit should consist of two 6" x 6" x 2.7mm mirrors properly fixed inside the protective molded hd plastic stand & unbreakable banded ms base with white/gray insulated material casing. A colourful printed template of a dining table to be provided. A conceptual chart in gujarati language of a3 size must be provided in 6 color print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
44	<p>Lateral shift</p> 	<p>Minimum size: 70mm x 230mm x 200mm material: this exhibit must consist of 5 identical metal rods powder coated in different colour, a frame as stand to hold the rods in vertical position and a viewing piece in plastic body made using prisms in such a way that the vision is shifted laterally by 25 to 30 degrees. A conceptual chart in gujarati language of a3 size must be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
45	<p>Volcano eruption</p> 	<p>Minimum requirement: it should have a molded hd plastic stand & unbreakable banded ms base size : 12'x10"x3.5" with white/gray insulated material casing material : this project must consist of an acrylic base molded mountain on the ms base. A conceptual chart in gujarati language of a3 size must be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
46	<p>Day & night</p> 	<p>Minimum requirement: size & material (l x w x h): minimum 10.5" x 10.5" x 10" electrical, coated wood, a conceptual chart in gujarati language of a3 size must be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video. It must also have a molded hd plastic stand & unbreakable banded ms base size: minimum 12" x 14" x 3.5" with white/gray insulated material bottom casing to encase electrical connection and/or mechanism if needed. (front loading style which is fix in modular platform) use: this activity will help to understand how days and nights are formed.</p>	1


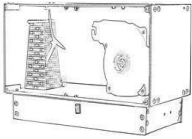
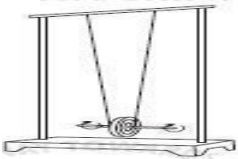
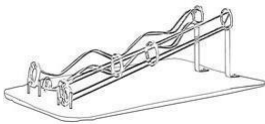

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
47	<p>The universe - solar system</p> 	<p>Minimum requirement: size & material: minimum dimensions (l x w x h): 30 cm x 21 cm x 25 cm, abs plastic, fibre, wood. A conceptual chart in gujarati language of a3 size must be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video. Use: this activity will help to understand 8 planets position.</p>	1
48	<p>Satellites</p> 	<p>Minimum requirement: the model must be provided with a transparent casing of size: 10.5" x 10.5" x 10" and 2.7mm wall thickness. It must also have a molded hd plastic stand & unbreakable banded ms base 12"x14"x3.5" with white/gray insulated material a bottom casing to encase electrical connection and/or mechanism if needed. (front loading style which is fix in modular platform) material: the exhibit must consist of a minimum 4" earth globe, 3.5 rpm geared motor and two 60 rpm motors connected to ce mark push button switch and electrical connectors. A metal pipe i.d. 5.7mm o.d. 10mm, 3 objects representing satellites and a dc adapter must also be provided. A conceptual chart in gujarati language of a3 size should be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
49	<p>Heat absorption</p> 	<p>Minimum requirement: the model must be provided with a molded abs casing of size: 8.5" x 8.5" x 10" and 2.7mm wall thickness. It must also have a a molded hd plastic stand & unbreakable banded ms base size : 12"x10"x3.5" with white/gray insulated material casing to encase electrical connection and/or mechanism if needed. (front loading style which is fix in modular platform) material: this model must consist of two same size acrylic discs, one white and one black. A 100 watt bulb and bulb holder connected to a rocker switch, 2 pin plug wire 1.5 m long must also be provided. A conceptual chart in gujarati language of a3 size should be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
50	<p>Hand powered generator</p> 	<p>Minimum requirement: the model must be provided with a transparent casing of size: 10.5" x 18.5" x 10" and 2.7mm wall thickness. It must also have a molded hd plastic stand & unbreakable banded ms base size : 14"x20"x3.5" with white/gray insulated material bottom casing to encase electrical connection and/or mechanism if needed. (front loading style which is fix in modular platform) material: this exhibit must consist of a wheel with handle for rotation, led, dynamo type motor, motor pulley, 1" gi clamp, long lasting pvc o-ring, model of a house. A conceptual chart in gujarati language of a3 size should be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for</p>	1


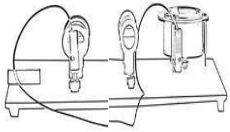
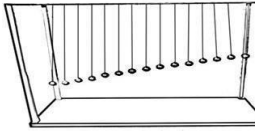
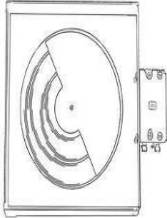
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
		seeing conceptual video.	
51	<p>Radiometer</p> 	<p>Minimum requirement: the model must be provided with a transparent casing of size: 8.5" x 8.5" x 10" and 2.7mm wall thickness. It must also have a molded hd plastic stand & unbreakable banded ms base size : 12"x10"x3.5" with white/gray insulated material bottom/top casing to encase electrical connection and/or mechanism if needed. (front loading style which is fix in modular platform) material: this exhibit must consist of a 200 watt bulb with bulb holder, radiometer properly fixed inside the protective plastic casing. The bulb connected to a ce mark switch and electrical connectors. A 2 pin plug with minimum 1.5 meter wire must be provided. Wall hooks and fittings must be provided. A conceptual chart in gujarati language of a3 size should be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
52	<p>Solar energy kit</p> 	<p>Minimum requirement: the model must be provided with a transparent casing of size: 8.5" x 8.5" x 10" and 2.7mm wall thickness. It should also have a molded hd plastic stand & unbreakable banded ms base size minimum 12"x10"x3.5" with white/gray insulated material bottom casing to encase electrical connection and/or mechanism if needed. (front loading style which is fix in modular platform) material: this exhibit must consist of a solar cell, toy motor with plastic propeller, 2.5 v led, 100 ohm resistor, a ce mark push button switch and electrical connections. A conceptual chart in gujarati language of a3 size must be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
53	<p>Newtons 3rd Law Model</p> 	<p>Minimum Requirement:10 x 12 x 30 (Inch) Material : This Model must consist of Pipe Model of Newtons Third Law which Clearly indicates that Action and Reaction are equal and opposite . It should also have s a Bottle Rocket and a Pump. . A conceptual chart in Gujarati language of A3 size must be provided in 6 colour print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
54	<p>Magnetic fluid</p> 	<p>Minimum requirement:6 x 10 x 5 (inch) material : this model must consist of magnetic liquid fluid in a transparent abs morld jar. A conceptual chart in gujarati language of a3 size must be provided in 6 color print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1

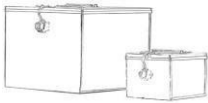
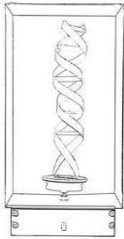

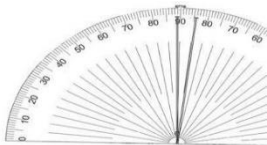
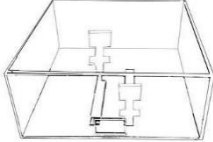
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55	<p>EDDY Current Break</p> 	<p>. Minimum Requirement:MS BASE Size : 10 x 10 x 5 . Material : This Model should consist of Aluminum Sheet round with a powerful Neodymium Magnet to understand the principle of Anti-magnetism. . A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video</p>	1
56	<p>WINDMILL</p> 	<p>Minimum Requirement: The model must be provided with a transparent casing of size: 10.5" x 18.5" x 10"and 2.7mm wall thickness. It must also have a molded HD plastic stand & unbreakable banded MS base size minimum :14"X20"X3.5" with white/Gray insulated material bottom casing to encase electrical connection and/or mechanism. (Front Loading Style which is fixed in modular Platform) MATERIAL: This exhibit should consist of a blower, a dynamo, plastic propeller, 2.5 V 10mm Dome green LED, windmill body. The blower should be connected to a CE mark push button switch and a 2 pin plug with minimum 1.5 meter long wire. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
57	<p>K.E. P.E. WHEEL</p> 	<p>Minimum Requirement: 305 mmx 180 x 460mm MATERIAL: This exhibit should consist of a metal frame with base having a solid wheel hung with threads. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
58	<p>Marble race</p> 	<p>Minimum requirement: 305mm x 510mm x 80mm material: this exhibit must consist of two metal frame slides, one with constant slope and one with varying slope attached on a base made of plastic/acrylic – 12" x 24", two 25mm marbles. A conceptual chart in Gujarati language of A3 size must be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
59	<p>Force and types – FRICTION</p> 	<p>Size & Material: This activity should contain casing Minimum 32mm X 300 mm, 3 marbles, Polish paper 50 micron grade, velvet and a cu/block.</p>	1


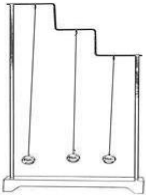
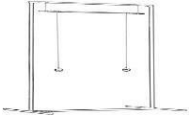

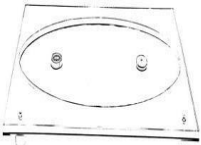
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
60	<p>Electric bell</p> 	<p>Minimum Requirement: 12" x 14" x 3.5" (Front Loading Style which is fix in modular Platform) Material: Shockproof molded HD plastic stand. This working model of electric bell must contain magnet, transparent enameled copper wire, coated wood. A conceptual chart in Gujarati language of A3 size must be provided in 6 colour print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video. Casing Size : 10.5" x 10.5" x 4" Use: Unlike a permanent magnet, the strength of an electromagnet can be easily changed by changing the amount of electric current that flows through it</p>	1
61	<p>Magnetic effect of electric current with galvanometer</p> 	<p>Minimum requirement: 305mm x 200mm x 50 mm (front loading style which is fix in modular platform) material: the exhibit should consist of 2 plastic spools with stand having 26 swg copper wire wound on them with lengths in 2:1 ratio and properly fixed on acrylic base of size 305 mm x 200 mm. A galvanometer, 3" bar magnet, electrical connectors should also be provided. The exhibit must be water-tight. A conceptual chart in gujarati language of a3 size should be provided in 6 color print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
62	<p>Wave motion with pendulum</p> 	<p>Minimum size: 310mm x 180mm x 300mm material: this exhibit must consist of a metal frame 15" x 7" x 10" made in 8mm square section ms rod, 15 metal bobs with hook and suspended using thread. A conceptual chart in gujarati language of a3 size provided in 6 color print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
63	<p>Nham's disc</p> 	<p>Minimum requirement: the working model must be provided in a transparent casing of size: 10.5" x 10.5" x 10" and 2.7mm wall thickness. It should also have a molded hd plastic stand & unbreakable banded ms base size: 12" x 14" x 3.5" with white/gray insulated material bottom casing to encase electrical connection and/or mechanism if needed. (front loading style which is fix in modular platform) material: this exhibit must consist of a disc template having pattern attached on a 120 rpm gear motor. The motor operated using a ce mark push button switch. A ce mark 12v 1a ac to dc adapter provided along-with. Wall hooks and fittings are to be provided if needed. A conceptual chart in gujarati language of a3 size must be provided in 6 color print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video. Use: this working model should consist of a spinning disc having black and white design. When the disk is spun, arcs of pale colour, called fechner colours or pattern-induced flicker colours should be visible at different places on the disk.</p>	1


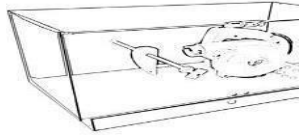
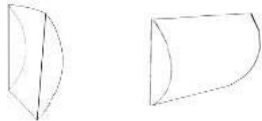
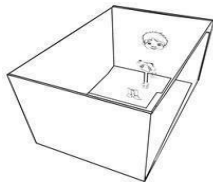
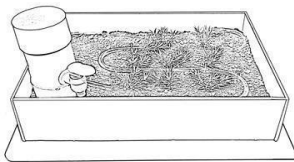

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
64	<p>Volume vs density</p> 	<p>Minimum requirement: 10" cu, 5" cu material: this exhibit should consist of two metal boxes one of 10" cu and other 5" cu, both having handles to lift, a 5 kg weight. A conceptual chart in gujarati language of a3 size must be provided in 6 colour print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
65	<p>Dna model</p> 	<p>Minimum requirement: the model must be provided with a transparent casing of size: 10.5" x 10.5" x 10" and 2.7mm wall thickness. It must also have a molded hd plastic stand & unbreakable banded ms base size 12"x14"x3.5" with white/gray insulated material bottom casing to encase electrical connection and/or mechanism. (front loading style which is fix in modular platform) material: this exhibit should consist of a model of dna structure made in plastic/aluminum, 3.5 rpm motor, ce mark switch, ce mark 9v 1a adapter and other necessary attachments. A conceptual chart in gujarati language of a3 size must be provided in 6 color print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
66	<p>Rain measurement meter, heat index, dew point</p> 	<p>Minimum size :6" x 3.5" x 2.5" material: plastic, aluminum, electronics circuit use : weather forecast</p>	1
67	<p>Angle of vision</p> 	<p>Minimum requirement: 304mm x 608mm x 5mm material: this exhibit should consist of a 0 to 180 degree angle template stuck on a 5mm pvc/sun board base, a fixed acrylic pointer and a movable acrylic pointer. A conceptual chart in gujarati language of a3 size must be provided in 6 color print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1
68	<p>Depth perception – near and far</p> 	<p>Minimum requirement: the model must be provided with a transparent casing of size: 10.5" x 18.5" x 10" and 2.7mm wall thickness. It should also have a a molded hd plastic stand & unbreakable banded ms base size : 14"x20"x3.5" with white/gray insulated material bottom casing to encase electrical connection and/or mechanism. (front loading style which is fix in modular platform) material: this exhibit should consist of two movable rectangular pieces inside a protective plastic casing with a view port in front. A conceptual chart in gujarati language of a3 size must be provided in 6 color print on minimum 3mm pvc base having a qr code that can be linked to an application for seeing conceptual video.</p>	1



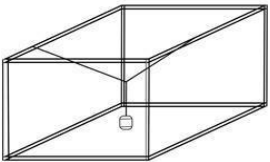

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
69	<p>Simple pendulum</p> 	<p>Minimum Requirement: 12" x 12" x 3" MATERIAL: The exhibit must consist of a metal frame of 12" x 7" x 18" made in 8mm square section with MS rod with powder coating. A metal bob with hook should be attached to the frame by a thread. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video. USE: This working model must consist of a simple pendulum which used to explain what a pendulum is, its time period, amplitude, frequency and oscillations.</p>	1
70	<p>Pendulums of varying length</p> 	<p>Minimum Requirement: 12" x 7" x 18" MATERIAL: The exhibit must consist of a metal frame 12" x 7" x 18" made in 8mm square section with MS rod with powder coating. Three metal bobs with hook should be attached to the frame by individual threads. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
71	<p>SYMPATHETIC PENDULUMS</p> 	<p>Minimum Requirement: 12" x 7" x 18" MATERIAL: The exhibit should consist of a metal frame 12" x 7" x 18" made in 8mm square section with MS rod with powder coating. Two metal bobs with hook should be attached to an aluminum rod, by individual threads. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video</p>	1
72	<p>WEIGHT ON DIFFERENT PLANETS</p> 	<p>Minimum Requirement: 46" x 12" x 46" MATERIAL: This exhibit must consist of 9 containers representing the planets of our Solar system, 9 plastic rings with smooth edges, 1 meter 4mm thread for each of the container, all on a square section powder coated metal pipe frame of size 46" x 12" x 46". Relevant weights should be placed inside the boxes. A vinyl background of 4ft by 4 ft and A conceptual chart in Gujarati language of A3 size must be provided in 6 colour print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
73	<p>ALL ROADS LEAD TO DELHI</p> 	<p>Minimum Requirement: 520mm x 385mm x 15mm MATERIAL: This exhibit must consist of an ellipse board with two discs at the foci, one fixed and one movable. The movable disc will be a carom board striker. Carom board powder to be provided along-with. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1

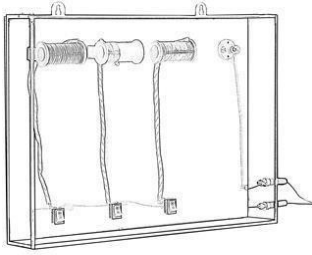



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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
74	<p>Angular momentum wheel</p> 	<p>Minimum SIZE:16” diameter with wall fittings. MATERIAL: This exhibit should consist of a metal frame cycle wheel 16” in diameter, thin and strong nylon rope for hanging the wheel from a powder coated metal frame and wall fittings. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
75	<p>Clap Switch</p> 	<p>Minimum Requirement: The model must be provided with a transparent casing of size: 10.5" x 12.5" x 10" and 2.7mm wall thickness. It must also have a molded HD plastic stand & unbreakable banded MS base size : 14"X12"X3.5" with white/Gray insulated material bottom casing to encase electrical connection and/or mechanism.</p>	1
76	<p>Funny mirrors</p> 	<p>Minimum SIZE:305mm x 75mm x 460mm MATERIAL: This exhibit must consist of two mirrors, one fixed in concave shape and other in convex shape. Wall fitting should be provided if needed. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
77	<p>Depth perception doll</p> 	<p>Minimum Requirement: The model must be provided with a transparent casing of size: 10" x 20" x 12" and 2.7mm wall thickness. It must also have a molded HD plastic stand & unbreakable banded MS base with white/Gray insulated material bottom casing to encase electrical connection and/or mechanism. MATERIAL: This exhibit must consist of 3 parts of a doll/template fixed inside the casing, a view port in the front. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
78	<p>DRIP IRRIGATION</p> 	<p>SIZE: The working model is provided with a transparent casing of size: Minimum 12” x 12” x 3” and Minimum 2.7mm wall thickness. MATERIAL: This model should consist of a water storage unit with a drip system attached to it that runs through a model of an artificial farm. A conceptual chart in Gujarati language of A3 size must be provided in 6 / Multi color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
79	<p>WEIGHT BALANCING SCALE</p> 	<p>SIZE: Minimum 640mm x 180mm x 305mm MATERIAL: This exhibit should consist of a minimum 2 foot wooden / plastic scale with holes at every centimeter, two sets of slotted weights with hook, a balancing base. A conceptual chart in Gujarati language of A3 size must be provided in 6/multi color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1

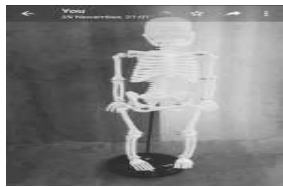


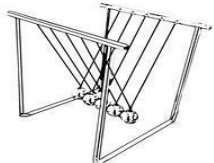
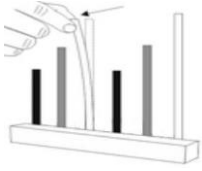
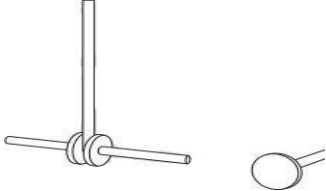
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
80	<p>Measurement of physical quantities: Weighing Machine</p> 	<p>Minimum Requirement: Size & Material: Minimum 240 X 170 X 30 mm- fiber, electronic. It should be accurate, very light weight and elegant. It must be functional using AAA batteries and not the coin cell kinds. A conceptual chart in Gujarati language of A3 size must be provided in 6/ Multi color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video. Use: This activity will help to understand how to measure various things.</p>	1
81	<p>ELECTRIC MAZE</p> 	<p>SIZE: The model must have a molded HD plastic stand banded MS base with white/Gray insulated ma of size: Minimum 12" x 14" x 3.5" and minimum 1mm thickness. It should have a banded MS base with white/Gray insulate material bottom casing of minimum 1mm wall thickness to encase electrical connection and/or mechanism needed. (Front Loading Style which is fix in modular Platform) MATERIAL: The working model should consist of a minimum 3 LED and 3V buzzer, 100 Ohms resistor, 14 aluminum wire, 6V 1A CE mark adapter, electric connectors, handle with hook and a m template. A conceptual chart in Gujarati language A3 size must be provided in 6/Multi color print on mini 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
82	<p>Sand patterns of a compound pendulum</p> 	<p>SIZE: Minimum 24" x 24" x 24" MATERIAL: This exhibit must consist of a powder coated MS pipe frame of size minimum 24" x 24" x 24", a pendulum weight with hollow cavity for sand attached to the frame using thin and strong nylon threads. A PVC/sun-board base should be provided at the bottom, a brush for collecting the sand and storage box must be provided. A conceptual chart in Gujarati language of A3 size must be provided in 6/multi colour print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
83	<p>The ironic border / colour boundary</p> 	<p>SIZE: Minimum 12"x18" MATERIAL: This exhibit should consist of A3 vinyl sticker stuck on minimum 3mm PVC/Sun-board, Minimum two 2 feet ribbon and wall fittings. A conceptual chart in Gujarati language of A3 size must be provided in 6/multi color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1

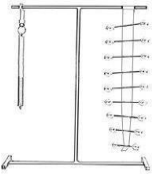
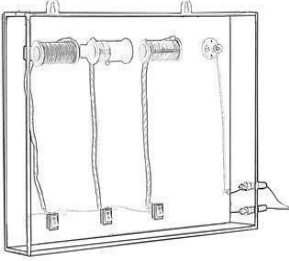


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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
84	<p>Change in electrical resistance due to dimension</p> 	<p>Minimum Requirement: The working model should be provided with a molded HD plastic stand & banded MS base size: Minimum 12" x 14" x 3.5" with white/Gray insulated material& transparent casing of size: Minimum 10.5" x 10.5" x 4" and minimum 1mm wall thickness. It must also have a molded bottom casing of minimum 2.7mm wall thickness to encase electrical connection and/or mechanism if needed. (Front Loading Style which is fix in modular Platform) MATERIAL: The six materials to be provided are Copper wire, Aluminum wire, Ni-chrome wire, Rubber band, plastic straw, wooden stake, minimum 4mm thread. Individual switches (CE mark push button) are to be provided for testing the conductivity of each material. A 6V bulb with holder is to be provided to indicate the conductivity. A 6V 1A CE mark adapter is to be provided along-with. If needed wall hooks and fittings are to be provided. A conceptual chart in Gujarati language of A3 size must be provided in 6/multi color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
85	<p>Pin screen</p> 	<p>Minimum Requirement: The model must be provided in size: 12" x 12" x 2"and minimum 2.7mm wall thickness. MATERIAL: This exhibit should consist of 2" nails minimum 2mm diameter anti-rust quality and more than 750 units neatly arranged in a square pattern. The nails should be locked within the casing such that they do not fall out. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
86	<p>Indore, outdoor & humidity digital temprature indicatore</p> 	<p>Minimum Requirement: 7" x 13" x 5" MATERIAL: Plastic, Aluminum, Electronics Circuits. CONCEPT: Digital temperature indicator through Electronics Circuit USE : Weather Forecast</p>	1
87	<p>Human torso</p> 	<p>Minimum Requirement: 10" x 8" x 30" MATERIAL: This exhibit must consist of a colored Human body torso provided in a standard quality fibre with removable organs – heart, lungs, liver, stomach, intestine, brain and eye. All parts should be labelled or coded. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1




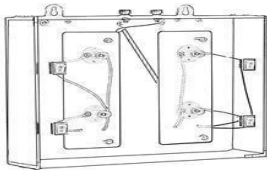
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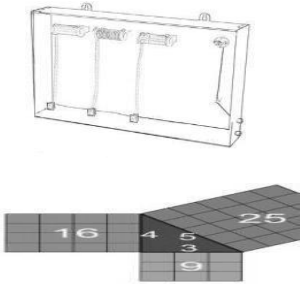

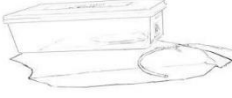
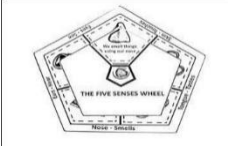

Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
88	<p>Human skeleton</p> 	<p>Size : Minimum Dimensions (L x W x H): 42 cm height Type: Model Material: The skeletal system must consist of the body's bones and joints made of fibre material. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
89	<p>Electronics eyepiece</p> 	<p>Type: Model Material: . Up to 5MP Interpolation built-in digital camera 1.3mp. Power : 15X to 30X. LED Illumination. Software for basic image capture. You can save images on your PC.</p>	1
90	<p>Pascal's triangle</p> 	<p>Minimum Requirement: 10" x 2" x 8" MATERIAL: This exhibit must consist of 2" x 2" cups molded in plastic, numbered 1 - 9 units, numbered 2 - 1 unit, numbered 3 - 2 units, numbered 4 - 2 units, numbered 6 - 1 unit. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
91	<p>Newton's cradle</p> 	<p>Minimum SIZE:138mm x 163mm x 135mm MATERIAL: This exhibit must consist of a metal frame with powder coating and 5 metal balls, hung from the frame such that they are just in contact with each other in a straight line. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
92	<p>Resonance</p> 	<p>Minimum SIZE:15 cm x 4 cm x 15 cm MATERIAL: This exhibit must consist of 6 metal strips mounted on a solid wooden or metal stand such that when one of the strip is disturbed and made to vibrate, it must make the other strips resonate. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
93	<p>Moment of inertia</p> 	<p>Minimum SIZE:15 cm x 6 cm x 20 cm - 2 units MATERIAL: This exhibit should consist of two metal bars of T shape. The weight must be concentrated at the center of T joint on one of the metal bar whereas on the other T bar the weight at the edges. It should be powder coated. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1

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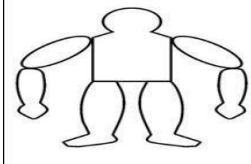

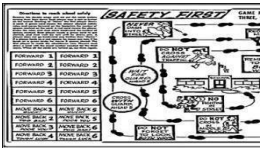
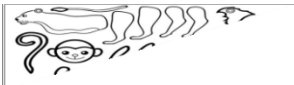

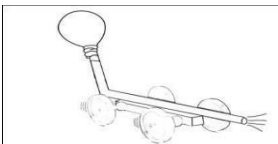
Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
94	Lateral and longitudinal waves 	Minimum SIZE:305mm x 180mm x 460mm MATERIAL: This exhibit must consist of a metal stand having a spring attached on one end and a lateral wave unit attached on the other end. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.	1
95 A	Change in electrical resistance due to dimension 	Minimum Requirement: The working model is to be provided with a molded HD plastic stand & unbreakable banded MS base size: 12" x 14" x 3.5" with white/Gray insulated material & transparent casing of size: 10.5" x 10.5" x 4" and 2.7mm wall thickness. It must also have a molded HD plastic stand & banded MS base with white/Gray insulated material casing of 1mm wall thickness to encase electrical connection and/or mechanism if needed. (Front Loading Style which is fix in modular Platform) MATERIAL: This model should consist of Ni-Chrome wire 20 SWG and Ni-Chrome 26 SWG. Three wires must be wound on individual ABS plastic molded spool with stand and connected to individual CE mark push button switches. A 6V bulb with holder is to be provided to indicate the conductivity of different wires. AC to DC adapter is to be provided for connecting the working model in to electrical socket. If needed wall hooks and fittings must be provided. A conceptual chart in Gujarati language of A3 size must be provided in 6 colour print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.	1
96	Human heart model 	Minimum Requirement: 10 cm x 8 cm x 15 cm. 4Times bigger than human size with sections hinged for observation. Display Stand to be included. MATERIAL: This exhibit should be made in fibre or plastic and mounted in a metallic stand. A conceptual chart in Gujarati language of A3 size provided must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.	1
97	Sound - Transmission of various types of sound waves. – Xylophone 	Minimum Requirement: Size & Material: 13.4 cm x 25.4 cm - wood and coated metal. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.	1

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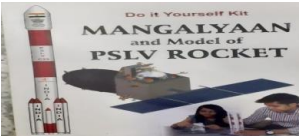

Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
98	<p>Natural resources</p> 	<p>Minimum Requirement: Material: .40 rock specimens covering igneous, sedimentary and metamorphic rocks. A conceptual chart in Gujarati language of A3 size should be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
99 A	<p>Animal cell</p> 	<p>Minimum Requirement: Material: Fiber/plastic fixed on a wooden/MDF frame with neat labelling of various parts of the cell. A conceptual chart in Gujarati language of A3 size must be provided in 6 color print on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
99 B	<p>Plant cell</p> 	<p>Minimum Requirement: Material: Fibre/plastic fixed on a wooden/MDF frame with neat labelling of various parts of the cell. A conceptual chart in Gujarati language of A3 size must be provided in 6 color prints on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
95 B	<p>Series and parallel circuits</p> 	<p>Minimum Requirement: The working model must be provided with a molded HD plastic stand & unbreakable banded MS base size: 12" x 14" x 3.5" with white/Gray insulated material& transparent casing of size: 10.5" x 10.5" x 4" and 2.7mm wall thickness. It should also have a bottom casing of 1mm wall thickness to encase electrical connection and/or mechanism if needed. (Front Loading Style which is fixed in modular Platform) MATERIAL: This working model must consist of two circuits, one having two 6V bulbs in series circuit with individual CE mark switches and the other having two 6V bulbs in parallel circuit. A 6V 1A CE mark AC to DC adapter is to be provided for connecting the working model in to electrical socket. If needed wall hooks and fittings must be provided. A conceptual chart in Gujarati language of A3 size should be provided in 6 color prints on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1

Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
95 C	<p>Electrical resistance of materials</p> 	<p>Minimum Requirement: The working model must be provided with a molded HD plastic stand & banded MS base size: 12" x 14" x 3.5" with white/Gray insulated material casing of size: 10.5" x 10.5" x 4" and 2.7mm wall thickness. Electrical connection and/or mechanism if needed. (Front Loading Style which is fix in modular Platform)</p> <p>MATERIAL: The working model should consists of 26 SWG Copper wire, 26 SWG Ni-chrome wire, 26 SWG galvanized wire, all wound on individual ABS molded spool with stand. Each of the wire is to be provided with a CE mark push button switch. A 6V bulb is provided with bulb holder to indicate the conductivity of each wire. AC to DC adapter is to be provided along-with. If needed wall hooks and fittings are to be provided. A conceptual chart in Gujarati language of A3 size must be provided in 6 color prints on minimum 3mm PVC base having a QR code that can be linked to an application for seeing conceptual video.</p>	1
Science kits			
100	<p>Properties of Air</p> 	<p>Minimum Requirement: Activity to be prepared by teacher. Material: 2 rubber balloons, boat</p>	1
101	<p>Air can lift weight</p> 	<p>Minimum Requirement: Should be packed in plastic box of size - 236mm x 137mm x 35mm MATERIAL: This kit should contain food grade clear plastic, attached with sealed clear plastic bag – 2 sets. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
102	<p>The 5 senses wheel</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 236mm x 137mm x 35mm MATERIAL: This kit must contain a printed, cut and assembled template of a five senses wheel on 220 gsm paper. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
103	<p>RELATIONSHIPS QUIZ CARDS</p> 	<p>Minimum Requirement: Packed in plastic box of size 6.6" x 4.3" x 1.2" MATERIAL: This kit should contain 32 quiz cards on relations of a family minimum size 100mm x 150mm. The cards should be colorful and non-tearable paper quality. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1

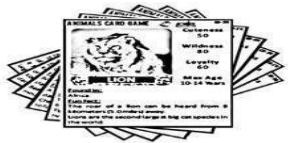


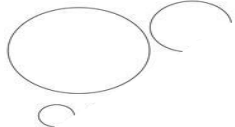
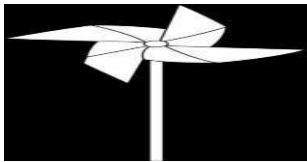

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
104	<p>Dancing acrobat</p> 	<p>Minimum Requirement: Packed in plastic box of size 8" x 6.2" x 3.4" MATERIAL: This kit contain must contain 4 sets of: 220 gsm card paper color templates of dancing acrobat as well as human skeleton with holding stick. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
105	<p>Tooth race board game</p> 	<p>Minimum Requirement: Should be provided in common board games box of size: 476 L X 384 W X 252 H mm MATERIAL: This kit should contain 4 sets of: a board game that teaches students to count teeth and learn about their types in a playful manner. The game should be in A3 size with pouch like cover or lamination, tokens, dice and score sheet must be provided. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
106	<p>Safety rules board game</p> 	<p>Minimum Requirement: Should be provided in common board games box of size: 476 L X 384 W X 252 H mm MATERIAL: This kit must contain 4 sets of: a board game that teaches students about safety rules while outdoor in a playful manner. Tokens and dice to be provided. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
107	<p>Stick animals – moving body parts</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 8" x 6.2" x 3.4" MATERIAL: This kit must contain 4 sets of: printed template/cut outs of animal's body parts, rivets for connecting parts together and handles to hold the as</p>	1
108	<p>Save the sun – board game</p> 	<p>Minimum Requirement: Provided in common board games box of size: 476 L X 384 W X 252 H mm MATERIAL: This kit must contain 4 sets of: a board game that teaches students about our Solar system in a playful manner. Tokens and dice to be provided. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
109	<p>Balloon car</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.7" x 5.2" x 3" MATERIAL: This kit must contain 5 sets of: a thin plastic molded/wooden base with 4 plastic wheels, a straw and 2 large and good quality balloons. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1



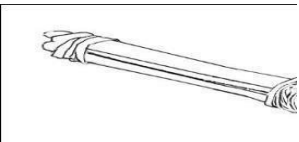



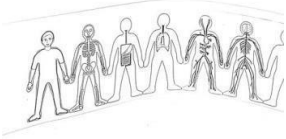
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
110	<p>Body parts bingo game</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 10.6" x 6.3" x 1.5" MATERIAL: This kit must contain Bingo style body part tickets - 50, foldable cells bingo style, Bingo body parts callout cards - 30 cards. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
111	<p>BAROMETER, DIGITAL CLOCK AND calanderweather Forecast Receiver</p> 	<p>Minimum Requirement: Provided in common board games box of size: 476 L X 384 W X 252 H mm MATERIAL: This kit must contain 4 sets of: a board game that teaches students about plants in a playful manner. Tokens and dice to be provided. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
112	<p>Clay animals</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 10.5" x 7.7" x 4.3" MATERIAL: This kit must contain 4 sets of: Clay bars brown yellow black red, set of eyes, 1 plastic mold each of a land based animal, water based animal, air borne animal and an animal that can live both in water and on land. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
113	<p>Do it YOURSELF kit of MANGALYAN and Model of PSLV ROCKET.</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 8" x 6.2" x 3.4" MATERIAL: This kit must contain 4 sets of: ISRO's PSLV C25 and MANAGALYAN CARD BOARD Model. An instruction manual mentioning the purpose and how to conduct the activity must be provided</p>	1
114	<p>Colossole s & l – space theme</p> 	<p>Minimum Requirement: 100 BLOCKS. 10X10 FEET MAT MATERIAL: This kit must contain 100 blocks, 10x10 feet rubber mat and jumbo 8inches dice</p>	1


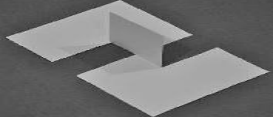
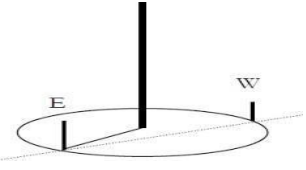
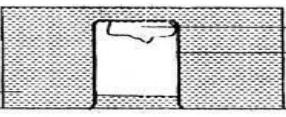

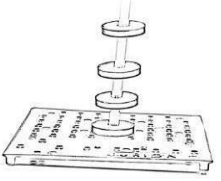
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
115	<p>Animals' zoo – card game</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.7" x 5.2" x 3" MATERIAL: This kit must contain 4 sets of: a card game having 36 colorful cards of animals and their properties in a trump card game style. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
116	<p>Aryabhata model</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 7.3" x 4.8" x 1.95" MATERIAL: This kit must contain Paper Model kit of INDIA's 1st EVER SATTELEITE Model. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
117	<p>Spin to read – secret communication</p> 	<p>Minimum Requirement: Should be packed in plastic box of size Flat 9.8" x 6.3" x 2.7" MATERIAL: This kit must contain a flat circular transparent base with printed message and a spinning disc on top with a gibberish message. The discs should be made of minimum 2mm clear acrylic of plastic. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
118	<p>3d ball for solar system with acrylic paint and paintbrush</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 13.2" x 11.3" x 6.5" MATERIAL: This kit must contain 3D plastic molded ball of planets of our Solar system, Mercury, Venus, Earth, Mars, Jupiter, Saturn with rings, Uranus, Neptune and Pluto. The planets nearly the actual ratio of their sizes. A yellow colour plastic molded Sun must be provided. A set of acrylic paint and paintbrush to be provided as well. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
119	<p>Pinwheel</p> 	<p>Minimum Requirement: Should be packed in a plastic box of size 13.2" x 11.3" x 6.5" MATERIAL: This kit must contain one assembled pinwheel using origami paper, thick straw and pin. Material should be provided to make 50 such pin wheels. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
120	<p>Animals jigsaw</p> 	<p>Minimum Requirement: Should be packed in a plastic box of size 10.5" x 7.7" x 4.3" MATERIAL: This kit must contain 4 different animals jigsaw – colorful and cut in MDF/PVC/good quality hard board. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1



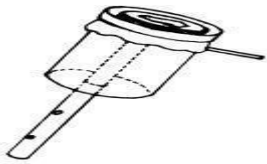



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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
121	<p>Insects jigsaw</p> 	<p>Minimum Requirement: Should be packed in a plastic box of size 10.5" x 7.7" x 4.3" MATERIAL: This kit must contain 4 different insects jigsaw – colorful and cut in MDF/PVC/good quality hard board. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
122	<p>Birds jigsaw</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 10.5" x 7.7" x 4.3" MATERIAL: This kit must contain 4 different birds jigsaw – colorful and cut in MDF/PVC/good quality hard board. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
123	<p>Popsicle stick whistle</p> 	<p>Minimum Requirement: Should be packed in a plastic box of size 10.5" x 7.7" x 4.3" MATERIAL: This kit must contain an assembled popsicle stick whistle using 2 popsicle sticks, 1 thick rubber band, thread/cello tape/rubber bands and 2 spacers. Material must be provided to prepare 50 more whistles. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
124	<p>Balloon bugle</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.7" x 5.2" x 3" MATERIAL: This kit must contain a balloon cut and connected to a tube at one end and a plastic cup/cut bottle on the other end such that when one blows air into to tube it produces sound like a bugle. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
125	<p>Paper cup telephone</p> 	<p>Minimum Requirement: Packed in plastic box of size 6.7" x 5.2" x 3" MATERIAL: This kit must contain 5 sets of: paper cup telephones having 2 paper cups attached together at the centre of the base using 4 meter thread and clips such that when two students are at opposite end, one speaking softly in the cup and other listening with the string taut, the listener should be able to hear the spoken words. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
126	<p>Pan pipes</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: This kit must contain a plastic molded model of pan pipes. An instruction manual mentioning the purpose and how to conduct the activity must be provided. This box should also contain a Flute and a Whistle.</p>	1
127	<p>My body pocket chart</p> 	<p>Minimum Requirement: A3 file and a plastic box of size 6.6" x 4.3" x 1.2" MATERIAL: This kit must contain a made pocket chart of human body for – skeletal system, heart and blood vessels, nervous system, organ of the body and the outer appearance, folded into a pocket size chart – 220gsm, colourful. Material should be provided to make 50 more such charts. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1

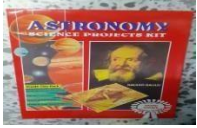
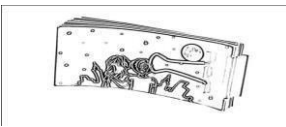
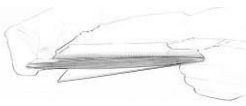




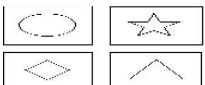
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128	<p>Nutriplay</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.7" x 5.2" x 3"</p> <p>MATERIAL: This kit must contain 5 sets of: 32 cards of food items and their nutritional value made in laminated 220gsm card paper each card minimum 65mm x 85mm, game playing in trump card style. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
129	<p>The impossible fold</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 9.4" x 5.6" x 1.4"</p> <p>MATERIAL: This kit must contain a made activity of the impossible fold using 220 gsm card paper. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
130	<p>Finding north</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 9.4" x 5.6" x 1.4"</p> <p>MATERIAL: This kit must contain a plastic molded base of minimum 11cm x 11cm and a plastic pointer – 10 cm in height and a magnetic compass. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
131	<p>Waterproof tissue paper</p> 	<p>Minimum Requirement: Should be packed in plastic box of size Flat 4.9" x 3.3" x 1.3"</p> <p>MATERIAL: This kit must contain a transparent plastic test tube, tissue paper, paper cup and a 15 cm long wooden stick. An instruction manual mentioning the purpose and how to conduct the activity must be provided</p>	1
132	<p>Blowing out candle through bottle</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 10.5" x 7.7" x 4.3"</p> <p>MATERIAL: This kit must contain a candle, matchstick box, a transparent cylindrical object, a rectangular block of minimum size. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
133	<p>Magnetic spring</p> 	<p>Minimum Requirement: Should be Packed in plastic box of size 10.5" x 7.7" x 4.3"</p> <p>MATERIAL: This kit must contain 4 sets of: an ABS plastic molded base plate of size 110mm x 110mm, 4 ferrite ring magnets and a thick straw. An instruction manual mentioning the purpose and how to conduct the activity must be provided</p>	1





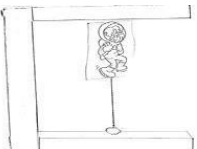
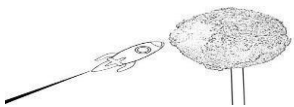
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134	<p>Solar eclipse Viewer</p> 	<p>Minimum Requirement: Packed in plastic box of size 6.7" x 5.2" x 3"</p> <p>MATERIAL: This kit contain 5 sets of Solar eclipse glasses from which students can see sun without damaging the eyes.</p> <p>An instruction manual mentioning the purpose and how to conduct the activity provided</p>	1
135	<p>Sound gun</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 10.5" x 7.7" x 4.3"</p> <p>MATERIAL: This kit must contain a hollow tube with drum/dhol like diaphragm on one end and the other end open. A packet of incense sticks to be provided for creating smoke. Upon hitting the diaphragm, the pipe should produce sound as well as smoke rings. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
136	<p>Musical balloon</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.7" x 5.2" x 3"</p> <p>MATERIAL: This kit must contain an assembled musical balloon set using a transparent plastic cup, small piece of clay, hard plastic straw, foam sheet, PVC tubes, good quality balloon in such a way that when one brings the central tubes in contact with the balloon diaphragm and blows through the other tubes, it produce a musical note. Moving the central tubes up and down create high and low pitch. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
137	<p>Musical straws</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 10.5" x 7.7" x 4.3"</p> <p>MATERIAL: This kit must contain one made musical straw and material for making 50 such straws provided. The made musical straw should have a v-shape cut at one of the end such that it produces a musical note when air is blown through it. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
138	<p>Cosmos : from big bang to earth</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.6" x 4.3" x 1.2"</p> <p>MATERIAL: This kit must contain 5 units of COSMOS BOOK, Which will explain the students all the details regarding UNIVERSE.</p>	1
139	<p>Sun and the zodiac band</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 8" x 6.2" x 3.4"</p> <p>MATERIAL: This kit must contain a yellow ball representing the sun and a black card paper roll with print of the 13 zodiacs such that the roll form a large circle. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1

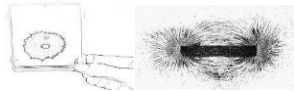




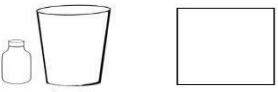
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140	<p>Sundial</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 10.5" x 7.7" x 4.3" MATERIAL: This kit must contain a base with a printed template of the sundial and a fixed gnomon. A magnetic compass is to be provided. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
141	<p>Moon flip book</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: This kit must contain 4 sets of: 31 cards flip book of the lunar cycle with each card of minimum 55mm x 105mm and 220gsm with soft lamination, held together with a binder clip. An instruction manual mentioning the purpose and how to conduct the activity must be provided</p>	1
142	<p>Friction books</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: This kit must contain 2 100-page notebooks of standard quality. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
143	<p>Floating rice bottles</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.7" x 5.2" x 3" MATERIAL: This kit must contain 2 bottles of 200 ml filled with rice, 2 long wooden stakes. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
144	<p>Flexagon – food chain</p> 	<p>Minimum Requirement: Should be packed in plastic box of size:6.7"x 5.2" x 3" MATERIAL: This kit must contain 1 made flexagon of food chain and 50 such templates with colorful print. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
145	<p>Flexagon – life cycle of a frog</p> 	<p>Minimum Requirement: Should be packed in plastic box of size:6.7"x 5.2" x 3" MATERIAL: This kit must contain 1 made flexagon of life cycle of frog and 50 such templates with colorful print. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
146	<p>Flexagon – life cycle of a butterfly</p> 	<p>Minimum Requirement: Should be packed in plastic box of size:6.7"x 5.2" x 3" MATERIAL: This kit contain 1 made flexagon of life cycle of butterfly and 50 such templates with colourful print. An instruction manual mentioning the purpose and how to conduct the activity provided.</p>	1
147	<p>Light is needed for photosynthesis</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 4.7" x 3" x 1" MATERIAL: This kit must contain stickers with shape cut-outs like circle, square and star. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1






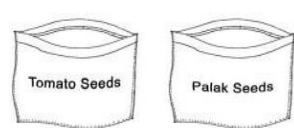

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
148	<p>Air is needed for photosynthesis</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.6" x 4.3" x 1.2" MATERIAL: This kit must contain a zip lock bag and iodine solution in 20 ml bottle. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
149	<p>Starch test for green leaves</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 4.7" x 3" x 1" MATERIAL: This kit must contain iodine solution in 20 ml bottle. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
150	<p>States of my country jigsaw</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 8" x 6.2" x 3.4" MATERIAL: This kit must contain 4 sets of Indian map jigsaw puzzle with minimum size 8" x 10" made using 3 mm thick MDF/PVC or good quality hard board material. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
151	<p>Tornado in a bottle</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.7" x 5.2" x 3" MATERIAL: This kit must contain two 200 ml bottles with a plastic moulded twin cap with hole in the centre such that both bottles can attached on opposite ends and the unit leak proof. 3 extra twin bottle cap connectors to be provided. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
152	<p>Floating astronaut</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 8" x 6.2" x 3.4" MATERIAL: This kit must contain a made model of a floating astronaut using a printed template of an astronaut, a C shape wooden/MDF/plastic frame, a hook, thread, pin and a strong neodymium 8mm diameter disc magnet. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
153	<p>Floating indian rocket to moon</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 8" x 6.2" x 3.4" MATERIAL: This kit must contain a made model of a floating rocket to moon using a printed template of a rocket, a wooden/MDF/plastic, a hook, thread, pin and a strong neodymium 8mm diameter disc magnet. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1



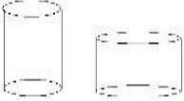

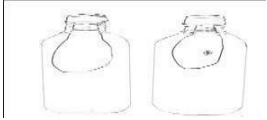


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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
154	<p>Magnetic field viewer</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 10.5" x 7.7" x 4.3" MATERIAL: This kit must contain a plastic box of size 6.6" x 4.3" x 1.2" containing iron filings, a 25mm diameter ring magnet, a 25mm diameter disc magnet, a bar magnet 10mm x 23mm x 38mm. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
155	<p>Planets card game</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.6" x 4.3" x 1.2" MATERIAL: This kit must contain 4 sets of: minimum 20 cards of planet and celestial bodies cards made in laminated 220gsm card paper each card minimum 65mm x 85mm, gameplay in quiz cards style. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
156	<p>The Muscular system and digestive system in Human ings - Teeth</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 11 x 8 x 9 cm Model of human teeth Use: It helps to understand 4 types of teeth in human body.</p>	1
157	<p>Catapult</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 13.2" x 11.3" x 6.5" MATERIAL: This kit must contain 4 made models of catapult made in wood/particle board/plastic such that it can move ahead/back using 4 plastic ABS molded wheels attached on 2 plated metal shafts 3mm diameter x 90 mm length. A launcher with O-ring and clay ball to be provided. The launcher must be attached to a thick rubber band by the hooks. 2 extra rubber bands to be provided with each model. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
158	<p>Strength of paper pillar</p> 	<p>Minimum Requirement: Should be packed in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: This kit must contain 8 A5 size 220 GSM card paper, cello tape. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
159	<p>Inverted glass of water with card</p> 	<p>Minimum Requirement: Should be packed in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: This kit must contain a hard transparent glass, 10 gram food color, a PVC/sun-board sheet of 3" x 3" size. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1


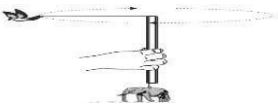


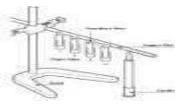
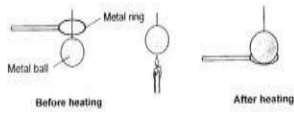
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
160	<p>Inverted glass of water with cloth</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.7" x 5.2" x 3" MATERIAL: This kit must contain a hard transparent glass, 10 gram food color, 4 rubber bands and a plain white cotton handkerchief/netted cloth. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
161	<p>Water rising in cup</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 10.5" x 7.7" x 4.3" MATERIAL: This kit must contain a pack of 10 thin birthday candles, match stick box, hard quality plastic plate minimum 5" in diameter, 10 gram food color, glass (glass – not plastic) An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
162	<p>Inverted bottle of water</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 150mm x 110mm x 70mm MATERIAL: This kit must contain a 200ml plastic bottle with hole in cap and food color. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
163	<p>Structures – sticks</p> 	<p>Minimum Requirement: Should be packed in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: This kit must contain 20 wooden stakes, 3 paper cups, 3 foam sheet rings with holes for the 20 sticks. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
164	<p>Structures – paper cups</p> 	<p>Minimum Requirement: MDF/PVC board size 1.5 x 1.5 ft and plastic box of size 10.5" x 7.7" x 4.3" MATERIAL: This kit must contain 25 identical paper cups of good quality and a MDF/PVC board of size minimum 15" x 15" x 3mm thickness. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
165	<p>Germination of seeds</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.7" x 5.2" x 3" MATERIAL: This kit must contain a packet of palak (spinach) seeds, a packet of tomato seeds and 4 mini-pots for planting the seeds. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
166	<p>Starch test of food items</p> 	<p>Minimum Requirement: Should be packed in a plastic box of size 4.7" x 3" x 1" MATERIAL: This kit must contain a 20 ml bottle of iodine solution. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1


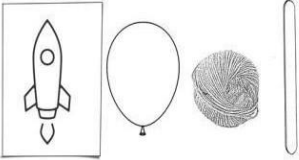
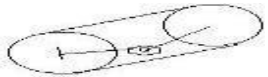

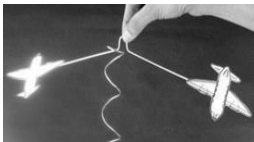

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
167	<p>Levitating pencil</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 8" x 6.2" x 3.4" MATERIAL: This kit must contain 4 ring magnets and 4 disc magnets, a plastic molded base and a pencil. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
168	<p>Diy magnetic compass</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 4.7" x 3" x 1" MATERIAL: This kit must contain a bar magnet, a needle, a soft foam piece of 30 mm diameter, a magnetic compass, and a paper cup. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
169	<p>Which one has more volume</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: This kit must contain 2 A5 size 220 gsm card paper, cello tape. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
170	<p>Leaky bottle – air pressure</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.7" x 5.2" x 3" MATERIAL: This kit must contain a 100 ml bottle with 2 specifically marked holes, one near the base and one near the neck. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
171	<p>Blowing balloon in a bottle</p> 	<p>Minimum Requirement: Should be packed in plastic box of size 6.7" x 5.2" x 3" MATERIAL: This kit must contain 2 bottles of 100 ml each, one of it having a marked hole near its neck. 2 good quality balloons provided. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
172	<p>Lungs model</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 10.5" x 7.7" x 4.3" MATERIAL: This kit should contain a plastic or glass jar with a Y – to be attached into its base and 2 balloons attached to the Y tubes. A rubber diaphragm attached to the mouth of the jar. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
173	<p>Inertia challenge</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: This kit should contain a hard plastic cup, a dummy metal coin and a card paper. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1

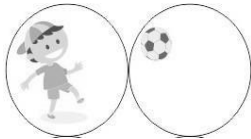
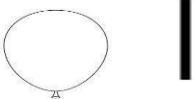
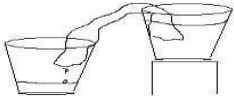

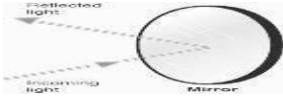

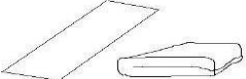
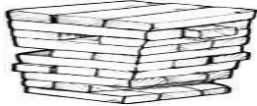
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
174	<p>Straw sprinkler</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 10.5" x 7.7" x 4.3" MATERIAL: This kit should contain a triangular hollow tube with a handle at the center and a hard plastic cup. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
175	<p>Small lifts heavy</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 9.4" x 5.6" x 1.4" MATERIAL: This kit should contain a plastic tubes, a bird and an elephant template a thread. An instruction manual mentioning the purpose and how to conduct the activity must be provided</p>	1
176	<p>Electromagnet</p> 	<p>Minimum Requirement: This activity must contain ABS plastic, copper wire, steel nail, cell. Minimum 11 x 6.5 x 3 cm Use: An electromagnet is a type of magnet in which the magnetic field is produced by an electric current. The magnetic field disappears when the current is turned off.</p>	1
177	<p>Measurement of physical quantities: Measuring Units</p> 	<p>Minimum Requirement: - Activity Material: Lab thermometer, thermometer, digital thermometer, measuring cylinder Use: This activity will help to understand how to measure various things in various objects, like temperature.</p>	1
178	<p>Heat: Modes of heat transfer: Conduction</p> 	<p>Minimum Requirement: activity to prepared by teacher Material: bar of iron with wooden handle, 5 pins, wax, spirit lamp. Use: This activity will help to understand conduction of heat takes place through solid substances, shows that a medium id required for the conduction of heat.</p>	1
179	<p>Modes of heat transfer: Expansion and Contraction of a solid substance</p> 	<p>Minimum Requirement: - activity to be prepared by teacher Material: a metal ball, a metal ring, heating source Use: This activity will help to understand that metals expand on heating and contract on cooling.</p>	1

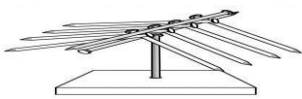

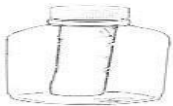

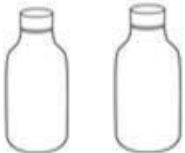

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
180	<p>TELESCOPE 3.0</p> 	<p>Minimum Requirement: - . RF900 Telescope Material: ZERO SHADOW FINDER exclusives Primary mirror Dia : Minimum 76mm Primary mirror Focal length : Minimum 900mm Secondary Mirror : Minimum 16 x 20 mm Steel BODY tube Lens : Minimum 20mm & 10mm Optically variable Star Finder scope Aluminum Tripod ALTITUDE / AZIMUTH Mount Image: Indicative</p>	1
181	<p>Balloon rocket</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: This kit should contain minimum 10 sets of - a template of a rocket, a balloon, minimum 1 m thread roll and a straw. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
182	<p>Magic roll back can</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 10.5" x 7.7" x 4.3" MATERIAL: This kit must contain a plastic can/box with a nut and rubber band attached inside such that the can roll back when rolled ahead.</p>	1
183	<p>The spinning spindle</p> 	<p>Minimum Requirement: Should be packed in plastic box of size Flat minimum 4.9" x 3.3" x 1.3" MATERIAL: This kit must consist of minimum 10 ice-cream sticks and minimum 10 meter cotton thread. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
184	<p>Twin planes</p> 	<p>Minimum Requirement: Should be packed in plastic box of size: minimum 6.7"x 5.2" x 3" MATERIAL: This kit must consist of card paper templates of airplanes and minimum 1 meter flexible soft aluminum wire. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
185	<p>Folding flyers</p> 	<p>Minimum Requirement: Should be packed in plastic box of size: Minimum 6.7"x 5.2" x 3" MATERIAL: This kit must consist of minimum 5 Paper planes with respective size of needles. Learn Aerodynamic Laws from this plane paper model rockets. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
186	<p>Thaumatrope</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: This kit must contain minimum 50 templates of thaumatrope, minimum 50 straws. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
187	<p>Piercing a balloon</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 9.4" x 5.6" x 1.4" MATERIAL: This kit must contain minimum 100 good quality balloons and minimum 100 pointed wooden stakes. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
188	<p>Cloth siphon</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: This kit must contain minimum 2 plastic/paper cups and a cotton handkerchief. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
189	<p>Dancing coin</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 8" x 6.2" x 3.4" MATERIAL: This kit must contain a glass bottle, a dummy metal coin. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
190	<p>Reflection of light</p> 	<p>Minimum Requirement: Minimum L 24.7" X W 16.3" X H 6.5 CM plastic box MATERIAL: This kit must contain torch, plane mirror, 1 laser, protractor, and duster. An A4 manual provided for explanation.</p>	1
191	<p>Magic straw – static electricity</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 9.4" x 5.6" x 1.4" MATERIAL: This kit must contain two clear plastic straws, a thumb-stack and a stand/support. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
192	<p>Static electricity</p> 	<p>Minimum Requirement: Should be packed in plastic box of size Flat minimum 7.3" x 4.8" 1.95" MATERIAL: This kit must contain a plastic/acrylic scale and a woollen cloth. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
193	<p>Jenga</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 10.5" x 7.7" x 4.3" MATERIAL: This kit must contain a set of the Jenga game in wooden finish. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
194	<p>Balancing nails</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: This kit must contain minimum 11 nails of 2" – non-rusting, a wooden/plastic base with a fixed nail. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
195	<p>Genie in a bottle</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: This kit must contain a minimum 100 ml plastic bottle, minimum 1 pipette, minimum 1 hexagonal nut, minimum 1 plastic cup. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
196	<p>Bottle of brahma</p> 	<p>Minimum Requirement: Should be packed in plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: This kit must contain a bottle with a plastic tubes attached within. A hole should be marked near the neck of the bottle. A covering sleeve for hiding this hole should be provided. Sould include a plastic cup as well. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
197	<p>Ping pong ball cup challenge</p> 	<p>Minimum Requirement: Should bepacked in plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: This kit must contain of minimum 4 sets of: mi2 nimum paper cups and minimum 1 table tennis ball. An instruction manual mentioning the purpose and how to conduct the activity must be provided.</p>	1
198	<p>Waterfall race</p> 	<p>Minimum Requirement: The activity is to be provided in a plastic box of size: Minimum 6.7" x 5.2" x 3". MATERIAL: The experiment must consist of minimum 2 plastic bottles with its cap. An instruction manual mentioning the purpose and how to conduct the activity must be provided. USE: In this experiment one has to try and empty the bottles filled with water in two ways. One by swirling and inverting and the other by inverting directly. This explains how air pressure acts on the water that is moving out of the bottle. One will faster and the other slower.</p>	1
199	<p>Reflection in a plane mirror</p> 	<p>Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment must consist of a plane mirror, a light source and a white paper. The light source should have a 12V AC to Dc power supply.</p>	1
200	<p>Laws of reflection common optics box</p>	<p>Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment must consist of a plane mirror, a light source and a white paper. The light source should have a 12V AC to Dc power supply.</p>	1
200	<p>Laws of reflection</p>	<p>Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x</p>	1



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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
		6.5".	
	Common optics box	MATERIAL: This experiment should consist of a plane mirror, a light source and a white paper. The light source should have a 12V AC to Dc power supply.	
201	Multiple reflection in mirrors at an angle common optics box	Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment must consist of 2 plane mirrors, a light source and a white paper. The light source should have a 12V AC to Dc power supply:	1
202	Multiple reflection in parallel mirrors common optics box	Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment must consist of 2-plane mirror, a light source and a white paper. The light source should have a 12V AC to Dc power supply USE: Using this activity the children can be explained how light gets reflected when two plane mirrors are place parallel to each other.	1
202	No inversion – principle of periscope common optics box	Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment must consist of 2-plane mirror, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
203	Dispersion of light common optics box	Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment should consist of a prism, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
204	Recombining light using two prisms common optics box	Minimum Requirement: This activity is to be provided in a common optics box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment must consist of 2 prisms, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
205	Angle of prism common optics box	Minimum Requirement: : This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment must consist of 1 prism, a light source and a white paper. The light source must have a 12V AC to Dc power supply	1
206	Rainbow formation common optics box	Minimum Requirement: : This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment should consists of a water drop, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1





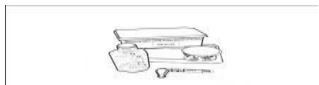


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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
207	Eye defects and correction common optics box	Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment should consists of a convex lens, a concave lens, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
208	Lateral inversion common optics box	Minimum Requirement: This activity should be provided in a common box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment should contain of 2-plane mirror, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
209	Reflection through rectangular block common optics box	Minimum Requirement: This activity should be provided in a common box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment should contain a rectangular glass slab, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
210	Refraction and reflection at plane surface common optics box	Minimum Requirement: This activity should be provided in a common box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment must contain a rectangular glass slab, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
211	Refraction through semicircular block common optics box	Minimum Requirement: This activity should be provided in a common box with of size 13" x 11.2" x 6.5". MATERIAL: This experiment should contain a semicircular glass slab, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
212	Critical angle common optics box	Minimum Requirement: This activity should be provided in a common box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment should contain a semicircular glass slab, a light source and a white paper. The light source should have a 12V AC to Dc power supply source and a white paper supply	1
213	Total internal reflecting prism common optics box	Minimum Requirement: This activity should be provided in a common box with of size minimum 13" x 11.2" x 6.5". MATERIAL: This experiment should contain a prism, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
214	Focal length of convex lens common optics box	Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5" MATERIAL: This experiment should consists of a convex lens, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
215	Focal length of concave lens common optics box	Minimum Requirement: This activity should be can provided in a common optics box with of size minimum 13" x 11.2" x 6.5" MATERIAL: This experiment should consists of a concave lens, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
216	Focal length of convex mirror common optics box	Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5" MATERIAL: This experiment should consists of a convex mirror, a light source and a white paper. The light source	1


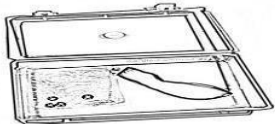
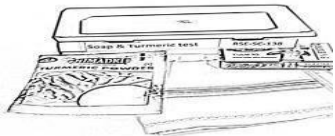

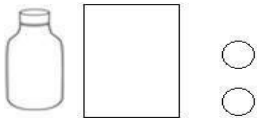

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
		should have has a 12V AC to Dc power supply	
217	Focal length of concave mirror common optics box	Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5" MATERIAL: This experiment should consists of a concave mirror, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
218	Focal length of convex lens using plane mirror common optics box	Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5" MATERIAL: This experiment should consist of a convex lens, a plane mirror, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
219	Focal length of convex lens - image and object method common optics box	Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5" MATERIAL: This experiment should consist of a convex lens, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
220	Convex lens as a combination of prisms common optics box	Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5" MATERIAL: This experiment should consists of 3 prisms, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
221	Concave lens as a combination of prisms common optics box	Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5" MATERIAL: This experiment should consists of 3 prisms, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
222	Simple kaleidoscope 	Minimum Requirement: This activity should be provided in a common optics box with of size minimum 13" x 11.2" x 6.5" MATERIAL: This experiment should consists of 3 prisms, a light source and a white paper. The light source should have a 12V AC to Dc power supply	1
223	Refraction tricks - broken pencil & disappearing coin 	Minimum Requirement: This activity should be provided in a plastic box of size minimum 8" x 6.2" x 3.4" MATERIAL: The activity should contain a transparent plastic glass, a standard pencil and a coin of minimum diameter of 25 mm.	1

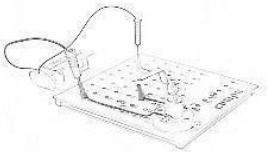

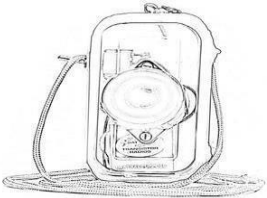
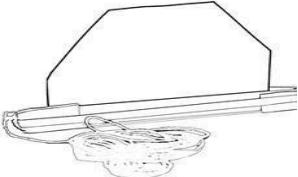
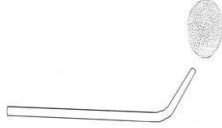
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
224	Isro gslv mk2 making kit 	Minimum Requirement: This activity should be provided in a plastic box of size minimum 10.6" x 6.3" x 1.5" MATERIAL: It should contain a set of ISRO GSLV MK2 rocket model, Each and every single rocket model should be made of Blocks type shape of parts of rocket. An instruction manual mentioning the purpose and how to conduct the activity must be provided.	1
225	Respiratory system jigsaw 	Minimum Requirement: This activity should be provided in a plastic box of size minimum 10.5" x 7.7" x 4.3" MATERIAL: It should contain a printed template pasted on MDF board/PVC or hardboard with machine cut finishing. An instruction manual mentioning the purpose and how to conduct the activity should be provided.	1
226	Heat resistant thread 	Minimum Requirement: This activity should be provided in a plastic box of size minimum 6.6" x 4.3" x 1.2" MATERIAL: It should contain a candle, a thread piece of length minimum 1000mm and a plated metal hexagonal nut of min diameter minimum 4 mm. An instruction manual mentioning the purpose and how to conduct the activity must be provided.	1
227	Heat resistant balloon 	Minimum Requirement: This activity should be provided in a plastic box of size minimum 6.6" x 4.3" x 1.2" MATERIAL: It should contain a candle of minimum 90 mm and at least 2 mid- sized balloons of good quality with a length of minimum 100 mm. An instruction manual mentioning the purpose and how to conduct the activity must be provided.	1
228	Bending of light using water bottle and laser 	Minimum Requirement: This activity must be provided in a plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: It should contain a plastic bottle, a stiff quality paper cup and a good quality laser light. An instruction manual mentioning the purpose and how to conduct the activity must be provided.	1
229	Paper chromatography 	Minimum Requirement: This activity should be provided in a plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: It should contain a stiff quality paper cup, a 4-colour sketch pen set and some standard quality tissue paper. An instruction manual mentioning the purpose and how to conduct the activity should be provided.	1
230	Balloon wars 	Minimum Requirement: This activity should be provided in a plastic box of size minimum 6.6" x 4.3" x 1.2" MATERIAL: It should contain good quality balloons. They should come in minimum 5 colours and minimum 5 quantity of each. An instruction manual mentioning the purpose and how to conduct the activity should be provided.	1

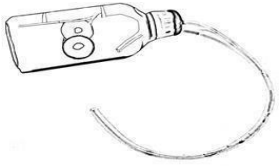
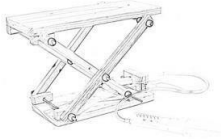
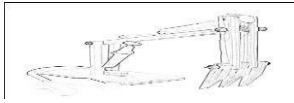


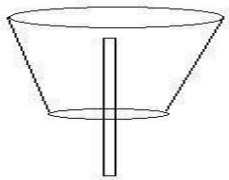
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
231	<p>Jal tarang</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size minimum 8" x 6.2" x 3.4" MATERIAL: This should contain minimum 7 glasses made of good quality glassware, a spoon and 10 grams of food colour. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
232	<p>Screaming balloons</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size minimum 6.6" x 4.3" x 1.2" MATERIAL: This should contain a balloon of good quality and a metal plated hexagonal nut of a min diameter of 4mm. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
233	<p>Soap and turmeric test</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size minimum 6.6" x 4.3" x 1.2" MATERIAL: This should contain at least 50 grams of powdered turmeric, a min 60 grams soap bar and a cloth piece of the size of a standard handkerchief. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
234	<p>Floating and sinking lemons</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: This contain at least 2 transparent plastic glasses, a plastic spoon of minimum size 90 mm and minimum of 100 gm common salt. An instruction manual mentioning the purpose and how to conduct the activity should be provided. USE: This activity is useful to explain to the child why lemons float in water and why they sink when salt is added to the same water. It is useful to explain the concept of density.</p>	1
235	<p>Magic marble through the coin</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: This should contain a good quality plastic bottle, a marble of minimum size 15mm, a chart paper of minimum size 15cm x 15cm and a metal coin. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
236	<p>Static Electricity: Temporary electric charge generated through various objects.</p> 	<p>Type: Activity to prepared by teacher Material: Kit with material and instructions to perform 4 activities which explains and demonstrates static electricity they are balloon, comb, wool & Electroscope with wooden body minimum 8cm X 12 cm.</p>	1

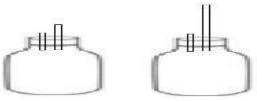


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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
237	<p>Simple circuits - bulb with switch</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: This activity should contain a circuit board made of ABS plastic of a minimum size of 110 x 110 mm, 3 copper plated spring connectors, a brass plated metal strip with a hole, a good quality 6v bulb along with holder, minimum 3 nuts and bolt of plated metal and a soft multithread wire of minimum length 200mm. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
238	<p>Simple circuits – conductors and insulators</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: This activity should contain a circuit board made of ABS plastic of a minimum size of 110 x 110 mm, 15 copper plated spring connectors, a good quality 6v bulb and plastic holder, 2 nuts and bolt of plated metal, a soft multithread wire of minimum length 200mm, a piece of straw, a wooden piece and small pieces of Ni-Chrome, copper and aluminum wires. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
239	<p>Doppler effect</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: This activity should contain a transparent plastic box of minimum size 25 x 45 x 85 mm, a standard quality 3 v buzzer, a rope of 1000mm, a metal plated round hook, 2 metal nut & bolts, a 9v battery cap and a multi thread wire of minimum 100 mm. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
240	<p>The buzzing e</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size minimum 6.6" x 4.3" x 1.2" MATERIAL: This activity should contain minimum 2 ice cream sticks, of minimum size 10 x 110 mm, a standard quality rubber band and a chart paper of minimum 85 x 85 mm size and some cotton thread of minimum 1000 mm length. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
241	<p>Floating ball challenge</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size minimum 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain ant straw of good quality with a minimum length of minimum 205mm and diameter of minimum 5mm. It should also have a Styrofoam ball of minimum 35mm diameter. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1

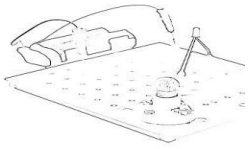
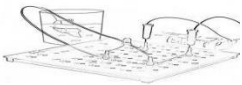
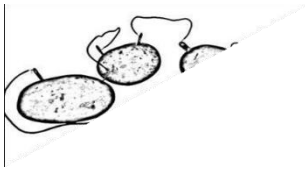

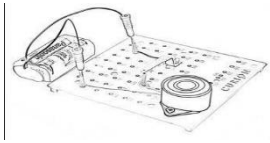
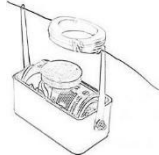
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
242	<p>Diy submarine</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size minimum 6.7" x 5.2" x 3" MATERIAL: The activity should contain a plastic bottle, a ring magnet of minimum diameter of 25mm and minimum 5mm thickness, a clear plastic food grade tubes of minimum length 400 mm, a small transparent cello tape and small piece of modelling clay. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
243	<p>Hydraulic jack</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size minimum 13.2" x 11.3" x 6.5" MATERIAL: The activity should contain plastic/wooden blocks of light weight preferably deodar in the following sizes: 10 x 77 x 209 mm, 10 x 77 x 170 mm, 10 x 10 x 29 mm, 15 x 23 x 43 mm, 10 x 10 x 180 mm, a 10 ml plastic syringe, a 5 ml plastic syringe, 3 wire ties of 100 mm length, 1 clear plastic food grade quality tube of minimum length 300 mm, some rubber bushes and a minimum of 8 gms glue. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
244	<p>Hydraulic excavator</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 13.2" x 11.3" x 6.5" MATERIAL: The activity should contain plastic/wooden blocks of light weight preferably deodar in the following sizes: 5 x 80 x 178 mm, 10 x 10 x 110 mm, 10 x 10 x 45 mm, 10 x 10 x 120 mm, 10 x 10 x 65</p>	1
245	<p>Slime ball</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain a paper cup, a plastic pipette of length 145 mm, 22ml synthetic glue, 10 gms borax powder and 2 ice cream sticks. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
246	<p>Pepper trick</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 10.5" x 7.7" x 4.3" MATERIAL: The activity should contain 75 gms of detergent soap, 100 gms of standard black pepper, a hard plastic plate. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
247	<p>Secret siphon</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain a thin plastic straw of minimum 180 mm length, a thick plastic straw of minimum 200 mm length, a small spool of standard quality duct tape, a transparent plastic glass. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1

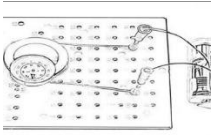

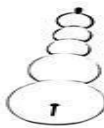


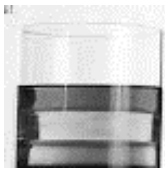
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
248	<p>Height might</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 8" x 6.2" x 3.4" MATERIAL: The activity should contain 2 plastic, hard quality straws of minimum length 220 mm and at least 10gms food color. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
249	<p>Magnetic slime</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain at least 20 gms borax powder, 10 grams iron filings, a neodymium magnet of size 10 x 12 mm, minimum 22 gms of standard glue and a paper cup. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
250	<p>Rusting of iron needs both water & oxygen</p> 	<p>Minimum Requirement: This activity should be provided in a common chemistry box made of plastic of size 13.2" x 11.3" x 6.5" MATERIAL: The activity should contain a test tube stand of standard quality, 3 glass test tubes, 3 iron nails of minimum length 75mm, 2 dropper bottles of 10 ml, a rubber stopper, 3 nt plastic straws of length 205 mm. 5 test tubes of 100 mm length, 10 ml copper sulphate solution, a small piece of zinc, a thin strip of magnesium, 10gms of iron filings, 100 gms of baking soda, a transparent plastic container with cover of size 55 x 60 mm, 150 ml of vinegar, 10 gms of food colour and 10 ml of lime water. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
221	<p>CO₂& LIME WATER EXPERIEMENT Material from above Chemistry box</p>	<p>Minimum Requirement: This activity should be provided in a plastic box of size 13.2" x 11.3" x 6.5" MATERIAL: An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
252	<p>Cuso₄& IRON FILINGS Material from above Chemistry box</p>	<p>Minimum Requirement: This activity should be provided in a plastic box of size 13.2" x 11.3" x 6.5" MATERIAL: An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
253	<p>DEPOSITION OF COPPER FROM ITS SALT SOLUTION Material from above Chemistry box</p>	<p>Minimum Requirement: This activity should be provided in a plastic box of size 13.2" x 11.3" x 6.5" MATERIAL: An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
254	<p>BAKING SODA & VINEGAR EXPERIMENT WITH FOOD COLOUR Material from above Chemistry box</p>	<p>Minimum Requirement: This activity should be provided in a plastic box of size 13.2" x 11.3" x 6.5" MATERIAL: An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1



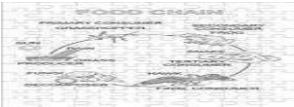




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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
255	<p>Working of leds</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain a circuit board made of ABS plastic of minimum size 110 x 110 mm, 4 copper plated spring connectors, 2 metal nut and bolts, a 2.5 v bulb, a plastic bulb holder, 20 cm of multi thread soft wire and 1.5 v white LED. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
256	<p>Electric conductivity of fluids</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity contain a circuit board made of ABS plastic of minimum size 110 x 110 mm, 5 copper plated spring connectors, 2 banana pins, 1 100 ohm resistor,, 30 cm of multi thread soft wire and 1.5 v red LED. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
257	<p>Potato battery</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.6" x 4.3" x 1.2" MATERIAL: The activity contain a 600 mm long multi thread soft wire, 4 copper strips, 4 galvanized iron strips, 2 wires with alligator clips and a 1.5 v LED. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
258	<p>Lemon battery</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.6" x 4.3" x 1.2" MATERIAL: The activity should contain a 600 mm long multi thread soft wire, 4 copper strips, 4 galvanized iron strips, 2 wires with alligator clips and a 1.5 v LED. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
259	<p>Simple telegraph</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain a circuit board made of ABS plastic of minimum size 110 x 110 mm, 3 copper plated spring connectors, a brass plated metal strip with hole, a 3V buzzer, 3 nuts and bolts, 6 cm of multi thread soft wire. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
260	<p>DC motor</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain a plastic cell holder for a jumbo battery, 2 metal strips with a hole, 2 nuts and bolts, a metal spring, 220 cm copper wire, an ABS plastic spool, of minimum dia 35 mm and ferrite disc magnet of minimum dia 25 mm. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1






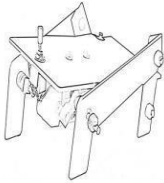
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
261	<p>Magnetic effect of electric current</p> 	<p>Minimum Requirement: This activity provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain an ABS plastic circuit board of minimum size 110 x 110 mm, 2 copper plated spring connectors, 2000 mm copper wire, an ABS plastic spool of dia 35 mm and a good quality compass. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
262	<p>Chemistry rocket</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 13.2" x 11.3" x 6.5" MATERIAL: The activity should contain a plastic bottle of minimum size 135 x 50mm, a rubber cork, minimum 100 gms of baking soda, 150ml of vinegar, a standard piece of tissue paper, a hard quality straw and a regular rubber band. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
263	<p>K.e. p.e. bounce</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain 4 rubber balls of reducing diameter and a plastic rod of minimum length 120 mm. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
264	<p>Kabhie solid kabhie liquid</p>	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain a minimum of 100 gms corn starch powder and a medium plastic bowl. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
265	<p>Crystal model</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain plastic parts to assemble a crystal structure. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
266	<p>The Structure of an atom</p> 	<p>Type: Activity to prepared by teacher. Material: This activity should contains Atoms are of the correct relative sizes, with a scale of 2.5cm to 1 Angstrom. Should includes a plastic box and instructions for building many different structures. Should include 51 total atoms and 35 links. Use: This activity will help to understand to understand atomic and molecular structure in an element or compound.</p>	1
267	<p>Density tower - 3 layers</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain at least 50gms sugar, a plastic pipette of minimum 145 mm length, test tube from common chemistry box, 3 plastic cups and 2 different food colors. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1



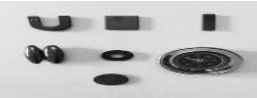

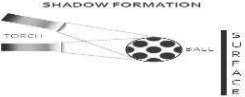
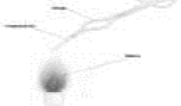

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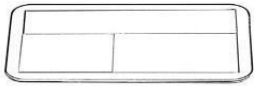
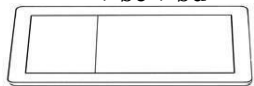
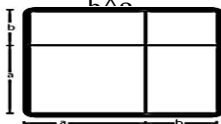
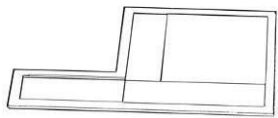
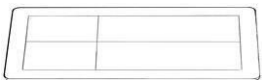
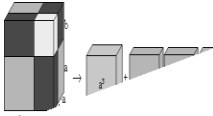

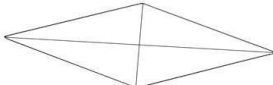
Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
268	Galileo's experient - freely falling weights	Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain at least 160 gms modelling clay, a table tennis ball and 2 glass marbles. An instruction manual mentioning the purpose and how to conduct the activity provided. USE: This activity useful to explain the effect of gravity on freely falling objects.	1
269	Aluminum rod - nodes and antinodes 	Minimum Requirement: 3 FT, 8 MM DIA MATERIAL: This kit should contain a 8 mm diameter and 3 ft long aluminium rod and rosin powder. An instruction manual mentioning the purpose and how to conduct the activity should be provided.	1
270	Led torch 	Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain a transparent plastic box of minimum size 25 x 45 x 85 mm, a 3 pin toggle switch, a 9v battery cap, a 100 ohms resistor and 2 dome shaped LED's of 2.5 v. An instruction manual mentioning the purpose and how to conduct the activity should be provided.	1
271	Food chain jigsaw 	Minimum Requirement: Should be packed in plastic box of size 10.5" x 7.7" x 4.3" MATERIAL: The activity should contain 4 colour printed template of food chain pasted on a good quality MDF board/sunboard/PVC/good quality hard board. An instruction manual mentioning the purpose and how to conduct the activity should be provided.	1
272	Chemmi-rummy 	Minimum Requirement: This activity should be provided in a plastic box of size 6.6" x 4.3" x 1.2" MATERIAL: The activity contain 51 printed 4 colour printed cards of a minimum size of 50 x 75 mm of 270 gsm paper. An instruction manual mentioning the purpose and how to conduct the activity should be provided.	1
273	Guess the state flash cards 	Minimum Requirement: This activity should be provided in a plastic box of size 6.6" x 4.3" x 1.2" MATERIAL: The activity should contain 29 printed 4 color printed cards of a minimum size of 145 x 100 mm of 270 gsm paper. An instruction manual mentioning the purpose and how to conduct the activity should be provided.	1
274	Guess the professions 	Minimum Requirement: This activity should be provided in a plastic box of size 6.6" x 4.3" x 1.2" MATERIAL: The activity should contain 9 printed 4 color printed cards of a minimum size of 145 x 100 mm of 270 gsm paper. An instruction manual mentioning the purpose and how to conduct the activity should be provided.	1
275	Who am i 	Minimum Requirement: This activity should be provided in a plastic box of size 6.6" x 4.3" x 1.2" MATERIAL: The activity should contain 24 printed 4 color printed cards of a minimum size of 145 x 100 mm of 270 gsm paper. An instruction manual mentioning the purpose and how to conduct the activity should be provided.	1

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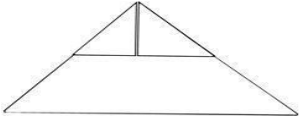
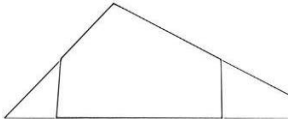
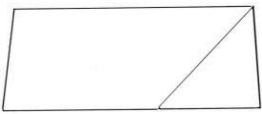

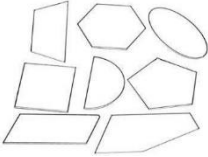
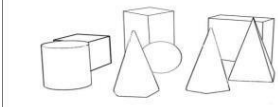
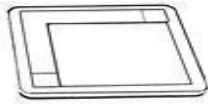
Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
276	<p>Paper circuit</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain an LED, Pencil, sharpener, clips and paper. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
277	<p>Substances in daily use</p> 	<p>Name of The Experiment: Natural Substances Size: A3 – PVC board Type: Chart with materials. 6 substances - cotton, wool, jute rope, plastic , polyester, nylon</p>	1
278	<p>Colour blending top</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain playing tops with different types of illusive coloring Card board rings. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
279	<p>Electric bug</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain, a 3 pin toggle switch, a 3v battery holder, small piece two way tape, connecting wire, motor with vibrator, plastic base plate, aluminum wires for legs, 2 cable ties, and a pair of eyes. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
280	<p>Art bot</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain 4 sketch pens of small length, 1 wheel with minimum 4 holes, one 3 pin toggle switch, a 3v battery holder, small piece two way tape, connecting wire, motor with vibrator, 2 cable ties and a blank white paper. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1
281	<p>Four legged walking toy</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain the following parts of ABS plastic: base plate of size minimum 75 x 143 mm, 2 L shaped legs of size 105 mm, 2 Straight legs of 60 mm length, connecting logs of length 60mm, 2 cams of minimum length 20mm, 2 L clamps of 1 x 2, 2 standard cable tie, a 3 pin toggle switch, a 9v battery cap, 100 mm of soft multi thread wire, 2 aluminum rivets of 3 x 40 mm, 4 aluminum rivets of 3 x 12 mm, 2 metal nuts and bolt, 2 screws of 4 x 10 mm, 10 rubber bushes, 2 small pieces of two way tape and an I shaft BO motor with two way shaft. An instruction manual mentioning the purpose and how to conduct the activity should be provided.</p>	1

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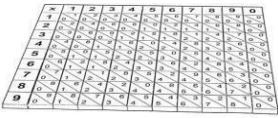
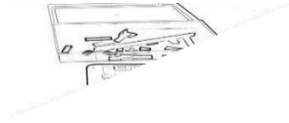
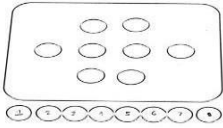
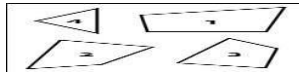
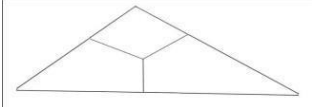
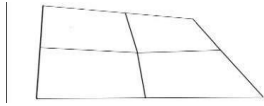
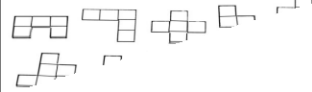
Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
282	Substances in surroundings - their states & properties 	Name of The Experiment: Heat & change of physical state Type: Activity to be prepared by the teacher Material: This activity should contain 2 lab thermometers, 2 – 50 ml beakers, heating source.	1
283	Water filtration 	Type: Activity to be prepared by the teacher. Material: This activity should contain sand, activated carbon, granite, filter papers, 3 filter papers, 3 abs Plastic containers.	1
284	Fun with magnets 	Name of The Experiment: Types of Magnets. Minimum Requirement: - chart Material: This activity should contain 6 types of magnets they are bar , horseshoe, ring, ball, oval, disk	1
285	Effects of Light : LIGHT TRAVELS IN A STRAIGHT LINE 	Minimum L 24.7"XW16.3"X H 6.5 CM plastic box Type: Activity to prepared by teacher. Material: duster, laser, small mirror, protractor.	1
286	Light & Shadow: i. Sources of Light, ii. How shadows form 	Type: Activity to be prepared by teacher Material: This activity contains ball, torch	1
287	Elements ,Compounds and Mixtures: Burning of Magnesium 	Type : Activity to prepared by teacher. Material: Magnesium ribbon, tong, spirit lamp, spirit, 5 test tubes.	1
288	Telescope MAKING KIT 	Type : Activity to be prepared Under teacher Supervisor. Material:Pre assembled Telescope Making Kit (5 Set)	1
289	Simple Machines - To understand the functions of Lever – Fulcrum Point	Minimum Requirement: Model cum Activity to be prepared by teacher Material & Size: Tong, Forceps & clip.	1
290	The odd mous strips	Minimum Requirement: This activity should be provided in a plastic box of size 6.6” x 4.3” x 1.2” MATERIAL: The activity should contain A5 size cards of 170 gsm paper. An instruction manual mentioning the	1

Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
		purpose and how to conduct the activity should be provided.	
Mathematics kits			
291	$A(b + c) = ab + ac$ 	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 2 rectangular pieces, 1 square piece and a tray made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided	1
292	$(A + b)(c + d) = ac + ad + bc + bd$ 	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 4 rectangular pieces and a tray made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.	1
293	$(A + b)^2 = a^2 + 2ab + b^2$ 	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 2 square pieces and 2 rectangular pieces and a tray made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.	1
294	$(A^2 - b^2) = (a+b)(a-b)$ 	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain a square piece, 2 congruent trapeziums and a tray made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.	1
295	$(A + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$ 	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 3 square pieces, 3 pairs congruent trapeziums and a tray made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.	1
296	$(A + b)^3$ 	Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain 8 cub of plastic/wooden pieces with non-toxic paint such that they combine into a large cu and represent the expansion formula for (a+b)^3. A4 manual should be provided.	1
297	$(A+b)^2 - (a-b)^2 = 4ab$ 	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain a square piece, 4 pairs congruent rectangles and a tray made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.	1
298	<p>Area of rhombus</p> 	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 98 pieces of hexagon shapes of size 20 x 20 mm made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.	1

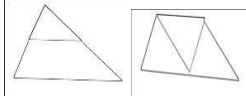
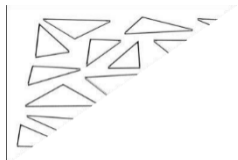
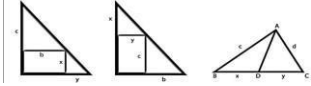
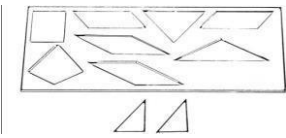
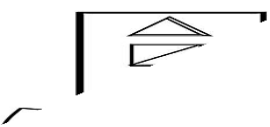
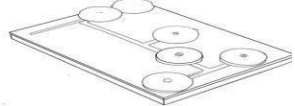
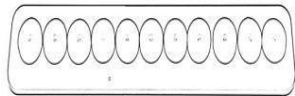
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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
299	<p>Area of triangle 1</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain a trapezium and 2 right angled triangles made of minimum 3mm acrylic sheet / plastic. The size of the complete triangle should be at least 140 x 149 mm. A4 manual should be provided.</p>	1
300	<p>Area of triangle 2</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain a 5 sided polygon and 2 right angled triangles made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided. USE: This activity will be able to help the children understand that area of a triangle = 1/2 base x height.</p>	1
301	<p>Area of parallelogram</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain a trapezium and 1 right angled triangle made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.</p>	1
302	<p>Area of trapezium</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 2 trapeziums made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.</p>	1
303	<p>2 d geometrical shapes</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain machine cut pieces of minimum 3mm acrylic in color with following sizes: Square: 91 x 91mm, Rectangle: 49 x 108 mm, Circle: 81 mm, Triangle: 150 x 58 mm, Semi Circle: 100 x 50 mm, Hexagon: 100 x 100, Pentagon: 99 x 99 mm, Parallelogram: 50 x 122 mm, convex pentagon: 140 x 65 mm, Ellipse: 58 x 117 mm. A4 manual should be provided.</p>	1
304	<p>3 d geometrical shapes</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 6.7" x 5.2" x 3" MATERIAL: The activity should contain 3D plastic/wooden pieces representing geometrical shapes with non-toxic paint. A4 manual should be provided.</p>	1
305	<p>$(A+b)^2 + (a-b)^2 = 2a^2 + 2b^2$</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 1 square piece, 3 pair's congruent rectangles and a tray made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.</p>	1

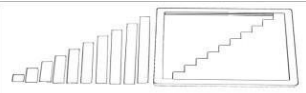
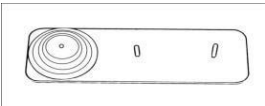
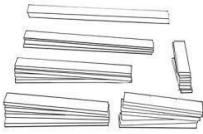
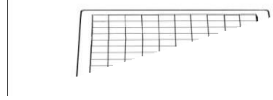
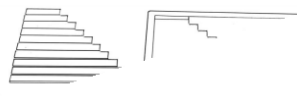
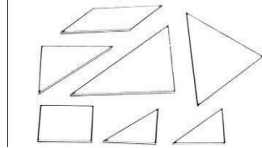

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306	<p>Napier strips</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain Napier strips template on MDF/PVC/Arcylic. A4 manual should be provided</p>	1
307	<p>Fraction strips</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain a tray, a strip of 1 unit length, 2 strips of 1/2 unit length, 3, 4, 5...10 strips with lengths of 1/3, 1/4, 1/5.... 1/10. A4 manual should be provided.</p>	1
308	<p>Numr puzzle game - arrange 1 to 8</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain machine cut base of at least 3mm acrylic having size 134 x 165 mm, 1 - 8 number coins of at least 3 mm acrylic in colour. A4 manual should be provided.</p>	1
309	<p>Equilateral triangle to square puzzle</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain three quadrilaterals and a triangle, of different colours. The size of the square should be around 105 x 105 mm.</p>	1
310	<p>Sum of angles of a triangle</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 3 quadrilaterals made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.</p>	1
311	<p>Sum of angles of a quadrilateral</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 4 quadrilaterals made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.</p>	1
312	<p>Pentominoes</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain a base of size 120 x 120 mm with 12 pentominoes. A4 manual should be provided.</p>	1

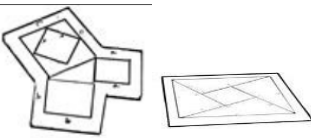
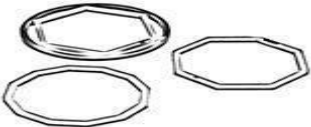

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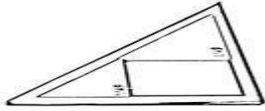

Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
313	<p>Mid-point theorem</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain a triangle and a trapezium machine cut in minimum 3mm acrylic sheet / plastic. A4 manual should be provided.</p>	1
314	<p>Set of triangles</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 25 triangular pieces machine cut in minimum 3mm acrylic of the following sizes: 62 x 62 x 35 – 2pcs, 32 x 73 x 59 mm – 2pcs, 31 x 73 x 63 mm – 6pcs, 37 x 62 x 37 mm – 14 pcs, 50 x 90 x 71 mm – 1 pcs, 50 x 50 x 50 mm – 1 pcs, 44 x 44 x 44 mm – 1 pcs, 48 x 31 x 37 mm – 1 pcs, 48 x 42 x 24 mm – 1 pcs. A4 manual should be provided.</p>	1
315	<p>Angle bisector theorem</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 3 triangles and a triangular machine cut in minimum 3mm acrylic sheet / plastic. A4 manual should be provided.</p>	1
316	<p>Two congruent right triangles</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 2 congruent right triangular pieces and a tray with different shapes made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.</p>	1
317	<p>Plug in 3 holes</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain a board machine cut in acrylic of minimum 3mm and a plug/piece that just passes through all holes. A4 manual should be provided.</p>	1
318	<p>Parking puzzle</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain machine cut base tray, 3 red counters, 3 yellow counters, 6 metal screws 3 x 25 mm, and 6 rubber bushes of 5mm. A4 manual should be provided.</p>	1
319	<p>Pegboard puzzle</p> 	<p>Minimum Requirement: This activity should be provided in a plastic cover or pouch. MATERIAL: The activity should contain a base having 11 pins and tokens with 5 black and 5 white. A4 manual should be provided.</p>	1

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
320	<p>Sum of first n natural numbers</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 10 rectangular strips of varying length and a tray made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.</p>	1
321	<p>Tower of brahma puzzle</p> 	<p>Minimum Requirement: This activity should be provided in a plastic cover or pouch. MATERIAL: The activity must contain a base having 3 pins of 50mm, 5 discs of reducing sizes. A4 manual must be provided.</p>	1
322	<p>L.C.M.</p> 	<p>Minimum Requirement: This activity must be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain machine cut acrylic pieces of the following sizes: 3 pieces of 14 x 210mm, 3 pieces of 14 x 180 mm, 4 pieces of 14 x 150 mm, 5 pieces of 14 x 120 mm, 7 pieces of 14 x 90 mm, 7 pieces of 14 x 60 mm. A4 manual should be provided.</p>	1
323	<p>Sum of first n odd numbers</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 10 L strips of varying length and a tray made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.</p>	1
324	<p>Sum of first n numbers in arithmetic progression</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 10 rectangular strips of varying length and a tray made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.</p>	1
325	<p>Tangram puzzles</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity contain Plastic Molded a big right angled triangle, 2 pairs of congruent right angled triangles of different sizes, a square and a parallelogram. A4 manual should be provided. Should be able yo make 300 Different Designs from these.</p>	1
326	<p>Integers</p> 	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 24 square pieces in 2 different colors. A4 manual should be provided.</p>	1
327	<p>FACTORS Reuse material of Integers kit</p>	<p>Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 24 square pieces in 2 different colours. A4 manual should be provided.</p>	1

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
328	EVEN & ODD NUMRS Reuse material of Integers kit	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL The activity should contain 24 square pieces in 2 different colours. A4 manual should be provided.	1
329	TURN-TURN GAME Reuse material of Integers kit	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 24 square pieces in 2 different colours. A4 manual should provided.	1
330	Make a Square puzzle	Minimum SIZE: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4".	1
331	Property of intersecting chords of a circle	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4"	1
332	Rectangular geoboard	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4"	1
333	Circular geoboard	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4"	1
334	Pythagoras theorem 1	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain a fixed right triangle and a square on each of its sides to from a tray, 4 congruent quadrilaterals and 1 small square all machine cut in minimum 3mm acrylic sheet / plastic. A4 manual should provided.	1
335	Pythagoras theorem 2 	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 4 congruent right triangles and square a tray machine cut in minimum 3mm acrylic sheet / plastic. A4 manual should be provided.	1
336	Understanding pi 	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain a circular ring and 3 polygon shaped rings, all machine cut in minimum 3mm acrylic sheet / plastic. A4 manual should be provided.	1
337	Sum of angles of triangle with respect to shape of edge 	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4"	1
338	Constructions of parabola	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4"	1
339	Conic sections	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4"	1

Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
340	$AD^2 = BD \times DC$ 	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain 2 small triangles and a big triangular tray made of minimum 3mm acrylic sheet / plastic. A4 manual should be provided.	1
341	Construction of ellipse	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4"	1
342	Binary convertor	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4"	1
343	FIND THE BIGGER CURVE 	Minimum Requirement: This activity should be provided in a plastic box of size 9.4" x 5.6" x 1.4" MATERIAL: The activity should contain two identical curved strips made in 3 mm acrylic/PVC. A4 manual provided. .	1
CHARTS – CONTRIBUTORS OF SCIENCE			
344	Johannes Kepler	Minimum 18" x 24" – 6 colour print on minimum 3mm PVC base – Gujarati and English	1
345	Sushrut	Minimum 18" x 24" – 6 colour print on minimum 3mm PVC base – Gujarati and English	1
346	Aryabhata	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
347	Varahmihira	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
348	Brahmagupta	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
349	Nagarjuna	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
350	Bhaskaracharya	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
351	Raja Sawai Jai Singh	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
352	Srinivasaramanujan	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
353	Jagdish Chandra Bose	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
354	Prafulla Chandra Roy	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
355	Homi Jahangir Bhabha	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
356	Vikram Sarabhai	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
357	Alrt Einstein	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
358	Sir C V Raman	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
359	Satyendranath Bose	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
360	Subrahmanyanchandrashek har	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
361	Edwin Hubble	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
362	Baudhayana	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
363	Charak	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
364	Rishi Kanad	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
365	Galileo Galilei	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
366	Isaac Newton	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
367	Nicolaus Copernicus	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
368	Charles Darwin	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
CHARTS – CONTRIBUTORS OF MATHEMATICS			
369	Rene Descartes	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
370	D R Kaprekar	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
371	R C Bose	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
372	John Napier	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
373	Galileo Galilei	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
374	Fibonacci	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
375	Varahmihira	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
376	Bhaskaracharya 1	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
377	Bhaskaracharya 2	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
378	Brahmagupta	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
379	Mahaviracharya	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
380	Archimedes	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
381	Aryabhata	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
382	Pythagoras	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
383	Euclid	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
384	P C Vaidya	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
385	A R Rao	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
386	Isaac Newton	Minimum 18" x 24" – 6 colour print on minimum 3mm PVC base – Gujarati and English	1
387	G W Leibniz	Minimum 18" x 24" – 6 color print on minimum 3mm PVC	1

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
		base – Gujarati and English	
388	Leonhard Euler	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
389	C F Gauss	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
390	George Boole	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
391	Alrt Einstein	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
392	Srinivasaramanujan	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
393	Harish Chandra	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
CHARTS – SPACE & UNIVERSE			
394	Alrt Einstein & $E=mc^2$	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
395	Asteroids	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
396	Charged solar particles	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
397	Chandrayaan 1	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
398	Comets	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
399	Constellations of Southern hemisphere	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
400	Constellations of Northern hemisphere	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
401	Milky way galaxy	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
402	Galaxies	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
403	Craters	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
404	Lunar missions	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
405	Moon	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
406	Nebula	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
407	Earth	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
408	Jupiter & its moons	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
409	Mars	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
410	Mercury	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
411	Neptune	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
412	Saturn	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
413	Uranus	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
414	Venus	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
415	Drawf planet - Pluto	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
416	Solar system	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
417	Sun	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
418	Tropic of Cancer & Capricorn	Minimum 18" x 24" – 6 colour print on minimum 3mm PVC base – Gujarati and English	1
419	Universe	Minimum 18" x 24" – 6 colour print on minimum 3mm PVC base – Gujarati and English	1
420	Zodiac It	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
421	The Big Bang Theory	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
422	TRAPPIST 1 and possibility of life A	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
423	TRAPPIST 1 and possibility of life B	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
424	THE SUN TEMPLE	Minimum 18" x 24" – 6 color print on minimum 3mm PVC base – Gujarati and English	1
425	RASHI CHAKRA	Minimum 18" x 24" – 6 colour print on minimum 3mm PVC base – Gujarati and English	1
426	IRON PILLAR	Minimum 18" x 24" – 6 colour print on minimum 3mm PVC base – Gujarati and English	1
427	KONARK SUN TEMPLE	Minimum 18" x 24" – 6 colour print on minimum 3mm PVC base – Gujarati and English	1
428	APOLLO	Minimum 18" x 24" – 6 colour print on minimum 3mm PVC base – Gujarati and English	1
CHARTS ON SYLLABUS			
429	Hygiene	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base – Single language – Gujarati	1
430	Safety rules	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base – Single language – Gujarati	1
431	Plants and Trees	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base – Single language – Gujarati	1
432	Body parts and organs	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base – Single language – Gujarati	1
433	Swacchbhaarat	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base – Single language – Gujarati	1
434	Cause, Effects and reducing of Air Pollution	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base – Single language – Gujarati	1

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
435	Helpful places and people	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
436	Sources of food	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
437	Rocks, minerals and soil	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
438	Sources of water	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
439	Saving forests - Causes & Effects	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
440	Indoor safety	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
441	Types of plants - climbers and creepers	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
442	Leaf types	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
443	Animal food habits / food chain	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
444	Interesting Insects	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
445	Cooking safety	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
446	Evolution of Tools & Machines	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
447	Ways to store portable water	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
448	Water pollution chart	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
449	Natural disasters and tech to fight them	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
450	Personal cleanliness	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
451	Food from plants	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
452	Food pyramid and balanced diet	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
		Gujarati	
453	Composition of Air	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
454	Wind types	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
455	Cause, Effects of Water pollution	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
456	Water Cycle	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
457	Reason of Season	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
458	Moons of Jupiter	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
459	Artificial satellite	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
460	Soil erosion	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
461	Types of joints lalled	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
462	First aid	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
463	Super Senses chart	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
464	Animal kingdom	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
465	Communicable diseases	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
466	Water profile of Earth	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
467	Renewable vs Non-renewable energy	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
468	Conserving energy	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
469	Food from Animals	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
470	Classification by food habits	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
		Gujarati	
471	Top 3 food for various components	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
472	Foods that heal	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
473	Charkha revolution of India	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
474	THE IDEAL STUDENT	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
475	Math - Amazing numr patterns	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
476	Rainwater harvesting	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
477	Composting, vermicomposting, Landfills	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
478	Adaptations in animals for extreme climates	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
479	Nitrogen cycle	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
480	The Micro World	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
481	Metallurgical advancements in Ancient India	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
482	Pyre, Pyrotechnic - fighting fire	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
483	Respiratory system	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
484	Schematic diagram of Petrol refinery	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
485	Constellations and their stories	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
486	Image formation in Convex lens	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
487	Biotechnology	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
MISC CHARTS			

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
488	Illusion - Faces or Vase	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
489	Illusion - Straight lines or Curved	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
490	Illusion - All lines are straight	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
491	Illusion - All Circles are of the same size	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
492	Illusion - Impossible objects	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
493	Illusion - Static or Moving image? - A	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
494	Illusion - Static or Moving image? - B	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
495	Illusion - Static or Moving image? - C	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
496	Illusion - Static or Moving image? - D	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
497	Jesus/Buddha Illusion	Minimum 12" x 18" - 6 colour print on minimum 3mm PVC base - Single language - Gujarati	1
498	STAND FOR CHARTS	Metal stand with hooks for hanging charts - 30" x 14" x 60" made in metal - 1 units	1
499	Led	1 Diagonal Size Minimum 32" & Above Large Format Display 2 Type 60Hz LED Panel Large Format Display / Signage (Not TV) 3 Resolution 1920 X 1080(16:9) FHD 4 Contrast Ratio (DCR/Native) 5000:1 or Higher 5 Brightness 330 nits or high 6 Sound Speakers In built speakers minimum 10 Watts 7 Ports VGA-1, HDMI-1, USB -1,RJ45-1 (for Educational Content Sharing via media player), Rs232(IN), Stereo Jack 8 Software Built in media player 9 Power supply AC100-240V -(+/-10%) 50/60 Hz 10 Accessories Remote, standard Cables 11 Certifications UL, FCC, BIS, Energy star 6.0 or above complaint 12 Installation Wall mount bracket 13 Warranty 2 years	1
500	Pen drive	32 GB	1
501	Platform	Minimum SIZE:14" x 48" x 27" - 8 units and 30" x 48" x 27" - 8 units made using metal having pre-laminated particle board/hardener sheet on the top	16
502	Storage cupboards	Minimum SIZE:76" x 36" x 19" - 5 partition, steel Almirah - 2 units	2

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Sr. No.	Name of items and images	Technical / Functional Specification	Unit / Size
503	Common tools box	Screw drivers, Scissors, duct tape, glue, spanner, stapler & pins, wire stripper, plier	1
504	Trouble shooting and repairs box	Extra switches, 6v bulbs, leds, electrical connectors, rechargeable batteries, connecting wires, safety goggles, rubber gloves, soldering kit	1
505	LED TV	Product Type : Android TV-- 4K LED UHD TV CPU: Quad Core or higher Processor GPU : Mali 470 OS :- Android P or higher, Certified by Google Android TV RAM/ROM :- 4.0 G Byte DDR3 /16G Byte ROM WI-FI :- Inbuilt 2.4 GHZ/5GHZ signal band Ethernet Network + Ethernet Port (100 MBPS)	1

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Annexure: -4 (3D Educational Chart)

Sr No.	3D Educational Chart Technical / Functional Specifications	Unit/ Sq. ft.
1	<p>Design, approve, provide and fixing the thematic 3D Educational pvcwall paper of 250-micron pvc sheet with 100-micron matte lamination. Certified by Cipet Lab, Printing to be done by water base, smell less, eco-friendly Latex ink Certified by Green Guard, Green Guard Gold and Eco Logo Lab.</p> <p>Providing and applying 2coat waterproofing of high elongation acrylic based liquid membrane as per direction of manufacturer-after</p> <p>Providing and applying base coat of acrylic primer as per manufacturer's application guideline, after removal of existing lime coat and surface preparation needed. Applying base coat of Final coat of liquid membrane mentioned as above to bond with PVC.</p> <p>Content for wallpaper should be in line with the curriculum of respective grade. Bidder is requested to propose the wallpaper design during the requirement gathering phase and same should be approved from competent authority. Bidder would be required to amend the design as per the suggestions received from client – AMC School Board. Bidder is requested to install 3D educational chart on 3 walls of a room only and remaining wall should be kept free for the installation of soft board.</p> <p>This wallpaper should be temper and tear proof.</p>	11000 Sq ft

Annexure: -5 (False Ceiling)

Sr No.	3D Educational Chart Technical / Functional Specifications	Unit/ Sq. ft.
1	<p>Providing and fixing tiled false ceiling of specified materials of size 595*595 MM PVC Laminated Gypsum Ceiling Tiles – 7 MM Thickness with 24 MM T-Grid consisting of main “T” runnerwithsuitablyspacedjointstogetrequiredlengthofsize24*32mmmadefrom 0.3 mm thick sheet, spaced at 1200 mm center to center and cross “T” of size 20*20 mm made 0.3 mm thick sheet. 1200 mm long spaced between main “T” at 600 mm center to form a grid of 1200*600 mm and secondary cross “T” of length 600 mm and size 24*25 mm made of 0.3 mm thick sheet to be interlocked at middle of the 1200*600 mm panel to form grids of 600*600 mm and wall angle of size 24*24*0.3 mm and laying false ceiling tiles of approved texture in the grid including, required, cutting/making, opening for service like diffusers, grills, light fitting, fixtures, smoke detectors, etc.</p>	4800 Sq ft

Annexure: -6 (Benches for Std-3 and Std- 4)

Sr. No.	Benches for Std-3 and Std -4 Technical / Functional Specifications	Unit/ Size
1	<p>Group learning along with the activity-based learning is being promoted in Std 3 and 4 across Municipal Schools. In order to support this initiative, bidder is encouraged to propose a lightweight design for benches, which would also support group learning activities or usual teaching – learning activities. The design must be proposed in consultation with AMC School board and upon their approval on sample benches, this should be installed, commissioned at various schools. Bidder must complete the activity of design approval during the requirement gathering phase only.</p>	40

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Annexure: -7 (3D Paint)

Sr. No.	3D Paint SPECIFICATIONS	Unit/ Sq. ft
1	Color water-based emulsion (weatherproof exterior emulsion) for High performance. The vendor's 3D paint submissions shall be deemed acceptable solely on the condition that the visual representation thereof is deemed meaningful by the AMC School Board. The inclusion of letters or words within the 3D paint will not be a determining factor for consideration by the Board.	1000 Sq. ft.

Annexure: -9 (Sports Kit)

Sr. No.	Sports Technical / Functional Specification			Unit/ Size
	S. No.	Item Name	Nos.	
1	1	Cricket Bat (Branded Co.) (Size 1 to 4)	4	4
	2	Cricket Ball (Tennis Ball)	12	
	3	Cricket Stumps & Bail (1 Set = 6 nos)	2	
	4	Volleyball (standard Brand)	2	
	5	Volleyball (Good Quality)	1	
	6	Football (standard Brand)	1	
	7	Flying Discs (Good Quality)	12	
	8	iron Ball (minimum 8-Ratal)	1	
	9	Carom Broad (Striker, Coin and Powder)	1	
	10	Carom Board (Striker, Coin and Powder) Small Size	1	
	11	Badminton (Good Quality)	2	
	12	Shuttle Cock (Good Quality)	1	
	13	Tekerring Game	1	
	14	Skipping Rope (Good Quality)	1	
	15	Compressor Air Pump	1	
	16	Wooden Chess Minimum 12"x12"	2	
	17	Sports Kit Bag (Good Quality with Naylor Material)	1	

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Annexure: -10 (Future Classroom)

The future classroom shall augment the teaching-learning process through digital devices like laptop, integrated projector with computer (or projector with computer/laptop), classroom management software, digital content, console management software with support infrastructure like storage cabinet, benches etc. as mentioned in this document.

Sr. No.	Future Classroom Specification																																													
	Features	Integrated Community Computer The requirement for future classroom is of a compact projector integrated with computer. Bidder may offer similar solution to meet the functional & technical requirement of future classroom.																																												
	Technology Integration	Multiple components integrated into a single compact unit including large screen TV																																												
	Ease of Setup & Use	Ease to use plug in device																																												
	Interactive Multimedia Content	Pre-Loaded modules approved by AMC School board																																												
	Image Size	Min 300 Inch Diagonally																																												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Component</th> <th style="width: 35%;">Feature</th> <th style="width: 35%;">Minimum Requirement</th> </tr> </thead> <tbody> <tr> <td rowspan="5" style="text-align: center;">Computer</td> <td>CPU</td> <td>Intel i3 Processor or Better</td> </tr> <tr> <td>Chipset</td> <td>Intel or better</td> </tr> <tr> <td>Memory</td> <td>Minimum 4 GB RAM</td> </tr> <tr> <td>Graphics</td> <td>Integrated Graphics</td> </tr> <tr> <td>Storage</td> <td>Minimum 1 TB</td> </tr> <tr> <td rowspan="3" style="text-align: center;">Advanced Projection System</td> <td>Brightness</td> <td>Min 3000 Lumens (Short Throw)</td> </tr> <tr> <td>Contrast Ratio</td> <td>18000:1</td> </tr> <tr> <td>Lamp Life</td> <td>5000 Hrs (Standard Mode) 3000 Hrs (Bright Mode)</td> </tr> <tr> <td colspan="2">In-built Interactivity</td> <td>Image Processing Technology</td> </tr> <tr> <td style="text-align: center;">DVD Player</td> <td>Optical Drive</td> <td>DVD-RW</td> </tr> <tr> <td style="text-align: center;">In Built Audio System</td> <td>Audio</td> <td>Min 30W Audio Speakers, with option for external speaker connectivity</td> </tr> <tr> <td rowspan="5" style="text-align: center;">I/O</td> <td>Input</td> <td>Microphone input</td> </tr> <tr> <td>Ports</td> <td>Minimum 4 USB Ports</td> </tr> <tr> <td>LAN</td> <td>1*Gbps</td> </tr> <tr> <td>Wi-Fi</td> <td>802.11 ax (Latest version)</td> </tr> <tr> <td>Bluetooth</td> <td>Bluetooth 5.0 or higher</td> </tr> <tr> <td colspan="2" style="text-align: center;">Certification</td> <td>UL Certified</td> </tr> </tbody> </table>		Component	Feature	Minimum Requirement	Computer	CPU	Intel i3 Processor or Better	Chipset	Intel or better	Memory	Minimum 4 GB RAM	Graphics	Integrated Graphics	Storage	Minimum 1 TB	Advanced Projection System	Brightness	Min 3000 Lumens (Short Throw)	Contrast Ratio	18000:1	Lamp Life	5000 Hrs (Standard Mode) 3000 Hrs (Bright Mode)	In-built Interactivity		Image Processing Technology	DVD Player	Optical Drive	DVD-RW	In Built Audio System	Audio	Min 30W Audio Speakers, with option for external speaker connectivity	I/O	Input	Microphone input	Ports	Minimum 4 USB Ports	LAN	1*Gbps	Wi-Fi	802.11 ax (Latest version)	Bluetooth	Bluetooth 5.0 or higher	Certification		UL Certified
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	Hardware Requirement per school																																													
	1	Chromebook/NetBook	40																																											
	2	Integrated computer projector	1																																											
	3	Wireless Router	1																																											
	4	Device cart & Storage Facility	1																																											
	5	UPS (Minimum 60 minutes back up)	1																																											

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6	Networking and Cabling	1
SOFTWARE/APPLICATION		
1	Multimedia Learning Modules in Hindi/English/Gujarati	1
2	Device Management Console	40
3	Cloud based Suite for Education (G suite or similar) – For 3 Years	-
PROJECT MANAGEMENT		
1	Minimum 1 days of Professional Development Program for Teachers at the inception of Project	-
2	Refresher Training (one per year for Five years)	-
3	School Coordinator for minimum 12 months min. one (1) resource for every five (5) schools	-
4	Project Management for minimum 36 months (Including VAS)	-
5	Basic Electrification of all IT Equipment	-

S. No.	Item	Description
1	Chromebook /Netbook for students	<p>Minimum Requirement:</p> <ul style="list-style-type: none"> Processor: Latest generation Intel or AMD or equivalent with dual core or i3 or higher processor, base frequency of 1.1 GHz (or higher speed) with latest generation chipset or Equivalent 64-bit x86 processor. Display: Minimum: 11.6" Diagonal IPS/TFT/SVA HD Widescreen with minimum 1366 x 768 resolution (16:9 ratio) RAM: 4 GB DDR4 Internal Storage: 16 GB Graphics Card: Integrated HD Graphics Ports: 2 USB Ports (out of which 1 should be USB 3.1), headphone/Microphone combo; Minimum 1 HDMI port Operating System: Pre-loaded latest version of Chrome OS/Windows/iOS and all necessary and latest patches and updates. All Utilities and driver software must be pre-installed. <p>The bidder needs to assure minimum specification of Digital Learning Device if they provide operating system based on Window or iOS.</p> <ul style="list-style-type: none"> Web Camera: Built in 720p web cam Wireless Connectivity: WiFi, Bluetooth Audio: Built-in Stereo Speakers Battery backup: Minimum 40 Whr lithium ion or lithium polymer battery with a backup of minimum 10 hours under standard test conditions with long life battery and min. 3 years of life and comprehensive insurance of battery and adapter. OEM should provide an undertaking. Keyboard and Touchpad: 74 Keys Full size spill resistant keyboard, Integrated Multi-touch Pad. Device Administration: Pre-loaded Device Management Console with perpetual license & letter of support from OEM. Web Based interface, Lock Devices, push apps and extensions, Enforce policies, Administrator tests at scale. Accessories: Adapter, Charger from same OEM, Carrying backpack Digital Content & Teaching-Learning Platform: Access to pre-loaded digital content & teaching-learning platform. The learning platform should enable the teacher and students to perform the key tasks of STEM labs such as attendance, assignments, sharing of study material, access to STEM lab digital content etc.

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Annexure: - 11 (Benches for Future Class)

Sr. No.	Benches for Future Class	Unit/ Sq. ft
1	Group learning along with the activity-based learning is being promoted across Municipal Schools. To support this initiative, bidder is encouraged to propose a lightweight design for benches, which would also support group learning activities or usual teaching – learning activities in future classroom. The design must be proposed in consultation with AMC School board and upon their approval on sample benches, this should be installed, commissioned at various schools. Bidder must complete the aforementioned activity of design approval during the requirement gathering phase only.	20

Annexure: -12 (Playground Equipment)

Sr. No.	Playground Equipment	Unit / Sqft
1	Merry go Round: - Age: -3-14 yrs Safe play area: - around 2.5 m Seat: - frp molded or similar Height: - minimum 1 mtr Area: -minimum 1.5 mtr	01
2	Slide: - Age: - 4-14 yrs Safe area play: -minimum 4.5 m x 4.5 m Ladder frame: - minimum 25mm n b pipe Handrail minimum 20 mm n b pipe Centre support: - minimum 40 mm n b pipe Area: - minimum 3.5 m x 3.5 m Platform height: - 3.0m/2.0m/1.5m Chute f r (two side finish) The topcoat is done using the best quality brand or duly powder coated Step: - width minimum 75mm thread minimum 90 mm riser minimum 250MM	01
3	Four seat swing Main frame: -minimum 40 mm n b pipe Seat frame structure- minimum 25 mm n b frame Seat pipe frame-minimum 20 mm n b pipe Footrest –aluminium or equivalent thick chakkar plate Seat size-minimum 4 ft x 3 ft Horizontal pipe-minimum 50 mm nb pipe Seat pipe-minimum 20mm x40mm rect tube Bearing: housing--heavy duty ball bearing Main frame size-minimum 6.5ft x 10 ft height	01
4	Jr. Combination 4 in 1 Race age: -3–8 yrs Safe area play -minimum 2.8 m x3.8 m side frame: -minimum 25 mm n b pipe slide 1 no: - moulded f r p Sea saw 2 no's: -minimum 20 mm n b pipe frame with moulded f r p seat Area: minimum 1.8. M x 2.8 m height : minimum 1.2 m Swing 1 no: - minimum20 mm n b pipe Ladder 1no: -minimum 20 mm n b pipe frame with minimum 75nn wide steps X- /o. -moulded plastic bloks	01
5	Seated puller: - (Main Frame Size minimum 330mm X 330mm Thickness minimum3mm & m.s. Plate Size minimum250mm X 200mm X 5mm) all pipe are galvanize (g,i.) Iron, All Handle	01

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Sr. No.	Playground Equipment	Unit / Sqft
	in rubber grip.	
6	Chest Press: - (Chest press center pipe is of minimum 100mm. M.S. round plate of minimum 250 mm diameter & minimum 10mm thickness. The Handel frame is made up minimum 25mm N B. The seat frame is made up minimum 40mm N B & minimum 50mm N B. Size minimum 330mm X 330mm of thickness minimum 3mm & M.S. plate of thickness minimum 5mm and size minimum 250mm X 200mm. Quality brand paint or powder coated)	01

Annexure: -13 Sound System

Sr. No.	Sound System	Unit/ Sqft
1	<p>Specification Voice & Music Recording in USB Power 5000 Watts PMPO 30.48 CM (12 Or 15) Woofer FM Radio, USB & SD Card Slot Play MP3 directly from mobile, Laptop, PC, Guitar Input Minimum 2 Wireless Microphone, Wired Microphone input Mic, Echo, Volume Control Trolley Support for Easy Movability Mic, Echo, Bass, Treble & Volume Control G.W - around 13.7kg, N.W - around 11.6kg</p> <p>Features Portable & Lightweight, USB – MP3 Supported Handheld Microphone / Wireless Tie – Clip Hands free minimum 2 Wireless MIC Tone Control and Independent Volume Control Built-in Rechargeable Battery and Charger Powerful 100 W Amplifier</p> <p>Useful For: Announcement or Training or IEC work @ School Prayer Complex, Primary And Secondary School Culture Activity, Primary Health School, Auditorium, Dancing academy, ITI Collage, Community Center Indoor Sport, Room Gym. ETC</p> <p>Benefits: Flexibility for longer distance connectivity, ability for expansion, monitoring the system and, no AC power source</p>	02

Annexure: -14 (Astronomical Telescope)

Sr. No.	Sound System	Unit/ Sqft
1	<p>High-end Telescope to view the occurrences and happenings in the galaxy. Useful for showing moon, sun, stars and constellation and deep sky observation from the city area is easy to operate, higher resolution and sharp image producer should have minimum 1300 Focal length.</p> <p>Aperture: Minimum 160mm</p> <p>Focal length: Minimum 1300mm - f/8.1 Sun Finder- Zero Shadow Technology.</p> <p>Precision mirror with diffraction limited resolution. High reflectivity coating Mounting system Dobsonian style mount with pearlised white finish Mirror cell Stability treated die-cast aluminum providing improved and stable alignment Focuser.</p> <p>Minimum 2" metal focuser with around 2" - 1.25"adaptor and Helical Rack & pinion movement</p> <p>Eyepieces: - 25mm and 10mm</p> <p>Barlow: - 1.8x achromatic Barlow</p> <p>Mirror cell: - stability treated die-cast aluminum provide better and stable alignment</p> <p>Packaging Size: - Minimum 115x55x37.5cm</p> <p>net weight: - Minimum24kgs</p> <p>gross weight: - Minimum 26kgs</p>	

Annexure: -15 (Stem Lab & Robotic Lab with QR Code)

Sr. No	Product	Description	Unit/ Sq.ft.
1.	Arduino UNO, Cable	<p>ATmega328P (smd) - 8-bit AVR family microcontroller, equivalent or better. Operating Voltage:5V Digital I/O Pins: 14 (of which 6 provide PWM output) Operating Voltage: 5V Digital I/O Pins: 14 (of which 6 provide PWM output) PWM Digital I/O Pins :6 Accessories: Case shell enclosure, compatible USB cable (length - 6 inch or more)</p>	30
2.	Arduino Nano	<p>ATmega328P - 8-bit AVR family microcontroller, equivalent or better Operating Voltage: 5V Digital I/O Pins: 14 (of which 6 provide PWM output) Alog Input Pins: 8</p>	10

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Sr. No	Product	Description	Unit/ Sq.ft.
		Accessories: Compatible USB cable (length -6 inch or more)	
3.	Arduino Mega	ATmega328P - 8-bit AVR family microcontroller, equivalent or better Operating Voltage: 5V Digital I/O Pins: 54 (of which 6 provide PWM output) Analog Input Pins: 16 Accessories: Compatible USB cable (length -6 inch or more)	10
4.	Raspberry pi ow	802.11 b/g/n wireless LAN Bluetooth 4.1/4.2/5 Bluetooth Low Energy (BLE) 1GHz, single-core CPU Minimum 512MB RAM Mini HDMI port and micro-USB On-The-Go (OTG) port Micro USB power HAT-compatible 40-pin header Composite video and reset headers CSI camera connector	05
5.	Solderless 400 pin breadboard	Solderless 400 pin breadboard	30
6.	Solderless 800 pin breadboard	Solderless 800 pin breadboard	20
7.	Self-Adhesive Proto Shield	Self-Adhesive Proto Shield	30
8.	General Purpose Board (Small)	FR2 A Grade Material (140*90 mm)	30
9.	General Purpose Board (Big)	FR2 A Grade Material (90*75 mm)	30
10.	Female Berg Strip 40 pins	Female Berg Strip, 2.54mm pitch, 40 pin single row, breakable pin	30
11.	Male Berg Strip 40 pins	male Berg Strip, 2.54mm pitch, 40 pin single row, breakable pin	30
12.	16x2 LCD display	Dot matrix LCD display. 16 characters X 2 lines. I2C	20
13.	USB Cables A to B	USB Cable Set (A to B, 12 inch or more)	10
14.	USB Cables Mini	USB Cable Set (Mini, 12 inches or more)	10
15.	Battery HW 9V-12V Rechargeable	9-12V 2000 to 2500 mAh rechargeable battery with 2 chargers. Equivalent or better	10
16.	Rechargeable Battery Charger	9-12V 2000 to 2500 mAh rechargeable battery charger	01
17.	Resistor Box	kit contains -Minimum 30 carbon film resistors of 20 different resistance values each assorted, packaged together & labelled.	20
18.	Capacitor Box	One kit contains - Minimum 20 electrolytic capacitors of 10 different capacitance values each. Assorted kit packaged together	20
19.	Linear Voltage Regulator: 7805	7805 IC	30
20.	Linear Voltage Regulator: 7812	7812 IC	30
21.	Linear Voltage Regulator: 7809	7809 IC	30
22.	Water Pump module	DC12V 3W Submersible Water Pump	04
23.	Piezoelectric Plate	Normal Copper based minimum 4 cm Diameter approx	30
24.	Minimum 8*8 LED Matrix Module	Max7219 Dot LED Matrix Module Mcu Control LED Display Module	10

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Sr. No	Product	Description	Unit/ Sq.ft.
25.	Bluetooth	HC 05 Bluetooth Module, voltage rating: 5 Volt	15
26.	7 Segment Led Display (4 digit)	LED 4-Digit Display Module Voltage Rating: 2.4V to 5.5V 4-Pin interface: Vcc, Gnd, Data, Clock	20
27.	GSM Module	Sim800L Gprs Transfer Board Micro Sim Gsm Core Ttl Port Module for Arduino	04
28.	GPS Module	GY-NEO6MV2 new GPS module	04
29.	Laser Diode	650 nm 5mW Mini Laser Dot Diode Module	10
30.	LDR Module	5mm/12mm, Photosensitive LDR Light Sensor Module	30
31.	Keypad	Universal 16 Key Switch Keypad	30
32.	Joystick	2-axis joystick with push button function	10
33.	Active Buzzer	small 5 volt	40
34.	Active Buzzer	big 5 volt	40
35.	Motor driver	L293d	10
36.	Sound Playback Module	ISD1820 voice recording module or equivalent	10
37.	12V, 150 RPM Motor with Wheel	12V, 150RPM, Side Shaft BO (Battery operation) Motor	40
38.	Node MCU / Wemos D1	ESP 8266 I2C, 1 wire, plug and play	06
39.	Nodemcu/ WeMos D1 R2	Nodemcu d1 mini/ WeMos D1 R2 with WiFi ESP 8266/Operating Voltage: 5V	06
40.	Vibrating Motor	Weight: 10 Grams/Operating Voltage: 1.5 to 3V	20
41.	Alligator Connectors (12 inches)	Multi Colour Alligator Connectors- 12 inch	200
42.	Battery clips with DC Jack	9-volt battery clips with DC Jack	40
43.	Hookup Wires (Red Wire 100 Mtr)	Red & Black set 100 Meters each	04
44.	Hookup Wires (Black Wire 100 Mtr)	Red & Black set 100 Meters each	04
45.	Jumper Cable: Male-Male	Male-Male	1000
46.	Jumper Cable: Male-Female	Male-Female	600
47.	Jumper Cable: Female-Female	Female-Female	400
48.	RGB LEDs	Regular 5mm 3-5-volt Range	1000
49.	LEDs (Red)	Regular 5mm 3-5-volt Range	1000
50.	LEDs (Green)	Regular 5mm 3-5-volt Range	1000
51.	LEDs (Blue)	Regular 5mm 3-5-volt Range	1000
52.	LEDs (yellow)	Regular 5mm 3-5-volt Range	1000
53.	LEDs (white)	Regular 5mm 3-5-volt Range	1000
54.	555 timer ic	LM 555 Timer IC. /Voltage range - 4.5V to 16V	30
55.	Atmega16A PU	8-bit microcontroller Individual IC (DIP). Voltage range: 2.7V to 5.5V. Operatiol Range: - 40°C to +80°C	10
56.	Diode & Transistor kit	One Kit Contains – minimum 25 Assorted Basic Diodes of 4 different types each. Types: NPN Transistor -2N3904, BC547 PNP Transistor - 2N3906, BC557 Silicon Diode - 1N4148, Power Diode - Equivalent or better.	03

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Sr. No	Product	Description	Unit/ Sq.ft.
		Wattage: 1W, Current rating: 1A Assorted kit packaged together and labelled.	
57.	Button Switch set minimum 100 qty.	One Kit Contains -Minimum 100 buttons of different types. Types: Push, toggle, rotary, selector and slide switch, etc Assorted kit packaged together and labelled.	100
58.	MPR121: Capacitive touch module	MPR 121 with I2C./Voltage Range: 2.5V to 3.6V DC.	20
59.	Capacitive Touch Switch	Digital Capacitive touch switch module - TTP223B/Voltage Range: 2V to 5V DC	10
60.	IR Sensors, Obstacle avoider sensor	LM393/Detection distance: 2 - 30 cm/Detection angle: 30 - 40°	20
61.	Triple Axis Magnetometer	3-Axis Magneto resistive Sensors I2C Digital Interface Integrated 12-bit ADC Range of -8 to +8 Gauss 160 Hz Maximum Output Rate	10
62.	Humidity Sensor	Operating range: 20 -95 % RH Temperature: 0 - 60 Celsius Power supply: 1.5V AC (Max sine) Operating frequency: 500Hz - 2kHz	10
63.	Methane Natural Gas Sensor	MQ- 2 Smoke Detection	03
64.	Alcohol - Ethanol Sensor	MQ-3 Alcohol - Ethanol Sensor	03
65.	High Sensitivity CO Carbon Monoxide Sensor Detector	MQ-4 Methane tural Gas Sensor	03
66.	Smoke Detection	MQ-5 Methane Liquified Gas Sensor	03
67.	Air Quality Sensor	MQ-6 Liquified Petroleum Gas Sensor	03
68.	Methane Liquified Gas Sensor	MQ-7 High Sensitivity CO Carbon Monoxide Sensor Detector	03
69.	Liquified Petroleum Gas Sensor	MQ-8 Hydrogen Gas	03
70.	Hydrogen Gas	MQ-135 Air Quality Sensor	03
71.	IR (transmitter) receiver - TSOP 1738	TSOP 1738/Switching rate - 38 KHz/ Volting Rating: 5V	10
72.	Ultrasonic Sensor	Working Voltage - DC 5V Working current - 15 mA Working Frequency - 40 Hz Range - 1 cm to 4 m Effectual Angle - <15° Measuring Angle -	40
73.	Triple Axis accelerometer	3-axis sensing Small, low profile package minimum 4 mm × 4 mm × 1.45 mm LFCSP Low Power: minimum 350 µA (typical) Single-supply operation: 1.8 V to 3.6 V Temperature stability	10
74.	PIR Motion Detector Module	High digital pulse when motion detected Low digital pulse when idle /no motion detected Sensitivity range (upto 6 m) Power supply: 5V - 12V	20
75.	Pulse Rate Heart Sensor	Pulse Rate Sensor Finger Based wore on the finger or earlobe Working voltage 3-5V	04
76.	Relay Module 2-channel	5V 10A 2 Channel Relay Module Compatible with Arduino	20
77.	Relay Module 1-channel	5V 10A 1 Channel Relay Module Compatible with Arduino	20
78.	Big sound Microphone module	Large Electret capsule sound module	10
79.	Soil Moisture Sensor	FC-28 with LM293 comparator/Operating Voltage: 3.3V to 5V.	06

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Sr. No	Product	Description	Unit/Sq.ft.
80.	Touch Sensor: Capacitive Touch Sensor Module	Capacitive Touch Sensor Module. TTP22X series. Voltage Range: 2.4V to 5.5V	06
81.	Metal touch sensor module	KY-036 or equivalent metal touch sensor module	06
82.	Rain Drop Sensor	Rain Sensitive, Rain Drop Detection Sensor Module. Voltage Range: 3.3V to 5.5V./Size: minimum 5mm X 40mm or equivalent.	06
83.	Flex Sensor	Flex Sensor minimum 2.2 Inches	06
84.	Temperature Sensor	LM35 Full range temperature sensor. Voltage Range: 4V to 30V. Error: $\pm 0.5^{\circ}\text{C}$	06
85.	DHT 11	DHT 11/Voltage Range: 3V to 5V	40
86.	Force Pressure Sensor	force sensitive resistor with a square, minimum 1.75x1.5", sensing area	04
87.	Color Recognition Sensor	TCS3200/ TCS34725 or similar Color Recognition Sensor	04
88.	Water Flow Sensor	Arduino Compatible Water flow sensor. 5V DC Input.	04
89.	Sound Sensor	Sound Sensor Module, Microphones module	10
90.	IR Sensors Array for Line Following	8 IR Sensors Array module for Line Following/Operating Voltage: 5V	10
91.	Power Bank	Power Bank Mobile Charger	05
92.	RFID Reader – Tags	Current :13-26mA / DC 3.3V Idle Current :10 13mA Sleep Current<80uA Peak Current<30mA Operating Frequency: 13.56MHz<30mA Read range between 20 cm to 1 m	10
93.	RF Modules Tx & Rx 315 MHz ASK	Frequency Range: 433.92/315 MHz Supply Voltage: 3 – 6 V Output Power: 4 – 16 Dbm Low power consumption Easy application	10
94.	Stepper motor with Driver board	28BYJ-48 ULN2003 5V Stepper Motor + ULN2003 Driver Board	10
95.	DC motor 12V 150 rpm	12V DC Gear 150 RPM	20
96.	Position Servo Angle based Metal Gear	Position Servo Angle based Metal Gear	10
97.	Small Servo Metal Gear	Small Servo Metal Gear	10
98.	Continuous Metal Gear Servo 360	Continuous Metal Gear Servo 360	10
99.	Small Servo Plastic Gear	Small Servo Plastic Gear	40
100.	150 RPM BO Motor	150 RPM BO Motor	50
101.	L298P Motor Driver	L298P Motor Driver Shield or relative Driver Shield	10
102.	Servo Motor Testor	CCPM 3 channel Servo Tester	04
103.	Robotics DIY Kit - 4-wheel robotic kit with brain	Robotics DIY kit with programmable intelligent brain/brick.	03
104.	Mechanical Construction kit	Metal/plastic mechanical construction kit compatible with electronic equipment.	05
105.	Drone Kit	Drone Kit	01
106.	Toyo Kit	Toyo Kit Dancing Robo	02
107.	Automobile Kit	Automobile Kit	01
108.	Solar Kit	Solar Charger	01
109.	Water/Sanitation Kit	Water/Sanitation Kit	01
110.	Other potential STEM	Other potential STEM application Kit	01

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Sr. No	Product	Description	Unit/ Sq.ft.
	application kit		
	P2 Package: Rapid Prototyping Tools including 3D Printer		
111.	3D Printer Kit and tools	Printer Type: FDM (Fused Deposition Modelling), Minimum Dimensions: 160mm *160mm *160mm Build Size or 4 litre Build Volume., Nozzle: 0.3mm to 0.4mm nozzle diameter, slicing software should be free or Open source, LCD Screen U I that display print metrics, Good Heated Print bed. Material Compatibility - PLA, ABS, and derivatives of PLA, Ninjaflex Quality Anti- bacterial/fungal Cover. Repair Kit - with spare springs, screws, keys, tweezers, etc.	01
112.	UPS/Power back	Dedicated UPS for Power Back up	01
113.	Filament for 3D printer	Compatible 1000 Grams Filament in 5 different colours	05
114.	Filament Storage Box	Compatible Filament storage box	05
115.	Cardboard	Cardboard	05
116.	foam core oards/Thermacol	foam core boards	05
117.	String	Minimum 20m spool of thick strings various colour	05
118.	Rubberband	rubberband	01
119.	popsicle sticks	popsicle sticks	01
120.	wood glue	wood glue-minimum 500 ml	02
	P3 Package: Mechanical, Electrical and Measurement Tools		
121.	Hacksaw	Size: minimum 12 inches	01
122.	Extra hacksaw blades	Size: minimum 12 inches	10
123.	Mini Hack Saw	Size: minimum 6 inches	01
124.	Hacksaw blades Mini	Size: minimum 6 inches	10
125.	Pliers (Set of 7)	- External Straight - Nose Circlip Plier - Long Nose Plier - Combination Mini Plier - Wire stripping Plier - Bent Nose Plier - Needle Nose Plier	01
126.	Tweezer set Minimum 6pc. Non- magnetic minimum 6 inch	Minimum 6 Pc Non-Magnetic Tweezer Set- minimum 6 Inches	02
127.	all Pein Hammer	Ball Pein Hammer/Weight- around 0.75kg	01
128.	Steel Shaft Claw Hammer	Claw Hammer Steel Shaft/Weight- around 0.75kg	01
129.	- C-Clamp	- Metal Clamp minimum 3 " Inch size	04
130.	- Allen Key Set	- Minimum 10 Piece Ring Imperial Allen Hex key	01
131.	- Drill machine set (Wired)	- Drill Machine with accessories Hammer/Screw and clockwise/anticlockwise modes. Power: 500W Chuck capacity - 1 to - 10 mm - Drill Bits - Masonry, Metal, Wood	01
132.	- Workstation for drilling	- Drill Press, Drill Holder and Rotary Tool, Compatible with Drilling machine provided	01
133.	- Spanner Set	- Minimum 12-piece combination - Spanner Set Range - 4 mm to 30 mm	01

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Sr. No	Product	Description	Unit/ Sq.ft.
134.	- Vice Normal	- Table top vice	01
135.	- Precision Screwdriver Set	- Minimum 6 Piece Precision Screwdriver Set Types: PH0, PH1, Flat head - 1.4mm, 2mm, 2.4mm, 3mm	02
136.	- Adjustable Universal Multi Wrench Spanner	- Adjustable Universal Wrench	02
137.	- Wire Strippers	- Wire Stripper Cutter Plier with Spring – minimum 26x6x20 Cms (LxWxH)	05
138.	- Multipurpose Screwdriver (Minimum 40 pcs.)	- Minimum 40 pc multi-purpose screwdriver set	03
139.	- Cordless rotary Tool Set	Manual	01
140.	- Air blower	Air blower High Speed	01
141.	- Drill Bit Set	- High Quality minimum 13 Pcs HSS Drill Bits Set for Wood, Iron, Aluminum, Plastic etc	01
142.	- File set	- Minimum 6 pc file set Working length – minimum 6 inch	01
143.	- Mini file set	- Minimum 6pc mini file set Working length – Minimum 3 inch	01
144.	- Flexible Cutting Mat	- A/3 Size with Marked Pattern and Grids (Minimum 18" X 12")	01
145.	- Plastic Toolbox with Organizer (Set of 10)	- Number of Drawers: Minimum 60 or equivalent Drawer size (l*w*d) (inch) : Minimum 2*2*5	01
146.	- PegBoard	- Peg board System to mount tools on wall with attachments. Size: Minimum 3ft*2ft	01
147.	- Hot glue gun	- Works with standard inch glue sticks. 0.5-Temperature - 230 to 280 degree Celsius.	04
148.	- Digital Oscilloscope	- Minimum Bandwidth: 50 Mhz. Minimum number of channels: 2 channels. Sample Rate: 1Gsa/s with inbuilt waveform function generator.	01
149.	- Soldering Kit	Soldering Iron DE- Soldering Pump Soldering- Wire DE Soldering- Wire	04
150.	- Adapters 5V	- DC power Adapter with 5V, 2A	10
151.	- Adapters 12V	- DC power Adapter with 12V, 2A	10
152.	- Electric Screwdriver Set	- Multipurpose Electric screwdriver set. Accessories - Compatible bits Mode - Wireless Battery - Li-ion minimum 3.6V or equivalent with charging dock	01
153.	- Dual Temperature Heat Gun	- Minimum 1800 W Dual Temperature Heat Gun	01
154.	- Soldering Helping hand	- Adjustable crocodile holding clamps/clip. Soldering iron holder. LED light. Magnifying lens.	04
155.	- Return measuring tape	- Return measuring tape minimum 5Mx19mm	02
156.	- Stainless Steel Rule	- Stainless Steel minimum 12" / 150 mm Rule	05
157.	- Digital Vernier	Minimum 150 mm / 6" Digital Vernier Caliper	02

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Sr. No	Product	Description	Unit/ Sq.ft.
	Caliper		
158.	- Spirit Level	Minimum 12" Spirit Level	01
159.	- Digital Pen electric Tester	- Voltage tester	01
160.	- Digital Multi Meter	- Digital Multi Meter Voltage Current Resistance-7 functions - + 19 ranges to cover DC voltage 200mV to 1kV - AC voltage 200 V - 750 V - DC current 200 µA - 10 A - Resistance 200 -2 M Ohm and Transistor & diode test.	05
161.	- Paper Microscope	- DIY Paper microscope. Magnification range - 100x to 2000x	05
162.	- Telescope	- All glass optical components/Altazimut h mount suitable for terrestrial and astronomical use/minimum 700 mm focal length	01
163.	- Sewing kit	- Semi-Automatic Sewing Machine Straight stitch/ Consumables -Minimum 2 set of assorted needles and Minimum 10-colour spool set.	01
P4 Package: Power Supply & Accessories and Safety Equipment			
164.	- Glue Sticks	- Minimum 11mm*200mm Hot Melt Glue Sticks	100
165.	- Nuts and Bolts and screw: 5 Types (M4X12MM, M4X20MM, M5X16MM,	- minimum SPECS- M4X12MM M4X20MM M5X16MM M5X25MM M6X20MM	40
166.	- Cable Tie - Small (Pack of minimum 100)	- Small Cable Tie Pack - Pack of minimum100	10
167.	- Cable Tie - Medium (Pack of minimum 100)	- Medium Cable Tie Pack - Pack of minimum 100	10
168.	- Cable Tie - Big (Pack of minimum 100)	- Big Cable Tie Pack - Pack of minimum100	10
169.	- Sand Paper	- Sand Paper	12
170.	- Power Strip Adaptors	Extension Board	05
171.	- Bulb Holders	- Regular Hanging Bulb holder	10
172.	- Electric Wires Twisted Red black (Mtr)	- Twisted Red black pair (In Meter)	01
173.	- USB TO dc jack cable	- USB to DC jack cable for Battery bank	10
174.	- Standard first aid kit	- Standard Medical First Aid kit in portable container.	02
175.	- Fire extinguisher (handy units) - 2KG	- Powder Type Fire Extinguisher 2KG	02
176.	- Safety goggles	- Polycarbote Safety goggles Clear lens with no tint	30
177.	- Safety Gloves Pairs	- Latex Coating Gloves (Medium Size)	10
178.	- Safety Mask	- Filtering efficiency ranging minimum 80 percent when tested against 0.3-micron sodium chloride particle	20

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Annexure: -16 (Stem & Robotic Lab Furniture)

Item	Description	Unit/ Size
Platform	Minimum 14" x 48" x 27" – Minimum 6 units made using metal having pre-laminated particle board/hardener sheet on the top	6
Storage cupboards	Minimum 76" x 36" x 19" – Minimum 5 partition, steel Almirah – Minimum 2 units	2

Annexure: - 17 (LED T.V for Stem & Robotic)

Item	Description	Unit/ Size
LED TV	Product Type: Android TV-- 4K LED UHD DTV CPU: Quad Core/ Octa core Processor GPU: Mali470 and above or any other comparable GPU OS: - Android P or above, Certified by Google Android TV RAM/ROM: - Minimum 2.0 G Byte DDR3 /Minimum 16G Byte ROM WI-FI: - Inbuilt 2.4 GHZ/5GHZ signal band Ethernet Network + Ethernet Port	1

Annexure: -18 (CIVIL WORK)

Sr. No	Civil Work Description	Unit
1	Dismantling tiled or stone floors laid in mortar including stacking of serviceable materials and disposal of under serviceable materials with all lead and lift	SMT
2	Demolition including stacking of serviceable materials and disposal of unserviceable materials with lead and lift. (i) RCC work	CMT
3	Demolition of brick work and stone masonry including stacking of serviceable materials and disposal of unserviceable materials with all lead and lift. (i) In Lime mortar (ii) in Cement mortar .	CMT
4	Excavation for foundation up to 1.5m depth including sorting out, stacking of useful materials and disposing of the excavated stuff up to 50mt. lead.	CMT
4 A	(A) Loose soil or soft soil	CMT
4 B	(C) Hard murrum	CMT
5	Providing & Laying Brick bat cement Concrete 1:5:10 (1 Cement: 5Coarse sand: 10 graded brick aggregates 40mm nominal size) and curing complete excluding cost of form work. Foundation and plinth.	CMT
6	Brick work using common burnt clay building bricks having crushing strength not less than 35Kg./sq.cm.In foundation and plinth in cement mortar 1:6 (1 cement :6 Coarse sand) (B) Conventional.	CMT

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Sr. No	Civil Work Description	Unit
7	White glazed tiles minimum 6mm thick in flooring, treads of steps, skirting or dado and landings laid on a bed of minimum 12mm thick cement mortar 1:3(1 cement: 3 coarse sand) finishing with flush pointing in white cement.	SMT
8	Providing minimum 15 mm thick cement plaster in single coat on fair side of brick or concrete wall for interior plastering up to floor two level finished even and smooth in cement mortar 1:3(1 cement :3 fine Sand) etc complete.	SMT
9	Providing minimum 20 mm thick cement plaster in single coat on fair side of brick or concrete wall for interior plastering up to floor two level finished even and smooth in cement mortar 1:3(1 cement :3 fine Sand) etc complete.	SMT
10	Minimum 25 mm Kotta stone Polish work, with Polish Kota stone slab flooring over 20mm. (average) base of cement mortar 1:6 (1 cement :6 coarse sand) of L.M. 1:1.5 and laid and jointed with grey cement slurry including rubbing and polishing complete. (Item no.12	SMT
11	Providing and fixing pre-cast Rubber Dye interlocking concrete block minimum 60mm thick with grade of concrete M250 pneumatic compressed by mechanically pressed and as per approved design including 75mm Sand layer for levelling and filling the joint with sand in proper line and level etc. complete. I.No.14034 Pg.No.191	SMT
12	Filling in plinth with sand under floors including watering griming, consolidating, and dressing complete (up to 10 ton)	CMT
13	Providing & filing with leveling work Sand in school all children play area	SMT
14	Providing and fixing to wall, ceiling & floor U.P.V.C (SCH 40) of the following Outside dia. Tube fitting and clamps, and testing including making good wall and floor etc. (c)Minimum 25mm Dia.	RMT
15	Providing & laying ordinary cement Concrete 1:1.5:3 (1 Cement:1.5 Coarse sand:3 graded stone aggregates) and finishing smooth including curing etc. complete including the cost of formwork but excluding the cost of reinforcement. For RCC work in RCC Slab	CMT
16	Providing & laying kota stone polish work Etc. comp... (Market Rate)	SMT
17	Creating decorative side wall or garden wall as per side location	RMT
18	Providing & Fixing 18 W.led Panel Light etc. comp. (Market Rate as per ssa)	Nos
19	Carrying out wall treatment for termite control including spraying with chemical solution in oil base (0.5 Lit/Sq. m) including labor and material. Using heptachlor concentration 20 Ec. As per IS. 6316_ Paret- II concentration by weight 0.50 percent is recommended i.e., one-liter chemical emulsion dilute with 39-liter of IS concentration total dilute concentration will be 40 liters inclusive of one-liter chemical emulsion application at the rate of 7.5-liter chemical / Sqm of surface is recommended as per I.S.	SMT
20	Major repair of Windows/ventilators Shutters and frames including necessary fitting and fixtures. (As per Market rates/ SOR rates)	Nos

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Sr. No	Civil Work Description	Unit
21	Providing and fixing 35mm/25mm thick shutter and frame for doors and windows and clear story windows including apodised aluminum butt hinges with necessary screws and required fittings. (A) Indian Tick wood (B) Partly paneled and partly glazed (C) Fully glazed (D) Fully Paneled	Sqm
22	Handel for doors & windows & cupboards 15 cm	Each
23	SS Doors and Windows Hinges	Nos
24	SS Aldrop 20/25/30 cm long of ASIS 304 Grade	Nos
25	SS Stopper 20/30/60 cm long of ASIS 304 Grade	Nos
26	Providing & laying minimum 36"x36" vitrified minimum 8mm thick tiles flooring over Minimum 20mm (average) base of cement mortar 1:3(1cement:6course sand) on new surface or fixing on exiting flooring by adhesive material including dismantling of existing flooring and jointed with colour cement slurry including finish with flush pointing and cleaning the surface etc. complete.	SMT
27	Clearing and grubbing road including land including Porting rank vegetation grass bushes, shrubs, sapling and trees girth up to 300mm removal of stumps of trees cut earlier and disposal of unserviceable materials etc.comp	HECTARE
28	Providing & erecting Switch board for Computer or electric apparatus consisting of following items in single board erected on PVC / Metal board with minimum 3 mm thick PC (Polycarbonate) / Acrylic sheet erected as directed 1 no. 6A/16A universal plug-switch combined. Minimum 4 nos. 6A Switch Minimum 4 nos. 6A 5 pins Plug. [B] For Modular Type Accessories. Cat.II	NOS
29	Providing and erecting XLPE (IS:7098) (I)-88 ISI armored cable multistrand Aluminum conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (b) 4 core 6 Sq. mm	RMT
30	Providing New Electric Wiring with ISI Mark Cable Electric wiring open fitting with light point,15/5 amp plug point, camera point, lcd point, light, and point speaker point with switch board with ISI Mark wire for 2.5 sq.mm X 3 wire circuit mains, speaker wire, light fitting fixing. (Market Rate as per ssa)	1 Point
31	Minimum 15-Watt LED Panel Light with Metal Body (Minimum 600 X 600 MM)	Nos
32	Minimum 1200 MM Ceiling Fan with high Speed	Nos
33	Finishing Ceiling / Wall Surfaces with Plastic Emulsion Paint on Ceiling / Wall Surface (Two Coats) to give a Required shape and even shade after thoroughly brushing the surface to remove all dirt, and remains of loose powdered materials and finishing smooth etc. complete. Rate are inclusive of Applying Two Coats of Lappy (Putty) and One Coat of Primer on New Wall Surfaces to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth. Material shall be used As per Approved make list of SSA	SMT

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Sr. No	Civil Work Description	Unit
34	Finishing walls with Weatherproof Exterior Emulsion Paint on Wall Surfaces (Two Coats) over and above Applying one coat of Primer to give a Required shape and even shade after thoroughly brushing the surface to remove all dirt, and remains of loose powdered materials and finishing smooth etc. complete. Material shall be used As per Approved make list of SSA	SMT
35	Minimum 3MM ACP sheet board Alu decor Alu Star Plaso (ACP Sheet Carving) Minimum 3MM acrylic Sheet Pasting for making of Carving. LED module: Power Supply, Board Depth –Minimum 3”MS pipe frame of Minimum 1”x1” (4 Kg Pipe of 20 ft length) Back Side GI Sheet Pasting covering Minimum 1 Year warranty on Electricals.	Nos
36	Repair and replacement of all the sanitaryware plumbing accessories in both the male and female washroom and drinking water area etc..	Nos
37	Providing and laying water proofing including 0.23 mts. radius vata with water drip as directed with 3 years written guarantee, by laying 40 mm thick cement mortar 1:4 (1 cement : 4 fine sand) after thoroughly cleaning the base slab and removing all the loose materials with wire brush, applying cement & waterproofing slurry evenly spread on slab and mixing water proofing materials in cement mortar in proportion as recommended by manufacture, laying brick bats after thoroughly soaked in water on layer of cement mortar, applying cement slurry on brick between @ 0.08 bag/smt. with mixing water proofing materials in proportion as recommended by the manufactures & finishing top with China mosaic tiles chips with 12 mm thick C.M. 1:3 base and laying by keeping gaps which should be filled with white cement and color pigment including rounding or junction extending up to 15 cm along the wall, including curing etc. complete. Note: The measurement of this item shall be taken as that of the horizontal surface (length x width) that is from inside of the parapet walls, thus, not considering the surface measurement of the rounded vatas.	SMT
38	Museum Quality Bharat Mata and Saraswati Mata Canvas Photo with UV Ray Protective Layer and with Metal Frame (Inside image Size - 724 mm x 896 mm, 3 Side white Boarder Size - 40 mm, bottom Side white Boarder Size - 55 mm with Sanskrit Slok and others, Total Image Size: 804 mm x 1081 mm)	Nos
39	Providing and Fixing MS Cupboard Shutter	Sq. m
40	Providing and fixing smart classroom in wooden box with laminated	Sq. m
41	M.S. angel 35 X 35 X 5 mm 14 X 14g GI Barbed wire 4-line 600mm dia.	RFT
42	Providing & Fixing SS brass bib Cock	Nos
43	Steel work welded in built up sections/ framed work, including cutting, hosting, fixing in position and applying a priming coat of approved steel primer using MS	Kg

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Sr. No	Civil Work Description	Unit
44	Providing & fixing Photo Frame size 19"X13"	Nos
45	Providing & fixing Name Plate	Nos
46	Providing & fixing of expansion joint system related with wall and floor	Mt
47	Providing & fixing 3D letter for building Names of Stainless steel 1" emboss size of letter in 6 - 10-inch height	Sq. ft.
48	Supplying, fitting, and fixing GI sheet with cost all materials, labor	SMT
49	Supplying, fitting, and fixing fibber sheet with cost all materials, labor	SMT
50	Inauguration Marble Takati 4'X2'6"	Each chart

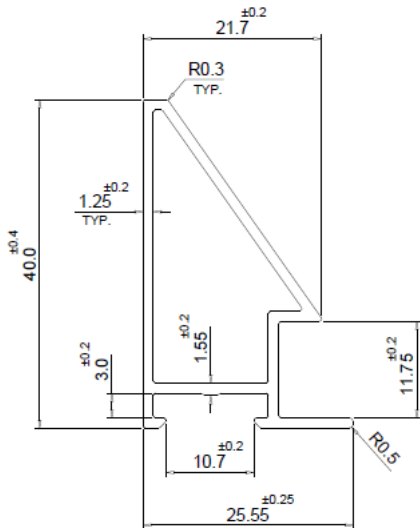
Technical Specifications (as per the approved technical specification under MP Grant Project)

Museum Quality Bharat Mata Canvas Photo with Metal Frame

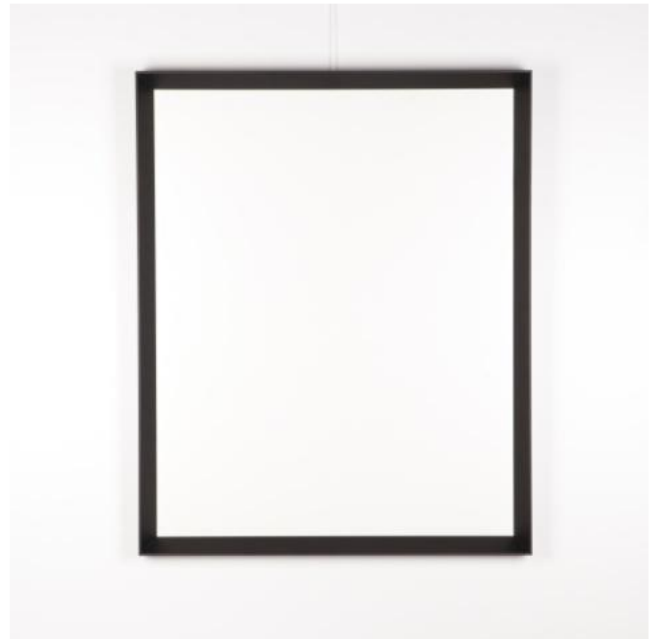
- i. The bidder is required to supply and installation of Museum Quality Bharat Mata Canvas Metal Frame Photos with UV Ray Protective Layer in municipal schools.
 - a. Canvas Board Size: 804 mm x 1081 mm
 - b. Canvas: 350 GSM Museum Quality Cotton Canvas
 - c. Mounting Board: 6 mm High Density High Moisture Resistance 2 sided white laminated.
 - d. Canvas Mounting Type: Dry Mounting Tissue Solvent Acrylic Heat Activated Film Thickness 2 mil and Adhesive Layer 1 mil.
 - e. Canvas UV Ray Protective Layer: Matte Perforated PVC Solvent Acrylic Heat Activated Film Thickness 3 mil and Adhesive Layer 1 mil film adhesive ratio 3:1
 - f. UV Protection Factor: Film Contains UV stabilizer, which prevent film degradation and provide UV protection to the underlying image.
 - g. Printing Type: Latex 6 Color Printing with Optimizer
 - h. Printing Profile: 12p_CMYKcm_120.icc
 - i. Resolution: 600 x 600 DPI
 - j. Wall Hanging: 2 Hook System
 - k. Spring: 14 Back Side for Supporting Canvas Board
- ii. Outer Frame Size: 840 mm x 1117 mm
- iii. Metal Frame Alloy Type: Hard Virgin Aluminum AA 6063 T6 (Temper) IS: 733 - 1983
- iv. Metal Frame Body Finish: Sand Blasting Matt
- v. Frame Color: Black
- vi. The installation work shall be completed in 3 months after issuance of work order.
- vii. Supplying in Box Packaging: 5-layer Kraft Paper Box with 5 mm foam Warping or Sheeting for protect for damage in transport.
- viii. The bidder shall provide delivery challan and all supporting document for delivery of all the hardware items.
- ix. Bidder will be responsible for installation & commissioning as per the defined project timeline and should obtain a completion certificate form AMC SCHOOL BOARD.
- x. AMC SCHOOL BOARD shall appoint a team for conducting the user acceptance test & performance and audit of the installation work. The agency/officials/team appointed by the AMC SCHOOL BOARD shall conduct audit and make recommendations before commissioning.
- xi. The bidder will need to provide daily, weekly, monthly and periodic reports to AMC SCHOOL BOARD as defined by authority.

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- xii. As part of its scope of work the successful bidder shall provide 1 year of Post Implementation Operational & Maintenance (O&M) Support.
- xiii. The bidder needs to deploy a competent team to execute scope of work defined in Tender. The bidder needs to depute adequate number of team members to execute the project in a timely manner, failure to execute the project within the defined time period shall attract a liquidated damage as defined in this Tender.



Metal
Frame
Design:



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Image Specification: Metal Frame Design:

Inside image Size - 724 mm x 896 mm, 3 Side white Boarder Size - 40 mm, bottom Side white Boarder Size - 55 mm with Sanskrit Slok and others, Total Image Size: 804 mm x 1081 mm

