

RAILTEL CORPORATION OF INDIA LIMITED
(A Govt. of India Undertaking)

**Expression of Interest for Selection of Partner from Empaneled Business Associate for
EXCLUSIVE PRE-BID TEAMING ARRANGEMENT**

For

**“Supply of integrated Learning Material for Class VI to VIII with associated software (LMS,
Assessment Platform, Project Tracking software) and Training Manuals”**

EOI No: RailTel/EOI/COMKTG/EB/BH/2023-24/4 dated 15th Jan 2024

EOI NOTICE

Plate-A, 6th Floor, Office Tower-2, NBCC Building, East Kidwai Nagar, New Delhi-110023

EOI Notice No: RailTel/EOI/COMKTG/EB/BH/2023-24/4 dated 15th Jan 2024

RailTel Corporation of India Ltd., (here after referred to as “RailTel”) invites EOIs from RailTel’s Empaneled Partners for the selection of suitable partner as Exclusive pre bid teaming arrangement for **“Supply of integrated Learning Material for Class VI to VIII with associated software (LMS, Assessment Platform, Project Tracking software) and Training Manuals”**.

The details are as under:

1	Last date for submission of Technical Packet against EOIs by bidders	19 th Jan 2024 at 16:30 Hours
2	Opening of Technical Bid of EOIs	19 th Jan 2024 at 16:45 Hours
3	Number of copies to be submitted for scope of work	One
4	EOI fees inclusive tax (Non-refundable)	Rs. 5,000/- (Five Thousand only)
5	Token EOI EMD	<p>Rs. 5,00,000/- (Five Lakhs Only) to be submitted along with EOI.(To be submitted via online bank transfer)</p> <p>Balance EMD for Rs. 2,95,00,000/- (Rupees Two Crores Ninety Five Lakhs only). To be submitted by selected Business Associate, in the form of BG/online transfer before submission of final bid to the end customer.</p> <p>*BG as EMD validity: Bid validity period + 2 months and claim period of 1 year from BG expiry period.</p> <p>(SFMS report guidelines: - BG advising message – IFN 760COV/ IFN 767COV via SFMS</p> <ul style="list-style-type: none">• To mandatorily send the Cover message at the time of BG issuance.• IFSC Code of ICICI Bank to be used (ICIC0000007).• Mention the unique reference (RAILTEL6103) in field 7037.)

The EMD should be in the favor of RailTel Corporation of India Limited payable at Delhi through online bank transfer or EMD can be submitted as PBG in favour of RailTel Corporation of India Limited. Partner needs to share the online payment transfer details like UTR No. date and Bank along with the proposal.

RailTel Bank Details: Union Bank of India, Account No. 340601010050446, IFSC Code - UBIN0534064.

Eligible Business Associates are required to direct all communications related to this Invitation for EOI document, through the following Nominated Point of Contact persons:

Level:1 Contact: Abhishek Pratap Singh
Designation: Sr.Mgr/EB
Email: abhishek.singh@railtelindia.com

Level:2 Contact: Shashidhar Uppal
Designation: GM/EB
Email: shashi_uppal@railtelindia.com

Level:3 Contact: Parag Kumar Goyal
Designation: PED/EB
Email : parag@railtelindia.com

Note:

1. Empaneled partners are required to submit soft copy of technical packet through an e-mail at eoiebc@railtelindia.com duly signed by Authorized Signatories with Company seal and stamp.
2. The EOI response is invited from eligible **Empaneled Partners of RailTel only**.
3. All the document must be submitted with **proper indexing** and **page no**.
4. This is an **exclusive pre-RFP partnership arrangement with empaneled business associate of RailTel for participating in the end customer RFP**. Selected partner's authorized signatory has to give an undertaking they will not submit directly or indirectly their bids and techno-commercial solution/association with any other organization once selected in this EOI for pre-bid teaming arrangement (before and after submission of bid to end customer organization by RailTel). This undertaking has to be given with this EOI Response.
5. **Transfer and Sub-letting**. The Business Associate has no right to give, bargain, sell, assign or sublet or otherwise dispose of the Contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the present Contract or any part thereof.

RailTel Corporation of India Limited (RailTel), an ISO-9001:2000 organization is a Mini Ratna Government of India undertaking under the Ministry of Railways. The Corporation was formed in Sept 2000 with the objectives to create nationwide Broadband Telecom and Multimedia Network in all parts of the country, to modernize Train Control Operation and Safety System of Indian Railways and to contribute to realization of goals and objective of national telecom policy 1999. RailTel is a wholly owned subsidiary of Indian Railways.

For ensuring efficient administration across India, country has been divided into four regions namely, Eastern, Northern, Southern & Western each headed by Executive Director and Headquartered at Kolkata, New Delhi, Secunderabad & Mumbai respectively. These regions are further divided into territories for efficient working. RailTel has territorial offices at Guwahati, & Bhubaneswar in East, Chandigarh, Jaipur, Lucknow in North, Chennai & Bangalore in South, Bhopal, and Pune & Ahmedabad in West. Various other territorial offices across the country are proposed to be created shortly.

Licenses & Service portfolio:

Presently, RailTel holds Infrastructure Provider -1, National Long Distance Operator, International Long Distance Operator and Internet Service Provider (Class-A) licenses under which the following services are being offered to various customers:



a) Carrier Services

- National Long Distance: Carriage of Inter & Intra -circle Voice Traffic across India using state of the art NGN based network through its Interconnection with all leading Telecom Operators
- Lease Line Services: Available for granularities from E1 to multiple of Gigabit bandwidth & above
- Dark Fiber/Lambda: Leasing to MSOs/Telco's along secured Right of Way of Railway tracks
- Co-location Services: Leasing of Space and 1000+ Towers for collocation of MSC/BSC/BTS of Telco's

b) Enterprise Services

- Managed Lease Line Services: Available for granularities from E1, DS-3, STM-1 & above
- MPLS VPN: Layer-2 & Layer-3 VPN available for granularities from 2 Mbps & above
- Dedicated Internet Bandwidth: Experience the "Always ON" internet connectivity at your fingertips in granularities 2 Mbps to several Gbps

c) DATA CENTER Infrastructure as a services (IaaS), Hosting as Services, Security operation Centre as a Service (SOCaaS): RailTel has MeitY empaneled two Tier-III data centres in Gurgaon & Secunderabad. Presently RailTel is hosting critical applications of Indian Railways, Central & State government/ PSUs applications. RailTel will facilitate Government's applications / hosting services including smooth transition to secured state owned RailTel's Data Centers and Disaster Recovery Centres. RailTel also offers SOC as a Service 'SOCaaS'. In addition, RailTel offers VPN client services so that employees can seamlessly access government's intranet, applications securely from anywhere without compromising security.

- National Long Distance: Carriage of Inter & Intra -circle Voice Traffic across India using state of the art NGN based network through its Interconnection with all leading Telecom Operators
- Lease Line Services: Available for granularities from E1 to multiple of Gigabit bandwidth & above
- Dark Fiber/Lambda: Leasing to MSOs/Telco's along secured Right of Way of Railway tracks
- Co-location Services: Leasing of Space and 1000+ Towers for collocation of MSC/BSC/BTS of Telco's

d) High-Definition Video Conference: RailTel has unique service model of providing high definition video conference bundled with Video Conference equipment, bandwidth and FMS services to provide end to end seamless services on OPEX model connecting HQ with other critical offices. RailTel also offers application-based video conference solution for employees to be productive specially during this pandemic situation.

e) Retail Services – RailWire

RailWire: Triple Play Broadband Services for the Masses. RailTel has unique model of delivering broadband services, wherein local entrepreneurs are engaged in delivering &

maintaining broadband services and up to 66% of the total revenues earned are shared to these local entrepreneurs in the state, generating jobs and revitalizing local economies. On date RailTel is serving approx. 5,00,000 subscribers on PAN Indian basis. RailTel can provide broadband service across– Government PSU or any organization's officers colonies and residences.

2. Project Background and Objective of EOI

RailTel intends to participate in **RFP floated** by end Customer organization for **“Supply of integrated Learning Material for Class VI to VIII with associated software (LMS, Assessment Platform, Project Tracking software) and Training Manuals”**

RailTel invites EOIs from RailTel's Empaneled Partners for the selection of suitable partner for participating in above mentioned work for the agreed scope work. The empaneled partner is expected to have excellent execution capability and good understanding customer local environment.

3. Scope of Work:

RailTel intends to participate in **RFP floated** by end Customer organization for **“Supply of integrated Learning Material for Class VI to VIII with associated software (LMS, Assessment Platform, Project Tracking software) and Training Manuals”**.

The brief scope of work is provided below for reference: -

- I. Integrated Learning Material for Classes 6-8
- II. Learning Management Solution (LMS)
- III. Assessment Platform
- IV. Project Tracking Software
- V. The Detailed specification and scope of software and content categories is mentioned in **Appendix-A**.

The above scope of work is indicative and the detailed scope of work is given in the end customer tender documents with latest amendments and clarifications.

In case of any discrepancy or ambiguity in any clause / specification pertaining to scope of work area, the RFP released by end customer organization shall supersede and will be considered sacrosanct. (All associated clarifications, response to queries, revisions, addendum and corrigendum, associated prime service agreement (PSA)/MSA/SLA also included.)

Business associate can participate as a sole bidder, Bid by consortium is not allowed.

Special Note: RailTel may retain any portion of the work mentioned in the end organization RFP, where RailTel has competence so that overall proposal becomes most winnable proposal.

4. Response to EOI guidelines

4.1 Language of Proposals

The proposal and all correspondence and documents shall be written in English in soft copy through an email.

4.2 RailTel's Right to Accept/Reject responses

RailTel reserves the right to accept or reject any response and annul the bidding process or even reject all responses at any time prior to selecting the partner, without thereby incurring any liability to the affected bidder or Business Associate or without any obligation to inform the affected bidder or bidders about the grounds for RailTel's action.

4.3 EOI response Document

The bidder is expected to examine all instructions, forms, terms and conditions and technical specifications in the bidding documents. Submission of bids, not substantially responsive to the bidding document in every aspect will be at the bidder's risk and may result in rejection of its bid without any further reference to the bidder.

All pages of the documents shall be signed by the bidder including the closing page in token of his having studied the EOI document and should be submitted along with the bid.

4.4 Period of Validity of bids and Bid Currency

Bids shall remain valid for a period of 180 days from the last date of submission of bids to end Customer organization.

4.5 Bidding Process

The bidding process as defined in para 4.10 & 6.

4.6 Bid Earnest Money (EMD)

4.6.1 The Business Associate shall furnish a sum as given in EOI Notice via online transfer from any scheduled bank in India in favour of "RailTel Corporation of India Limited" along with the offer. This will be called as **EOI EMD**.

4.6.2 Offers not accompanied with valid EOI Earnest Money Deposit shall be summarily rejected.

4.6.3 In case of Bidder's offer is selected for bidding, bidder has to furnish Earnest Money Deposit (for balance amount as mentioned in the customer's Bid as and if applicable) for the bid to RailTel amounting **Rs. 2.95 Crores**. The selected Business Associate shall have to submit a Bank Guarantee against EMD in proportion to the quoted value/scope of work to RailTel before submission of bid to end customer as and if applicable.

4.6.4 Return of EMD for unsuccessful Business Associates: EOI EMD of the unsuccessful Business Associate shall be returned without interest after completion of EOI process.

4.6.5 Return of EMD for successful Business Associate: EOI-EMD & Earnest Money Deposit

(balance proportionate EMD) if applicable of the successful bidder will be discharged / returned as promptly as possible after the receipt of RailTel's EMD/BG from the Customer and or on receipt of Security Deposit Performance Bank Guarantee as applicable (clause no. 4.7) from Business Associate whichever is later.

4.6.6 Forfeiture of EOI EMD or EOI EMD & EMD (balance proportionate EMD) and or Penal action as per EMD Declaration:

4.6.6.1 The EOI EMD may be forfeited and or penal action shall be initiated if a Business Associate withdraws his offer or modifies the terms and conditions of the offer during validity period.

4.6.6.2 In case of non-submission of SD/PBG (as per clause no. 4.7) lead to forfeiture of EOI EMD, EMD (balance proportionate EMD) if applicable and or suitable action as prescribed in the EMD Declaration shall be initiated as applicable.

4.7 Security Deposit / Performance Bank Guarantee (PBG)

4.7.1 In case the bid is successful, the PBG of requisite amount proportionate to the agreed scope of the work will have to be submitted to RailTel.

4.7.2 As per work share arrangements agreed between RailTel and Business Associate the PBG will be proportionately decided and submitted by the selected Business Associate.

4.8 Last date & time for Submission of EOI response

EOI response must be submitted to RailTel at the email address specified in the preamble not later than the specified date and time mentioned in the preamble.

4.9 Modification and/or Withdrawal of EOI response

EOI response once submitted will treated, as final and no modification will be permitted except with the consent of the RailTel.

No Business Associate shall be allowed to withdraw the response after the last date and time for submission.

The successful Business Associate will not be allowed to withdraw or back out from the response commitments. In case of withdrawal or back out by the successful business associate, the Earnest Money Deposit shall be forfeited and all interests/claims of such Business Associate shall be deemed as foreclosed.

4.10 Details of Financial bid for the above referred tender

Business Associate meeting eligibility criteria will be selected for financial bid opening.

Business Associate with lowest (L1) offer will be selected for exclusive pre-bid arrangement for optimizing technical and commercial solution so that most winnable solution is submitted to end customer.

The final bid for the tender will be prepared jointly with the selected Business Associate so that the optimal bid can be put with a good chance of winning the Tender.

4.11 Clarification of EOI Response

To assist in the examination, evaluation and comparison of bids the purchaser may, at its discretion, ask the Business Associate for clarification. The response should be in writing and no change in the price or substance of the EOI response shall be sought, offered or permitted.

4.12 Period of Association/Validity of Agreement

RailTel will enter into a pre-bid agreement with selected bidder with detailed Terms and conditions.

5. Eligibility Criteria for Bidding Business Partner of RailTel

S No.	Particulars	Criteria for Tender Package
		(Mandatory Compliance & Document Submission)
A)	Financial Conditions	
i)	Bidder should be registered under Companies Act, 1956 or Companies Act 2013 or as amended and should have at least 3 years of operations in India as on bid submission date.	1. Certificate of Incorporation 2. GST Registration 3. PAN Card
ii)	Bidder should have cumulative annual turnover of at least INR 120 Cr. for last three years (FY 20-21, 21-22, 22-23).	Turnover Certificate issued by the Chartered Accountant. Certificate should contain UDIN no. issued by ICAI.
iii)	Bidder should also have a positive net worth in the last 3 financial years (FY 20-21, 21-22, 22-23) .	Positive Net Worth Certificate issued by the CA for the last three financial years (FY 20-21, 21-22, 22-23). Certificate should contain UDIN no. issued by ICAI.
B)	Technical Conditions	
iv)	<p>Bidder should have experience of similar project(s) in Central/State Government/ Govt. undertakings/ UT's/Autonomous Bodies/Public listed companies/reputed Private organization in India as:</p> <p>Maximum Three (3) Orders of total value of Rs. 50 Crore or more</p> <p>Similar projects may consist of education product/ IT hardware/ IT software POs in last five years as on date of bid submission.</p>	Documentary evidence such as Certificate from Customer/CA Certificate for services/supply/ Payments along with Customer's purchase orders/ work orders etc for completed / ongoing project.
v)	Bidder shall have at least 100 technical personnel on its payroll.	Undertaking from authorized signatory or HR Head of the Company on its letter head.

S No.	Particulars	Criteria for Tender Package
		(Mandatory Compliance & Document Submission)
vi)	Bidder should have following certificates: - 1. ISO-9001 Certificate 2. CMMI ML3 or above Certificate	Copy of valid Certificate
C)	Annexures	
vii)	Annexure 1	Covering Letter: Self-certification duly signed by authorized signatory on company letter head.
viii)	Annexure 2	The Bidder should agree to abide by all the technical, commercial & financial conditions of the end customer RFP for which EOI is submitted.
		Self-certification duly signed by authorized signatory on company letter head.
ix)	Annexure 3	An undertaking signed by the Authorized Signatory of the company to be provided on letter head. The Bidder should not have been blacklisted/debarred by any Governmental/ Non-Governmental Organization in India as on bid submission date.
x)	Annexure-4	Format for Affidavit to be uploaded by bidder with the tender documents.
xi)	Annexure-5	Non-disclosure agreement with RailTel.
xii)	Power of Attorney	Bidder need to provide Power of Attorney and Board Resolution in favour of one of its employees who will sign the Bid Documents.
xiii)	Additional Documents to be Submitted	Technical Proposal with overview of the project with strength of the Partner.
xiv)	Product samples	Bidder need to showcase / demonstrate the product samples as per specifications. Date of demonstration will be intimated to the bidders separately.
xv)	Annexure-6	EMD (as PBG) Format
xvi)	Annexure-7	Price Bid Format (BOQ) (Financial Bid) with password protected PDF.

6. Bidder's Profile

The bidder shall provide the information in the below table:

S. No.	ITEM	Details
1.	Full name of bidder's firm	
2.	Full address, telephone numbers, fax numbers, and email address of the primary office of the organization / main / head / corporate office	
3.	Name, designation and full address of the Chief Executive Officer of the bidder's organization as a whole, including contact numbers and email Address	
4.	Full address, telephone and fax numbers, and email addresses of the office of the organization dealing with this tender	
5.	Name, designation and full address of the person dealing with the tender to whom all reference shall be made regarding the tender enquiry. His/her telephone, mobile, Fax and email address	
6.	Bank Details (Bank Branch Name, IFSC Code, Account number)	
7.	GST Registration number	

7. Evaluation Criteria

- 7.1 The Business Associates are first evaluated on the basis of the Eligibility Criteria as per clause 5 above.
- 7.2 The Business Associate with lowest commercial (L1) offer will be selected for exclusive pre-bid arrangement for optimizing technical and commercial solution so that most winnable solution is submitted to end customer.
- 7.3 RailTel reserves the right to accept or reject the response against this EOI, without assigning any reasons. The decision of RailTel is final and binding on the participants. The RailTel evaluation committee will determine whether the proposal/ information is complete in all respects and the decision of the evaluation committee shall be final. RailTel may at its discretion assign lead factor to the Business associate as per RailTel policy for shortlisting partner against this EOI.
- 7.4 All General requirement mentioned in the Technical Specifications are required to be complied. The solution proposed should be robust and scalable.

8. Payment terms

- 8.1 RailTel shall make payment to selected Business Associate after receiving payment from Customer for the agreed scope of work. In case of any penalty or deduction made by customer for the portion of work to be done by BA, same shall be passed on to Business Associate.
- 8.2 All payments by RailTel to the Partner will be made after the receipt of payment by RailTel from end Customer organization.

9 SLA

The selected bidder will be required to adhere to the SLA matrix as defined in the end Customer organization tender for his scope of work and the SLA breach penalty will be applicable proportionately on the selected bidder, as specified in the end Customer organization Tender. The SLA scoring and penalty deduction mechanism for in-scope of work area shall be followed as specified in the Tender. All associated clarifications, responses to queries, revisions, addendum and corrigendum, associated Prime Services Agreement (PSA)/ MSA/ SLA also included. Any deduction by Customer from RailTel payments on account of SLA breach which is attributable to Partner will be passed on to the Partner proportionately based on its scope of work.

Note: Depending on RailTel's business strategy RailTel may choose to work with Partner who is most likely to support in submitting a winning bid.

Annexure 1: Format for COVERING LETTER

COVERING LETTER (To be on company letter head)

To,

RailTel Corporation of India Ltd.
Plate-A, 6th Floor, Office Tower-2,
NBCC Building, East Kidwai Nagar, New Delhi-110023

Dear Sir,

SUB: Participation in the Eol process

Having examined the Invitation for Eol document bearing the reference number _____ released by your esteemed organization, we, undersigned, hereby acknowledge the receipt of the same and offer to participate in conformity with the said Invitation for Eol document.

If our application is accepted, we undertake to abide by all the terms and conditions mentioned in the said Invitation for Eol document.

We hereby declare that all the information and supporting documents furnished as a part of our response to the said Invitation for Eol document, are true to the best of our knowledge. We understand that in case any discrepancy is found in the information submitted by us, our Eol is liable to be rejected.

We hereby Submit EMD amount of Rs. _____ issued vide _____ from Bank _____.

Authorized Signatory

Name

Designation

Annexure 2: Format for Self-Certificate & Undertaking

Self-Certificate (To be on company letter head)

EoI Reference No:

Date:

To,

RailTel Corporation of India Ltd.
Plate-A, 6th Floor, Office Tower-2,
NBCC Building, East Kidwai Nagar, New Delhi-110023

Dear Sir,

Sub: Self Certificate for Tender, Technical & other compliances

- 1) Having examined the Technical specifications mentioned in this EOI & end customer tender, we hereby confirm that we meet all specification.
- 2) We_____agree to abide by all the technical, commercial & financial conditions of the end customer RFP for which EOI is submitted (except pricing, termination & risk purchase rights of the RailTel). We understand and agree that RailTel shall release the payment to selected sole partner/lead partner in case of consortium after the receipt of corresponding payment from end customer by RailTel. Further we understand that in case selected sole partner/lead partner in case of consortium fails to execute assigned portion of work, then the same shall be executed by RailTel through third party or departmentally at the risk and cost of selected sole partner/lead partner in case of consortium.
- 3) We agree to abide by all the technical, commercial & financial conditions of the end customer's RFP for the agreed scope of work for which this EOI is submitted.
- 4) We hereby agree to comply with all OEM technical & Financial documentation including MAF, Technical certificates/others as per end to end requirement mentioned in the end customer's RFP. We are hereby enclosing the arrangement of OEMs against each of the BOQ item quoted as mentioned end customer's RFP. We also undertake to submit MAF and other documents required in the end Customer organization tender in favour of RailTel against the proposed products.
- 5) We hereby certify that any services, equipment and materials to be supplied are produced in eligible source country complying with OM/F. No. 6/18/2019 dated 23rd July 2020 issued by DoE, MoF.
- 6) We hereby undertake to work with RailTel as per end customer's RFP terms and conditions. We confirm to submit all the supporting documents constituting/ in compliance with the Criteria as required in the end customer's RFP terms and conditions like technical certificates, OEM compliance documents.
- 7) We understand and agree that RailTel is intending to select sole partner/ consortium who is willing to accept all terms & conditions of end customer organization's RFP for the agreed scope of work.

RailTel will strategies to retain scope of work where RailTel has competence.

- 8) We hereby agree to submit that in case of being selected by RailTel as sole partner/ consortium for the proposed project(for which EOI is submitted), we will submit all the forms, appendix, relevant documents etc. to RailTel that is required and desired by end Customer well before the bid submission date by end customer and as and when required.
- 9) We hereby undertake to sign Pre Bid Agreement and Non-Disclosure Agreement with RailTel on a non-judicial stamp paper of Rs. 100/- in the prescribed Format.
- 10) We undertake that we will not submit directly or indirectly out bids and techno-commercial solution/association with any other organization once selected in this EOI for pre-bid teaming arrangement (before and after submission of bid to end customer organization by RailTel)

Authorized Signatory

Name & Designation

Annexure 3: Undertaking for not Being Blacklisted/Debarred

<On Company Letter Head>

To,

RailTel Corporation of India Ltd
Plate-A, 6th Floor, Office Tower-2,
NBCC Building, East Kidwai Nagar, New Delhi-110023

Subject: **Undertaking for not Being Blacklisted/Debarred**

We, Company Name, having its registered office at Address

hereby declares that that the Company has not been blacklisted/debarred by any

Governmental/ Non-Governmental organization in India for past 3 Years as on bid submission date.

Date and Place

Authorized Signatory's Signature:

Authorized Signatory's Name and Designation:

Bidder's Company Seal:

Annexure 4: Format of Affidavit

(To be executed in presence of Public notary on non-judicial stamp paper of the value of Rs. 100/-. The paper has to be in the name of the BA) **

I..... (Name and designation)** appointed as the attorney/authorized signatory of the BA (including its constituents),
M/s.....(hereinafter called the BA) for the purpose of the EOI documents for the work of as per the EOI No. of (RailTel Corporation of India Ltd.), do hereby solemnly affirm and state on the behalf of the BA including its constituents as under:

1. I/we the BA (s), am/are signing this document after carefully reading the contents.
2. I/we the BA(s) also accept all the conditions of the EOI and have signed all the pages in confirmation thereof.
3. I/we hereby declare that I/we have downloaded the EOI documents from RailTel website www.railtelindia.com. I/we have verified the content of the document from the website and there is no addition, no deletion or no alternation to be content of the EOI document. In case of any discrepancy noticed at any stage i.e. evaluation of EOI, execution of work or final payment of the contract, the master copy available with the RailTel Administration shall be final and binding upon me/us.
4. I/we declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
5. I/we also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.
6. I/we declare that the information and documents submitted along with the EOI by me/us are correct and I/we are fully responsible for the correctness of the information and documents, submitted by us.
7. I/we undersigned that if the certificates regarding eligibility criteria submitted by us are found to be forged/false or incorrect at any time during process for evaluation of EOI, it shall lead to forfeiture of the EOI EMD besides banning of business for five years on entire RailTel. Further, I/we (insert name of the BA)**.....and all my/our constituents understand that my/our constituents understand that my/our offer shall be summarily rejected.
8. I/we also understand that if the certificates submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of EMD/SD and Performance guarantee besides any other action provided in the contract including banning of business for five years on entire RailTel.

DEPONENT
SEAL AND SIGNATURE
OF THE BA

VERIFICATION

I/We above named EOI do hereby solemnly affirm and verify that the contents of my/our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

DEPONENT
SEAL AND SIGNATURE
OF THE BA

Place:

Dated:

****The contents in Italics are only for guidance purpose. Details as appropriate, are to be filled in suitably by BA. Attestation before Magistrate/Notary Public.**

Annexure-5: Non-Disclosure Agreement (NDA) Format

NON-DISCLOSURE AGREEMENT

This Non-Disclosure Agreement (this “**Agreement**”) is made and entered into on this ____ day of ____, 2021 (the “**Effective Date**”) at _____.

By and between

RailTel Corporation of India Limited, (CIN: L64202DL2000GOI107905), a Public Sector Undertaking under Ministry of Railways, Govt. of India, having its registered and corporate office at Plate-A, 6th Floor, Office Block, Tower -2, East Kidwai Nagar, New Delhi-110023, (hereinafter referred to as '**RailTel**'), which expression shall unless repugnant to the context or meaning thereof, deem to mean and include its successors and its permitted assignees of the ONE PART,

And

_____) (CIN: _____), a company duly incorporated under the provisions of Companies Act, _____ having its registered office at _____, (hereinafter referred to as '_____'), which expression shall unless repugnant to the context or meaning thereof, deem to mean and include its successors and its permitted assignees of OTHER PART

RailTel and _____ shall be individually referred to as “Party” and jointly as “Parties”

WHEREAS, RailTel and _____, each possesses confidential and proprietary information related to its business activities, including, but not limited to, that information designated as confidential or proprietary under Section 2 of this Agreement, as well as technical and non-technical information, patents, copyrights, trade secrets, know-how, financial data, design details and specifications, engineering, business and marketing strategies and plans, forecasts or plans, pricing strategies, formulas, procurement requirements, vendor and customer lists, inventions, techniques, sketches, drawings, models, processes, apparatus, equipment, algorithms, software programs, software source documents, product designs and the like, and third party confidential information (collectively, the “**Information**”);

WHEREAS, the Parties have initiated discussions regarding a possible business relationship for _____.

WHEREAS, each Party accordingly desires to disclose certain Information (each Party, in such disclosing capacity, the “**Disclosing Party**”) to the other Party (each Party, in such receiving capacity, the “**Receiving Party**”) subject to the terms and conditions of this Agreement.

NOW THEREFORE, in consideration of the receipt of certain Information, and the mutual promises made in this Agreement, the Parties, intending to be legally bound, hereby agree as follows:

1. Permitted Use.

(a) Receiving Party shall:

- (i) hold all Information received from Disclosing Party in confidence;
- (ii) use such Information for the purpose of evaluating the possibility of entering into a commercial arrangement between the Parties concerning such Information; and
- (iii) restrict disclosure of such Information to those of Receiving Party's officers, directors, employees, affiliates, advisors, agents and consultants (collectively, the “**Representatives**”) who the Receiving Party, in its reasonable discretion, deems need to know such Information, and are

bound by the terms and conditions of (1) this Agreement, or (2) an agreement with terms and conditions substantially similar to those set forth in this Agreement.

(b) The restrictions on Receiving Party's use and disclosure of Information as set forth above shall not apply to any Information that Receiving Party can demonstrate:

(i) is wholly and independently developed by Receiving Party without the use of Information of Disclosing Party;

(ii) at the time of disclosure to Receiving Party, was either (A) in the public domain, or (B) known to Receiving Party;

(iii) is approved for release by written authorization of Disclosing Party; or

(iv) is disclosed in response to a valid order of a court or other governmental body in the India or any political subdivision thereof, but only to the extent of, and for the purposes set forth in, such order; provided, however, that Receiving Party shall first and immediately notify Disclosing Party in writing of the order and permit Disclosing Party to seek an appropriate protective order.

(c) Both parties further agree to exercise the same degree of care that it exercises to protect its own Confidential Information of a like nature from unauthorised disclosure, but in no event shall a less than reasonable degree of care be exercised by either party.

2. Designation.

(a) Information shall be deemed confidential and proprietary and subject to the restrictions of this Agreement if, when provided in:

(i) written or other tangible form, such Information is clearly marked as proprietary or confidential when disclosed to Receiving Party; or

(ii) oral or other intangible form, such Information is identified as confidential or proprietary at the time of disclosure.

3. Cooperation. Receiving Party will immediately give notice to Disclosing Party of any unauthorized use or disclosure of the Information of Disclosing Party.

4. Ownership of Information. All Information remains the property of Disclosing Party and no license or other rights to such Information is granted or implied hereby. Notwithstanding the foregoing, Disclosing Party understands that Receiving Party may currently or in the future be developing information internally, or receiving information from other parties that may be similar to Information of the Disclosing Party. Notwithstanding anything to the contrary, nothing in this Agreement will be construed as a representation or inference that Receiving Party will not develop products, or have products developed for it, that, without violation of this Agreement, compete with the products or systems contemplated by Disclosing Party's Information.

5. No Obligation. Neither this Agreement nor the disclosure or receipt of Information hereunder shall be construed as creating any obligation of a Party to furnish Information to the other Party or to enter into any agreement, venture or relationship with the other Party.

6. Return or Destruction of Information.

(a) All Information shall remain the sole property of Disclosing Party and all materials containing any such Information (including all copies made by Receiving Party) and its Representatives shall be returned or destroyed by Receiving Party immediately upon the earlier of:

(i) termination of this Agreement;

(ii) expiration of this Agreement; or

(iii) Receiving Party's determination that it no longer has a need for such Information.

(b) Upon request of Disclosing Party, Receiving Party shall certify in writing that all Information received by Receiving Party (including all copies thereof) and all materials containing such Information (including all copies thereof) have been destroyed.

7. **Injunctive Relief:** Without prejudice to any other rights or remedies that a party may have, each party acknowledges and agrees that damages alone may not be an adequate remedy for any breach of this Agreement, and that a party shall be entitled to seek the remedies of injunction, specific performance and/or any other equitable relief for any threatened or actual breach of this Agreement

8. **Notice.**

(a) Any notice required or permitted by this Agreement shall be in writing and shall be delivered as follows, with notice deemed given as indicated:

- (i) by personal delivery, when delivered personally;
- (ii) by overnight courier, upon written verification of receipt; or
- (iii) by certified or registered mail with return receipt requested, upon verification of receipt.

(b) Notice shall be sent to the following addresses or such other address as either Party specifies in writing.

RailTel Corporation of India limited:

Attn: _____
Address: _____
Phone: _____
Email: _____

_____:

Attn: _____
Address: _____
Phone: _____
Email: _____

9. **Term, Termination and Survivability.**

(a) Unless terminated earlier in accordance with the provisions of this agreement, this Agreement shall be in full force and effect for a period of _____ years from the effective date hereof.

(b) Each party reserves the right in its sole and absolute discretion to terminate this Agreement by giving the other party not less than 30 days' written notice of such termination.

(c) Notwithstanding the foregoing clause 9(a) and 9 (b) , Receiving Party agrees that its obligations, shall:

- (i) In respect to Information provided to it during the Term of this agreement, shall survive and continue even after the expiry of the term or termination of this agreement; and
- (ii) not apply to any materials or information disclosed to it thereafter.

10. Governing Law and Jurisdiction. This Agreement shall be governed in all respects solely and exclusively by the laws of India without regard to its conflicts of law principles. The Parties hereto expressly consent and submit themselves to the jurisdiction of the courts of New Delhi.

11. Counterparts. This agreement is executed in duplicate, each of which shall be deemed to be the original and both when taken together shall be deemed to form a single agreement

12. No Definitive Transaction. The Parties hereto understand and agree that no contract or agreement with respect to any aspect of a potential transaction between the Parties shall be deemed to exist unless and until a definitive written agreement providing for such aspect of the transaction has been executed by a duly authorized representative of each Party and duly delivered to the other Party (a "**Final Agreement**"), and the Parties hereby waive, in advance, any claims in connection with a possible transaction unless and until the Parties have entered into a Final Agreement.

13. Settlement of Disputes:

- a) The parties shall, at the first instance, attempt to resolve through good faith negotiation and consultation, any difference, conflict or question arising between the parties hereto relating to or concerning or arising out of or in connection with this agreement, and such negotiation or consultation shall begin promptly after a Party has delivered to another Party a written request for such consultation.
- b) In the event of any dispute, difference, conflict or question arising between the parties hereto, relating to or concerning or arising out of or in connection with this agreement, is not settled through good faith negotiation or consultation, the same shall be referred to arbitration by a sole arbitrator.
- c) The sole arbitrator shall be appointed by CMD/RailTel out of the panel of independent arbitrators maintained by RailTel, having expertise in their respective domains. The seat and the venue of arbitration shall be New Delhi. The arbitration proceedings shall be in accordance with the provision of the Arbitration and Conciliation Act 1996 and any other statutory amendments or modifications thereof. The decision of arbitrator shall be final and binding on both parties. The arbitration proceedings shall be conducted in English Language. The fees and cost of arbitration shall be borne equally between the parties.

14. CONFIDENTIALITY OF NEGOTIATIONS

Without the Disclosing Party's prior written consent, the Receiving Party shall not disclose to any Person who is not a Representative of the Receiving Party the fact that Confidential Information has been made available to the Receiving Party or that it has inspected any portion of the Confidential Information or that discussions between the Parties may be taking place.

15. REPRESENTATION

The Receiving Party acknowledges that the Disclosing Party makes no representation or warranty as to the accuracy or completeness of any of the Confidential Information furnished by or on its behalf. Nothing in this clause operates to limit or exclude any liability for fraudulent misrepresentation.

16. ASSIGNMENT

Neither this Agreement nor any of the rights, interests or obligations under this Agreement shall be assigned, in whole or in part, by operation of law or otherwise by any of the Parties without the prior written consent of each of the other Parties. Any purported assignment without such consent shall be void. Subject to the preceding sentences, this Agreement will be binding upon, inure to the benefit of, and be enforceable by, the Parties and their respective successors and assigns.

17. EMPLOYEES AND OTHERS

Each Party shall advise its Representatives, contractors, subcontractors and licensees, and shall require its Affiliates to advise their Representatives, contractors, subcontractors and licensees, of the obligations of confidentiality and non-use under this Agreement, and shall be responsible for ensuring compliance by its and its Affiliates' Representatives, contractors, subcontractors and licensees with such obligations. In addition, each Party shall require all persons and entities who are not employees of a Party and who are provided access to the Confidential Information, to execute confidentiality or non-disclosure agreements containing provisions no less stringent than those set forth in this Agreement. Each Party shall promptly notify the other Party in writing upon learning of any unauthorized disclosure or use of the Confidential Information by such persons or entities.

18. NO LICENSE

Nothing in this Agreement is intended to grant any rights to under any patent, copyright, or other intellectual property right of the Disclosing Party, nor will this Agreement grant the Receiving Party any rights in or to the Confidential Information of the Disclosing Party, except as expressly set forth in this Agreement.

19. RELATIONSHIP BETWEEN PARTIES:

Nothing in this Agreement or in any matter or any arrangement contemplated by it is intended to constitute a partnership, association, joint venture, fiduciary relationship or other cooperative entity between the parties for any purpose whatsoever. Neither party has any power or authority to bind the other party or impose any obligations on it and neither party shall purport to do so or hold itself out as capable of doing so.

20: UNPULISHED PRICE SENSITIVE INFORMATION (UPSI)

_____ agrees and acknowledges that _____, its Partners, employees, representatives etc., by virtue of being associated with RailTel and being in frequent communication with RailTel and its employees, shall be deemed to be "Connected Persons" within the meaning of SEBI (Prohibition of Insider Trading) Regulations, 2015 and shall be bound by the said regulations while dealing with any confidential and/ or price sensitive information of RailTel. _____ shall always and at all times comply with the obligations and restrictions contained in the said regulations. In terms of the said regulations, _____ shall abide by the restriction on communication, providing or allowing access to any Unpublished Price Sensitive Information (UPSI) relating to RailTel as well as restriction on trading of its stock while holding such Unpublished Price Sensitive Information relating to RailTel

21 MISCELLANEOUS. This Agreement constitutes the entire understanding among the Parties as to the Information and supersedes all prior discussions between them relating thereto. No amendment or modification of this Agreement shall be valid or binding on the Parties unless made in writing and signed on behalf of each Party by its authorized representative. The failure or delay of any Party to enforce at any time any provision of this Agreement shall not constitute a waiver of such Party's right thereafter to enforce each and every provision of this Agreement. In the event that any of the terms, conditions or provisions of this Agreement are held to be illegal, unenforceable or invalid by any court of competent jurisdiction, the remaining terms, conditions or provisions hereof shall remain in full force and effect. The rights, remedies and obligations set forth herein are in addition to, and not in substitution of, any rights, remedies or obligations which may be granted or imposed under law or in equity.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the date set forth above.

_____:

RailTel Corporation of India Limited:

By_____

— Name:
Title:

By_____

— Name:
Title:

Witnesses

Annexure-6: EMD (as PBG) Format

BG NO :
ISSUANCE DATE : DD-MM-YYYY
BG AMOUNT : Rs xxxxxxxx /-
EXPIRY DATE : DD-MM-YYYY
CLAIM EXPIRY DATE : DD-MM-YYYY

In consideration of the **RailTel Corporation of India Limited**, (CIN: L64202DL2000GOI107905) having its registered office at Plate-A, 6th Floor, Office Block Tower-2, East Kidwai Nagar, New Delhi - 110023 (Here in after called RailTel) having agreed to exempt **Partner Name (CIN:-)** having its registered office at **Partner's address** (Here in after called "the said Contractor(s)") from the demand, under the terms and conditions of **EOI NO.** made between **RailTel Corporation of India Limited** and **Partner Name** for (here in after called "the said Agreement") of security deposit for the due fulfilment by the said contractor (s) of the terms and conditions contained in the said Agreement, or production of a Bank Guarantee for **Rs. /- (In Words)**.

We, **Bank Name** a banking company incorporated under the Companies Act, 1956 and carrying on Banking Business under The Banking Regulation Act, 1949 and having its Registered Office at **Bank's Address** and its Central office at **Bank's Corporate Office Address** (indicate the name of the Bank) here in after referred to as "the Bank") at the request of **Partner's Name** Contractor(s) do hereby undertake to pay the **RailTel** an amount not exceeding **Rs /- (In Words)** .. against any loss or damage caused to or suffered or would be caused to or suffered by the **RailTel** by reason of any breach by said Contractor(s) of any of the terms or conditions contained in the said Agreement.

We, **Bank Name** do here by undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the **RailTel** stating that the amount as claimed is due by way of loss or damage caused to or would be caused to or suffered by the **RailTel** by reason of breach by the said Contractor(s) of any terms and conditions contained in the said Agreement or by the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding **Rs. /- (In Words)**.

We, **Bank's Name** undertake to pay to the **RailTel** any money so demanded not with standing any dispute or disputes raised by the Contractor(s) / Supplier(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal. The payment so made by us under this Bond shall be a valid discharge of our liability for payment there under and the Contractor(s)/ Supplier(s) shall have no claim against us for making such payment.

We, **Bank's Name** further agree that the Guarantee here in contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the **RailTel** under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till **RailTel** certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharge this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the **DD-MM-YYYY(Claim Expiry Date.)** We shall be discharged from all liability under this Guarantee thereafter.

We, **Bank's Name** further agree with the **RailTel** that the **RailTel** shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time or to postpone for any time or from time to time any of the powers exercisable by the **RailTel** against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of **RailTel** or any indulgence by the **RailTel** to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

This Guarantee will not be discharged due to the change in the Constitution of the bank or the Contractor(s) Supplier(s).

Bank's Name lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the **RaiITel** in writing.

Date : DD-MM-YYYY

Place :

Annexure-7: Price Bid Format (BOQ) (Financial Bid) with password protected PDF.

S. No.	Item Description	Rate Per Unit	GST	Total Price per Unit Including GST
		A	B	C=A+B
1	Integrated Learning Material for Class 6-8, with associated software (LMS, Assessment Platform, Project Tracking software) and Training Manuals			
Total Price				

Note: -

- All the above price would be in INR only.
- The bidder has to compulsorily quote for all items mentioned in the Commercial-bid Tables. In case bidder fails to quote for any of this stage, the bid would be summarily rejected.
- The bid price should include all taxes and levies.
- Any conditional bid would be rejected.

Appendix-A

Integrated Learning Material for Classes 6-8

(One kit per school)

I. Integrated Learning Material Kit Specifications: -

Sl.No	Component Name	Qty per School
1	Solution 1: Robotics and Mechanics	2
2	Solution 2: Tinkering with electronics Tiles & Circuits (Type 1)	2
3	Solution 3: Art and Electronic	2
4	Solution 4: Tinkering with 3D Model	2
5	Solution 5: Tinkering with electronics Tiles & Circuits (Type 2)	2
6	Solution 6: STEM Electronics Kit	2
7	Solution 7: Robotics and Design Thinking (Type 1)	2
8	Solution 8: Robotics and Design Thinking (Type 2)	2
9	Solution 9: Project Based Learning	2
10	Solution 10: LMS License per school (Nos)	1

Specifications –

SR.NO.	CATEGORY	NAME	SPECIFICATION	Actual QTY per Package
Solution 1 : Robotics and Mechanics				
1	Robotics and Mechanics	Power Distribution	Size of 62.9mm x 62.5mm x 20mm motor control should have 4 core cable RJ11 connector of 2 motor and 1 RJ45 data connector. The PCB should have plastic base which have multiple holes for easy attachment of other parts.	1

2	Robotics and Mechanics	Remote	Size of 98.4mm x 67.5mm x 24.7mm motor control remote should have RJ45 data connector and 1 female dc jack connector. The PCB should have plastic transparent costume which have 2 DPDT switch and led for indicator.	1
3	Robotics and Mechanics	Medium Metal Body Plate	Size of 138.6mm x 61.9mm x 1mm metal plate should have multiple holes with minimum 3mm diameter for easy attachment of parts and modules. It should have been color coded.	2
4	Robotics and Mechanics	Small L shape Metal caster strip	Size of 62.5mm x 29.5mm x 1 mm metal strip Multipurpose connectors having multiple holes with minimum 3mm diameter. It should have been color coded.	1
5	Robotics and Mechanics	Small Metal Body Plate	Size of 63.4mm x 62.2mm x 1mm metal plate should have multiple holes with minimum 3mm diameter for easy attachment of parts and modules. It should have been color coded.	2
6	Robotics and Mechanics	Metal bar	Size of 125mm x 13mm x 1mm metal bar Multipurpose connectors having multiple holes with minimum 3mm diameter. It should have been color coded.	4
7	Robotics and Mechanics	Small L shape metal bar	Size of 127.5mm x 27mm x 13.5mm metal bar Multipurpose connectors having multiple holes with minimum 3mm diameter. It should have been color coded.	4
8	Robotics and Mechanics	Big L shape metal bar	Size of 237mm x 25mm x 15mm metal bar Multipurpose connectors having multiple holes with minimum 3mm diameter. It should have been color coded.	2
9	Robotics and Mechanics	Small C shape metal bar	Size of 125mm x 27mm x 13.5mm metal bar Multipurpose connectors having multiple holes with minimum 3mm diameter. It should have been color coded.	2
10	Robotics and Mechanics	Big C shape metal bar	Size of 237mm x 28mm x 13.5mm metal bar Multipurpose connectors having multiple holes with minimum	2

			3mm diameter. It should have been color coded.	
11	Robotics and Mechanics	Small Shaft	Size of 76.5mm x 3mm Metal length compatible with provided rotary motion	4
12	Robotics and Mechanics	Spur Gear	Size of 65mm diameter and 6.5mm thickness plastic spur gear 60 teeth compatible with provided shaft	2
13	Robotics and Mechanics	Spur Gear	Size of 37mm diameter and 5.5mm thickness plastic spur gear 35 teeth compatible with provided shaft	4
14	Robotics and Mechanics	Wheel with Rubber grip	Plastic wheel size of 84mm diameter and 13.5mm thickness compatible with provided shaft, Rubber grip for the provided wheel.	4
15	Robotics and Mechanics	Caster wheel	Caster wheel makes the robot to walk or move at a more flexible and comfortable way compatible with provided caster strip.	1
16	Robotics and Mechanics	Spanner	Metal spanner with both ends shaped for turning small metal nuts and bolts.	1
17	Robotics and Mechanics	Screwdriver	A tool that you use for turning screws.	1
18	Robotics and Mechanics	Power Adapter	DC Power Adapter With 12V,2A	1
19	Robotics and Mechanics	RJ45 Cable	6 core wire RJ 45 cable for direction control	1
20	Robotics and Mechanics	RJ11 cable	4 core wire RJ11 cable for motor	2
21	Robotics and Mechanics	DC Motor with RJ11 connector	Size of 42mm x 22.5mm x 60.5mm DC Motor L shape, plastic module blocks compatible with provided parts. It should have connected via RJ11 connector.	2

22	Robotics and Mechanics	Nuts and Bolts Box	It should have contained nuts, bolts, spacer, axel lock, shaft locker, hook, motor shaft, caster nuts & bolts and other equipment.	1
Solution 2:Tinkering with electronics Tiles & Circuits : Type 1				
23	Tinkering with electronics Tiles & Circuits	POWER Distribution Module	Power distribution module should distribute signal/ power to 3 other modules. It should have a minimum of 3 Input and 3 output ports. The PCB board should be size of 59.8mm x 47.8mm with color coded like plastic costumes with open for connection. Power modules should be modular in such a way that all functional components can be connected via JST connector. It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.	2
24	Tinkering with electronics Tiles & Circuits	Red LED Module	Size of 37.8mm x 27.9mm LED module with JST connector for input and output side compatible with Brain module. The PCB board should be covered plastic costumes with open- ended connection and costume should be color coded so that students can recognize it as an I/O module. It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.	1

25	Tinkering with electronics Tiles & Circuits	Green LED Module	Size of 37.8mm x 27.9mm LED module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes with open- ended connection and costume should have color coded so that students can recognize it as an I/O module. It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.	1
26	Tinkering with electronics Tiles & Circuits	Blue LED Module	Size of 37.8mm x 27.9mm LED module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes with open- ended connection and costume should have color coded so that students can recognize it as an I/O module. It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.	1
27	Tinkering with electronics Tiles & Circuits	White LED Module	Size of 37.8mm x 27.9mm LED module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes open- ended connection and costume should have color coded so that students can recognize it as an output block. It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.	1

28	Tinkering with electronics Tiles & Circuits	Yellow LED Module	Size of 37.8mm x 27.9mm LED module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes open-ended connection and costume should have color coded so that students can recognize it as an I/O module. It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.	1
29	Tinkering with electronics Tiles & Circuits	Buzzer Module	Size of 37.8mm x 27.9mm Buzzer module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes open-ended connection and costume should have color coded so that students can recognize it as an I/O module. It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.	1
30	Tinkering with electronics Tiles & Circuits	DC Motor Module	Size of 37.8mm x 27.9mm DC Motor module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes open-ended connection and costume should have color coded so that students can recognize it as an I/O module. It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.	2

31	Tinkering with electronics Tiles & Circuits	Vibro Motor Module	<p>Size of 37.8mm x 27.9mm Vibro motor module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes open-ended connection and costume should have color coded so that students can recognize it as an I/O module.</p> <p>It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.</p>	1
32	Tinkering with electronics Tiles & Circuits	Dual light Module	<p>Size of 37.8mm x 27.9mm LED module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes open-ended connection and costume should have color coded so that students can recognize it as an I/O module.</p> <p>It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.</p>	1
33	Tinkering with electronics Tiles & Circuits	Laser Module	<p>Size of 37.8mm x 27.9mm Laser module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes open-ended connection and costume should have color coded so that students can recognize it as an I/O module.</p> <p>It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.</p>	1

34	Tinkering with electronics Tiles & Circuits	Potentiometer Module	<p>Size of 37.8mm x 27.9mm POT module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes with open- ended connection and costume should have color coded so that students can recognize it as an I/O module.</p> <p>It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.</p>	1
35	Tinkering with electronics Tiles & Circuits	Push Button Module	<p>Size of 37.8mm x 27.9mm Push Button block with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes with open-ended connection and costume should have color coded so that students can recognize it as an I/O module.</p> <p>It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.</p>	2
36	Tinkering with electronics Tiles & Circuits	On/Off Switch Module	<p>Size of 37.8mm x 27.9mm Switch module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes with open-ended connection and costume should have color coded so that students can recognize it as an I/O module.</p> <p>It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.</p>	

37	Tinkering with electronics Tiles & Circuits	LDR Module	<p>Size of 37.8mm x 27.9mm LDR sensor module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes with open-ended connection and costume should have color coded so that students can recognize it as an I/O module.</p> <p>It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.</p>	2
38	Tinkering with electronics Tiles & Circuits	IR Sensor Moule	<p>Size of 37.8mm x 27.9mm IR sensor module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes with open-ended connection and costume should have color coded so that students can recognize it as an I/O module.</p> <p>It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.</p>	1
39	Tinkering with electronics Tiles & Circuits	NOT Gate Module	<p>Size of 37.8mm x 27.9mm NOT Gate module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes with open-ended connection and costume should have color coded so that students can recognize it as an I/O module.</p> <p>It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.</p>	1

40	Tinkering with electronics Tiles & Circuits	OR Gate Module	<p>Size of 37.8mm x 27.9mm OR Gate module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes with open-ended connection and costume should have color coded so that students can recognize it as an I/O module.</p> <p>It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc..</p>	1
41	Tinkering with electronics Tiles & Circuits	AND Gate Module	<p>Size of 37.8mm x 27.9mm NOT Gate module with JST connector for input and output side compatible with brain module. The PCB board should be covered plastic costumes with open-ended connection and costume should have color coded so that students can recognize it as an I/O module.</p> <p>It should be compatible with utility-based MDF/Cardboard structures to construct Real word projects Smart home, Helibot, Guitar, Art Machine, guest notifier Etc.</p>	1
42	Tinkering with electronics Tiles & Circuits	JST Wires	3 Pin and 4 pin JST wire connectors compatible with Brain Module and I/O block.	5
43	Tinkering with electronics Tiles & Circuits	Power cable	USB 2.0 A to USB 2.0 Mini B	1
44	Tinkering with electronics Tiles & Circuits	Power Bank	2200 mAh, 5v output	1
45	Tinkering with electronics Tiles & Circuits	Popsicle sticks	Natural Wood Popsicle Sticks, Straight and Smooth. Minimum length of 80mm and 2 mm thickness	1

46	Tinkering with electronics Tiles & Circuits	Straw	Plastic straw minimum length of 200 mm	5
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Solution 3 : Art and Electronic

47	Art and Electronic	Paper electronic circuit kit	<p>A Paper Circuit is a low-voltage electronic circuit that is created on paper. It should be in the shape of a book that has at least 25 activities with a hardbound cover size of 300mm x 210mm and 14mm thickness. The book provided the basic theory of circuit and electronics components on a minimum of 150 GSM glossy paper.</p> <p>Its activity should be based on any character/story/card with a paper size of a minimum of 110 GSM, so that students can color it and the circuit diagram should be provided with directions on the back of the characters/cards.</p> <p>The activity paper can be pulled apart. It should be length of 4 meter and 8 mm thickness of copper tape, minimum length of 15 meter with transparent color cello tape, minimum length of 80mm and 8 assorted shades.</p> <p>The kit should have different color of led like red, green, yellow, blue.</p> <p>The kit should be a button cell shaped as a cylinder typically 5 to 25 mm in diameter with Corrosion-resistant steel, Re-usable binder clip minimum size of 15 mm and 5 mm buzzer with positive and negative terminal.</p>	1
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Solution 4 :Tinkering with 3D Model

48	Tinkering with 3D Model	3D pen with AR	<p>The kit should offer the opportunity to explore 3D designing and modeling AR-enabled allows students to visualize and create 3D models. The kit includes a 3D pen with drawing sheet with built in display unit, Filament-PLA, Anti- clog nozzle, powered by 12VDC-2A adaptor, speed controllable, nozzle diameter- 0.7mm (about 0.03 in).</p> <p>Kit should be on 2D and 3D shapes combinations and create models like pyramids, windmills, Christmas trees, Biology cell, solar system and Table lamp.</p> <p>Kit should be advanced AR (Augmented reality) feature with Mobile App.</p>	1
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Solution 5: Tinkering with electronics Tiles & Circuits : Type 2

49	Tinkering with electronics Tiles & Circuits	Circuit Board	It should be size of 270mm x 210mm x 3.2mm circuit boards and having 8 x 6 magnetic dots connectors on board that are used to construct electronic circuits. To form a circuit, all modules can be easily connected horizontally or vertically on dots.	1
50	Tinkering with electronics Tiles & Circuits	Jumper-1	2 magnetic connectors compatible with the circuit board and other provided modules.	1
51	Tinkering with electronics Tiles & Circuits	Jumper-2	Size of 82.4mm x 21.6mm x 8.2 jumper module with 2 magnetic connector compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded so that students can recognize it.	8

52	Tinkering with electronics Tiles & Circuits	Jumper-3	Size of 141.9mm x 21.6mm x 8.2 jumper module with 3 magnetic connector compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded so that students can recognize it.	4
53	Tinkering with electronics Tiles & Circuits	Jumper-4	Size of 205mm x 21.6mm x 8.2mm jumper module with 4 magnetic connector compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded so that students can recognize it.	2
54	Tinkering with electronics Tiles & Circuits	Adjustable Module	Size of 82.4mm x 21.6mm x 8.2mm adjustable module to connect 2 extra components apart from the already connected with 2 magnetic connectors compatible with the circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded and mention the name, so that students can recognize it.	2
55	Tinkering with electronics Tiles & Circuits	Conductance	Size of 82.4mm x 21.6mm x 8.2mm conductance module to check the conductivity of different materials with 2 magnetic connectors compatible with the circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded and mention the name, so that students can recognize it.	4
56	Tinkering with electronics Tiles & Circuits	Battery Socket	2 magnetic connectors with 9v battery cap compatible with the circuit board and other modules provided.	1
57	Tinkering with electronics	USB Cable	2 magnetic connectors with USB compatible with the circuit board and other modules provided.	1

	Tiles & Circuits			
58	Tinkering with electronics Tiles & Circuits	Fan	Minimum diameter of 60.5mm toy fan compatible with motor	1
59	Tinkering with electronics Tiles & Circuits	9V Alkaline Battery	DC 9V alkaline battery	1
60	Tinkering with electronics Tiles & Circuits	Buzzer Module	Size of 82.4mm x 21.6mm x 8.2mm buzzer module with 2 magnetic connector compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded and mention the name, so that students can recognize it	1
61	Tinkering with electronics Tiles & Circuits	Capacitor Module	Size of 82.4mm x 21.6mm x 8.2mm capacitor module with 2 magnetic connectors compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded and mention the name, so that students can recognize it	1
62	Tinkering with electronics Tiles & Circuits	Diode Module	Size of 82.4mm x 21.6mm x 8.2mm diode module with 2 magnetic connectors compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded and mention the name, so that students can recognize it	1
63	Tinkering with electronics Tiles & Circuits	Infrared Led Module	Size of 82.4mm x 21.6mm x 8.2mm Infrared Led module with 2 magnetic connectors compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded	1

			and mention the name, so that students can recognize it	
64	Tinkering with electronics Tiles & Circuits	LDR Module	Size of 82.4mm x 21.6mm x 8.2mm LDR module with 2 magnetic connectors compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded and mention the name, so that students can recognize it.	1
65	Tinkering with electronics Tiles & Circuits	LED Module	Size of 82.4mm x 21.6mm x 8.2mm LED module with 2 magnetic connectors compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded and mention the name, so that students can recognize it.	1
66	Tinkering with electronics Tiles & Circuits	Motor Module	Size of 82.4mm x 21.6mm x 8.2mm motor module with 2 magnetic connectors compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded and mention the name, so that students can recognize it.	1
67	Tinkering with electronics Tiles & Circuits	POT Module	Size of 82.4mm x 21.6mm x 8.2mm potentiometer module with 2 magnetic connectors compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded and mention the name, so that students can recognize it.	1

68	Tinkering with electronics Tiles & Circuits	Resistor Module	Size of 82.4mm x 21.6mm x 8.2mm resistor module with 2 magnetic connectors compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded and mention the name, so that students can recognize it.	1
69	Tinkering with electronics Tiles & Circuits	Switch Module	Size of 82.4mm x 21.6mm x 8.2mm switch module with 2 magnetic connectors compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded and mention the name, so that students can recognize it.	1
70	Tinkering with electronics Tiles & Circuits	Switch(on-off) Module	Size of 82.4mm x 21.6mm x 8.2mm on-off switch module with 2 magnetic connectors compatible with circuit board and other provided modules. The PCB board must have handle protection like rubber/plastic costumes and costumes should have color coded and mention the name, so that students can recognize it.	1
Solution 6 : STEM Electronics Kit				
71	STEM Electronics Kit	Plugboard	Size of 170mm x 62.74mm x 8.5mm reusable for fast build a prototype of an electronic circuit should be accept transistors, diodes, LEDS, resistors, capacitors and virtually all types of components. It should be adhesive sheet on the back side of the board with 840 Tie Points, fit for jumper wire of 0.8mm diameter standard and 2.54mm hole spacing and should be packed in a separate plastic box.	1
72	STEM Electronics Kit	Red Led	Size of 5mm red led with positive and negative terminal should be packed in a separate plastic box.	5
73	STEM Electronics Kit	Voltage regulator 7805	Linear Voltage Regulator 7805 should be packed in a separate plastic box.	1

74	STEM Electronics Kit	On-Off VTR Switches	Size of 8.4mm x 8.4mm, 6 Pin DPDT Self- Locking VTR on/off Push Button should be packed in a separate plastic box.	8
75	STEM Electronics Kit	Green Led	Size of 5mm green led with positive and negative terminal should be packed in a separate plastic box.	5
76	STEM Electronics Kit	Blue Led	Size of 5mm blue led with positive and negative terminal should be packed in a separate plastic box.	5
77	STEM Electronics Kit	RGB Led	Size of 10mm tricolor 50-degree viewing angle common Anode led should be packed in a separate plastic box.	1
78	STEM Electronics Kit	Buzzer	Size of 10mm buzzer with positive and negative terminal should be packed in a separate plastic box.	1
79	STEM Electronics Kit	Resistors 220 Ohm	Size of 9mm x 3.2mm metal film resistor with two terminals, Tolerance: 5% should be packed in a separate plastic box.	5
80	STEM Electronics Kit	Resistors 330 Ohm	Size of 9mm x 3.2mm metal film resistor with two terminals, Tolerance: 5% should be packed in a separate plastic box.	5
81	STEM Electronics Kit	Resistors 470 Ohm	Size of 9mm x 3.2mm metal film resistor with two terminals, Tolerance: 5% should be packed in a separate plastic box.	5
82	STEM Electronics Kit	Resistors 3.3K	Size of 9mm x 3.2mm metal film resistor with two terminals, Tolerance: 5% should be packed in a separate plastic box.	5
83	STEM Electronics Kit	Resistors 100K	Size of 9mm x 3.2mm metal film resistor with two terminals, Tolerance: 5% should be packed in a separate plastic box.	5
84	STEM Electronics Kit	LDR Sensor	5mm/12mm Photosensitive LDR Light Sensor Module should be packed in a separate plastic box.	1
85	STEM Electronics Kit	IR Sensor Module	Detection distance 2-30 cm, Detection angle 30-40° should be packed in a separate plastic box.	2

86	STEM Electronics Kit	7 Segment Display Single Digit	Single-digit, common cathode/anode, LED- based, with decimal point option and individual segment control should be packed in a separate plastic box.	1
87	STEM Electronics Kit	Transistor BC547	NPN transistor should be packed in a separate plastic box.	3
88	STEM Electronics Kit	Gate IC SN74HC08N	4-channel, 2-input, 2V to 6V, 5.2 mA drive strength AND gate should be packed in a separate plastic box.	1
89	STEM Electronics Kit	Capacitor (100uf)	Electrolyte capacitor with two terminal, tolerance 5% should be packed in a separate plastic box.	1
90	STEM Electronics Kit	Potentiometer	Linear type with a single turn, Compact size, Value 0- 10K, Resistance Tolerance ± 10 should be packed in a separate plastic box.	1
91	STEM Electronics Kit	Male to Male Jumper	Open-source Male to Male wire for breadboard connection and sensor connection should be packed in a separate plastic box.	20
92	STEM Electronics Kit	Male to Female Jumper	Open-source Male to Female wire for breadboard connection and sensor connection should be packed in a separate plastic box.	3
93	STEM Electronics Kit	Toy Motor	Size of 27mm should have shaft Length of 8 mm and a shaft diameter of 2 mm. It should have an operating voltage of 3- 12V with a minimum of 150 RPM should be packed in a separate plastic box.	1
94	STEM Electronics Kit	Fan	High Quality 4 blade Fan fits On Small 3/6v Motors, Material should be PP & ABS Plastic with packed in a separate plastic box.	1
95	STEM Electronics Kit	9V Battery	Standard quality 9v battery should be packed in a separate plastic box.	2
96	STEM Electronics Kit	Battery Clips	Standard quality 9V Battery connector should be packed in a separate plastic box.	1

Solution 7 : Robotics and Design Thinking : Type 1

97	Robotics and Design Thinking	I Connector	Size of 49.2mm x 15mm x 4mm MDF cutout with a 9mm diameter hole at the center. It should have two arms vertically aligned with the center of a hole and in opposite directions. The edges should be smooth and compatible with straws or tubes.	8
98	Robotics and Design Thinking	Y Connector	Size of 45.2mm x 31.8mm x 4mm MDF cutout with a 9mm diameter hole at the center. It should have two arms at a 72-degree angle and one arm vertically aligned with the center and on the opposite side of the hole. The edges should be smooth and compatible with straws or tubes.	8
99	Robotics and Design Thinking	L Connector	Size of 32.1mm x 32.1mm x 4mm MDF cutout with a 9mm diameter hole at the center. It should have two arms at a 90-degree angle. The edges should be smooth and compatible with straws or tubes.	12
100	Robotics and Design Thinking	O Connector	Size of 15mm x 15mm x 4mm MDF cutout with an 8.5mm diameter hole at the center. The edges should be smooth and compatible with straws or tubes and other pieces.	16
101	Robotics and Design Thinking	X Connector	Size of 49.2mm x 49.2mm x 4mm MDF cutout with a 9mm diameter hole at the center. It should have four arms at a 90-degree angle from each other. The edges should be smooth and compatible with straws or tubes.	8
102	Robotics and Design Thinking	T Connector	Size of 49.2mm x 28.1mm x 4mm MDF cutout with a 9mm diameter hole at the center. It should have two arms that are horizontally aligned with the center of a hole and at a 90 - degree angle with the third arm. The edges should be smooth and compatible with straws or tubes.	8

103	Robotics and Design Thinking	1 LEG Connector	Size of 32.1mm x 15mm x 4mm MDF cutout with a 9mm diameter hole at the center. It should have one arm vertically aligned with the center of a hole. The edges should be smooth and compatible with straws or tubes.	16
104	Robotics and Design Thinking	3 LEG Connector	Size of 47.2mm x 32.1mm x 4mm MDF cutout with a 9mm diameter hole at the center. It should have one arm vertically aligned with the center of the hole and the rest of the two arms at a 72-degree angle from the first arm. The edges should be smooth and compatible with straws or tubes.	8
105	Robotics and Design Thinking	T LOCK Connector	Size of 18mm x 9mm x 4mm MDF cutout. It should have two arms that are horizontally aligned with the center of a hole and at a 90-degree angle with the third arm. The edges should be smooth and compatible with straws or tubes and O Piece.	16
106	Robotics and Design Thinking	Bottom Plate	Size of 100.7mm x 29.1mm x 4mm MDF cutout should be cut into H shape. It should be compatible with other parts.	1
107	Robotics and Design Thinking	Motor Arm	Size of 25mm x 20mm plastic should be into Z shape. One side should be connect with the motor and other side compatible with other parts.	4
108	Robotics and Design Thinking	Top Plate	Size of 30mm x 25mm x 20mm plastic should be into U shape. It should be holding the motor and compatible with bottom plate.	1
109	Robotics and Design Thinking	Straws	Size of 200mm length and 6 mm diameter plastic straw and it should be compatible with other parts.	100
110	Robotics and Design Thinking	Toy Motor with battery holder-a	Size of 60mm x 20mm x 20mm plastic geared dc motor such that it acts as a support and has provision for both side shaft, standard 3 to 12 V DC 150RPM compatible with wheel and other parts. It should be a 2 AA battery closed holder and a slide switch to control the motor.	1

111	Robotics and Design Thinking	Wheel	Size of 12mm width and 70mm diameter plastic wheel with rubber grip and it should be compatible with motor.	2
112	Robotics and Design Thinking	Battery	Standard AA Battery	2
113	Robotics and Design Thinking	Rubber band	Rubber band (Thin) - Standard, minimum having 3".	10
114	Robotics and Design Thinking	Scissor	Standard DIY craft scissor	1
115	Robotics and Design Thinking	Scale	Standard minimum 15cm length plastic scale.	1

Solution 8: Robotics and Design Thinking : Type 2

116	Robotics and Design Thinking	MDF Cutout A	Pack of 3 minimum 140x104x3mm, 112x114x3mm and 92x74x3mm MDF cutout which should include 35+ unique interlocking pieces like T Piece, Motor Arm Piece, Linker Piece for Rotating Legs, toy Motor-Battery Casing holder etc..One can make a battery-operated motorized Walking Dog model.	3
117	Robotics and Design Thinking	MDF Cutout B	Pack of 3 minimum 140x107x3mm, 82x72x3mm and 172x136x3mm MDF cutout which should include 35+ unique interlocking pieces such as hands, legs, robot face, toy Motor-Battery Casing holder etc... One can make a battery-operated motorized Walking Robo model.	3
118	Robotics and Design Thinking	MDF Cutout C	Pack of 3 minimum 156x154x3mm and 136x152x3mm MDF cutout which should include 30+ unique interlocking pieces such as wheels, linkers, hands, legs, cart, toy Motor-Battery Casing holder etc... One can make a battery-operated motorized Cart Pushing Robo model.	2

119	Robotics and Design Thinking	MDF Cutout D	Pack of minimum 188x114x3mm, 146x134x3mm and 134x102x3mm MDF cutout which should include 35+ unique interlocking pieces such as wings with living hinge mechanism, wheels, toy Motor-Battery Casing holder etc... One can make a battery-operated motorized Flying Dino Model.	3
120	Robotics and Design Thinking	MDF Cutout E	Pack of 3 minimum 142x164x3mm, 124x148x3mm and 163x104x3mm MDF cutout which should include 45+ unique interlocking pieces like 16 Teeth Gears, 12 Teeth Gears and 8 Teeth Gears particularly with toy Motor connection, T Piece, toy Motor-Battery Casing Holder, Legs etc... One can make a battery-operated motorized Walking Dino Model.	3
121	Robotics and Design Thinking	Wax	Candle wax	1
122	Robotics and Design Thinking	Rubber Band	Rubber band (Thin) - Standard, minimum having 3".	4
123	Robotics and Design Thinking	Cello Tape	Minimum length of 15 meter with transparent color cello tape.	1
124	Robotics and Design Thinking	Toy Motor-b	Minimum 60mm x 20mm x 20mm plastic geared dc motor such that it acts as a support and has provision for both side shaft, standard 3 to 12 V DC 150RPM compatible with wheel and other interlocking parts.	1
125	Robotics and Design Thinking	Battery Casing	Battery Holder 2 - Standard battery holder for two AA cell with two way slide switch with battery cover.	1
126	Robotics and Design Thinking	Battery	Standard AA battery	2
127	Robotics and Design Thinking	Small Scissors	Standard DIY craft scissor	1

Solution 9 : Project Based Learning

128	Project Equipment	Set of 5 Model real word project	Utility-based MDF/Cardboard structures to construct Real word projects like Smart home, Helibot, Guitar, Art Machine, guest notifier Etc. It should be compatible with Tinkering with electronics Tiles & Circuits	1
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- **Necessary Training and Video Manuals should be provided along with the kit**
- **Student should be able to make minimum number of 150 activities with the above packages.**
- **Videos for the activities need to be provided by the bidder.**

Solution 10 : SPECIFICATION OF LEARNING MANAGEMENT SOLUTION (LMS)

The LMS should be optimized for delivering and managing robotics-related educational content, ensuring an engaging and interactive learning experience.

1. User Management:

- Self and cohort enrollment capabilities.
- Comprehensive group, grouping, role management, and custom role creation features.

2. Course Features:

- Diverse assignment types which should be based on MCQ and drag drop- based questions, feedback mechanisms, surveys, and interactive forums.
- Attendance and leave tracking, online reservations for webinars and events.
- SCORM-compliant lessons, integration with popular platforms like YouTube, Google Drive, OneDrive, Dropbox.
- Video, PPT, PDF, Word support, and external embedding options tailored for robotics content.
- Chat and chatbot functionalities for interactive learning.

3. Reporting Capabilities:

- Detailed department and batch-wise reporting.
- Learning outcomes tracking, attendance, course and activity completion reports.
- Comprehensive assessment reports and quiz analytics.
- With the help of this reporting format teachers and parents should be informed about students progress about Robotics and their innovative mind set

4. Assessment Tools:

- If any external robotics exam paper needs to be uploaded then it should be uploaded very easily with minimal support.
- Safe Exam Browser compatibility for secure assessments.
- Support for all standard exam formats, ensuring robust assessment methods.

5. Additional Features:

- Efficient communication through mails, notifications, blogs, and alerts.

- Customizable UI/UX with a focus on robotics courses, featuring a custom frontend, course categorization, featured courses, add-to-cart options, ratings, forums, blogs, and support chat.

6. Database and Integration:

- SSO integration with existing databases.
- Essential database import and export functionalities.

II. SPECIFICATION OF ASSESSMENT PLATFORM

- i. An assessment platform for teachers to monitor the performance of the children.
- ii. Class teacher assesses the performance of students in the class and manually enter their marks in the application.
- iii. Complete yearly report card of every student should be visible to the teachers and principal.
- iv. School wise performance report should be visible to the department.

PS: Detailed requirements shall be given to the successful bidder before development. Bidder should have the experience of developing such application and show the same during technical evaluation.

III. SPECIFICATION OF PROJECT TRACKING SOFTWARE

This scope of work is for design & development of an Android based mobile application for tracking and tracing the path of batches of shipment from the headquarters/State Level to the various districts and across the complete value chain up until the school level. The below mentioned points summarize the requirement: -

1. Each batch shipment will be assigned a unique QR Code/Bar Code
2. Each batch will have certain fields assigned to it like date of dispatch, source/origin point, destination point, transit route with all interim locations tagged onto the same.
3. Provision shall be made for all transit points (like district, block, school etc.) to update the information contained in the database (like “received”, “dispatched”, “cancelled”, “delayed” etc.) by scanning the QR Code/Bar Code on the batch shipment. This updation shall be made upon receipt and dispatch of shipment respectively with an option to enter remarks (to input certain important information pertaining to the state of receipt, dispatch, delay etc.)
4. Provision shall be made to track the shipment by all concerned stakeholders like “Dept. HQRS”, “District Level Officer”, “Block Level Officer” and “School” to track the journey of the batch shipment through their respective logins in the mobile application. A graphical seek-bar on the UI can be provided pictorially depicting (representational) the complete route highlighting the areas covered/remaining towards the final destination.
5. Provision will be made for the administrator to manually update the status of the shipment in case any stakeholder in the value chain is unable to update the information due to technical glitches.

6. Provision for the administrator to define the different masters like “Shipment Status”, “Shipment Size/Category”, “locations” (for entering “Place of Origin” & “Place of Delivery”), mechanism for defining the transit route, estimated time of delivery etc.
7. Provision for the administrator to define roles in the system with access rights & privileges and assigning them to different users.
8. Provision for the administrator to define the various users or optionally, users can download the application from the Android play-store and register themselves using some authentication mechanism.
9. Provision for the administrator to view/download/print certain pre-defined reports like no. of shipments delivered in a particular time-period, no. of shipments pending to be delivered, no. of shipments which have overrun their estimated time of delivery etc.
10. Provision for sending different application-based alerts and notifications to all stakeholders upon triggering of key events like “package received”, “package dispatched” etc.

PS: Detailed requirements shall be given to the successful bidder before development. Bidder should have the experience of developing such application and show the same during technical evaluation.