

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

“Integrated Science & Math Lab at Government Secondary/Senior Secondary Schools”

EOI No: RailTel/EOI/COMKTG/EB/ISM Lab/2024-25/01 dated 02nd December 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/ISM Lab/2024-25/01 dated 02nd December

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 “**Integrated Science & Math Lab at Government Secondary/Senior Secondary Schools**”.

The details are as under:

1	Last date for submission of Technical Packet against EOIs by bidders	05 th December 2024 at 11:00 Hours
2	Opening of Technical Bid of EOIs	05 th December 2024 at 11:15 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 (To be submitted along with EOI)	Rs. 10,00,000/- (Ten Lakhs Only) to be submitted along with EOI (To be submitted via online bank transfer only). RailTel Bank Details: Union Bank of India, Account No. 340601010050446, IFSC Code - UBIN0534064. Partner needs to share the online payment transfer details like UTR No. date and Bank along with the proposal.
6	Balance EMD (To be submitted by the shortlisted Business Associate to be intimated later)	Balance EMD for Rs. 4,90,00,000/- (Rupees Four Crores Ninety Lakhs only). To be submitted by shortlisted Business Associate, in the form of BG or online transfer before RailTel submit its bid to the end customer. i) In Case of Balance EMD is submitted in the form of Bank Guarantee : The validity : Bid validity period (180 days) + 2 months and claim period of 1 year from BG expiry period.

		(SFMS report guidelines: - BG advising message – IFN 760COV/ IFN 767COV via SFMS • To mandatory 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.) ii) In case Balance EMD is submitted through Online Transfer, the same may be transfered in the following Bank Account. RailTel Bank Details: Union Bank of India, Account No. 340601010050446, IFSC Code - UBIN0534064. Partner needs to share the online payment transfer details like UTR No. date and Bank along with the proposal.
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Eligible Business Associates are required to direct all communications related to this Invitation for EOI document, through the following Nominated Point of Contact persons:

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

Contact: Rahul Agarwal
Designation: GM/Finance
Email: carahul@railtelindia.com

Contact: Himanshu
Designation: GM/TP
Email: himanshu@railtelindia.com

Note:

1. Empaneled partners are required to submit a soft copy of the technical packet through an e-mail at eoiebco@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 documents must be submitted with **proper indexing** and **page no.**
4. This is an **exclusive pre-bid partnership arrangement with an empaneled business associate of RailTel for participating in the end customer RFP.** The 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 the 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:

Core Services	Value Added Services	Emerging Services
• MPLS VPN • Internet Leased Line • Transport Services • Dark Fibre • Tower Colocation	• Tele-Presence as a Services (HD Video Conferencing) • RailWire (Broadband Services) • Data Centre Services • Turnkey Solutions in ICT • Digital Service (Aadhaar based solution, Railwire Saathi, Online Tendering, WiFi as a Service, Predictive maintenance etc)	• Station Wi-Fi • Content on Demand (COD) • Video Surveillance Services • Railway Display Network (RDN) • High Speed Mobile Corridor

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 granularity 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 granularity from E1, DS-3, STM-1 & above
- MPLS VPN: Layer-2 & Layer-3 VPN available for granularity from 2 Mbps & above
- Dedicated Internet Bandwidth: Experience the "Always ON" internet connectivity at your fingertips in granularity 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 granularity 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 **“Integrated Science & Math Lab at Government Secondary/Senior Secondary Schools” with end customer(BEPC) RFP ref. no. BEPC/ISM Lab/2024-25/4328, dated 16.11.2024.**

RailTel invites EOIs from RailTel's Empaneled Partners/Business Associates for the selection of suitable partner for participating in below 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 **“Integrated Science & Math Lab at Government Secondary/Senior Secondary Schools”**.

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

- I. Science Equipment
- II. Mathematical Equipment
- III. STEM Equipment
- IV. Furniture and Storage
- V. Learning Management Software
- VI. QR based Supply Chain Monitoring Software
- VII. The Detailed specification 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 the overall proposal becomes the 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 before 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 180 days from the last date of submission of bids to the 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 favor of "RailTel Corporation of India Limited" along with the offer. This will be called **EOI EMD**.

4.6.2 Offers not accompanied by 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 Balance Earnest Money Deposit (EMD) for the bid to RailTel for the amount as mentioned in this EOI Notice. The selected Business Associate shall have to submit balance EMD amount in proportion to the quoted value/scope of work to RailTel before submission of bid to end customer.

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 the validity period.

4.6.6.2 In case of non-submission of SD/PBG (as per clause no. 4.7) leads to forfeiture of EOI EMD, EMD (Balance 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 the 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 be 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 5 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 225 Cr for last three years (FY 21-22, 22-23, 23-24).	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 (21-22, 22-23, 23-24).	Positive Net Worth Certificate issued by the CA for the last three financial years (21-22, 22-23, 23-24). Certificate should contain UDIN no. issued by ICAI.
B)	Technical Conditions	
iv)	Bidder should have experience of successful implementation of similar project(s) in Central/State Government/ Govt. undertakings/ UT's/Autonomous Bodies in India as: One project of value of Rs. 90 Cr. Two project of cumulative value of Rs 120 Cr. Three project of cumulative value of Rs. 135 Cr.	Documentary evidence such as: Certificate from Customer/ or CA Certificate for services/supply/ Payments received against the project along with Customer's purchase orders/ work orders etc. for ongoing/ completed project.

S No.	Particulars	Criteria for Tender Package
		(Mandatory Compliance & Document Submission)
	Similar projects would be Supply of Educational Kits/ STEM/ Robotics/ Math Kits/ Science Kits/ ATL Kits POs in last five years as on date of bid submission.	
v)	Bidder shall have at least 50 technical personnel on its payroll.	Undertaking from authorized signatory or HR Head of the Company on its letter head.
vi)	Bidder should have following certificates: - 1. ISO-9001 Certificate 2. CMMI ML3 or above Certificate	Copy of valid Certificates. CMMI certificate should be available on https://cmmiinstitute.com/pars
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)	Presentation	Bidder need to show the demo of all items at RailTel office during technical evaluation of the bid. Date & Time will be shared to the bidder after technical bid opening.
xv)	Product samples	Bidder need to provide undertaking for submitting the Samples as per specifications in Appendix-A (i.e. 1 set)

S	Particulars	Criteria for Tender Package
		(Mandatory Compliance & Document Submission)
xvi)	Product Certificates: IS 9873	Copy of Valid Certificates for all tools (Science, Math and STEM tools) conforming to IS 9873 standards from NABL accredited lab as on bid submission date (or) give an undertaking to submit all certificates before end client bid submission date.
xvii)	Annexure-6	EMD (as PBG) Format
xvii)	Annexure-7	Integrity Pact A detailed Integrity Pact Program along with Independent External Monitors (IEM)s is available on the RailTel Website. https://www.railtel.in/tenders/integrity-pact.html
xviii)	Annexure-8	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.
- 7.5 In order to meet customer's delivery timelines/urgency or for any other reasons, RailTel reserves the right to split the order subject to matching the L1 price and approved product by end customer among L1 & L2 bidders.

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.
- 8.2.1 The indicative quantity shall be 4600 schools, however the quantity may increase or decrease at the time of placing the purchase order as per end customer requirement.

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 letterhead)

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 EoI process

Having examined the Invitation for EoI 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 EoI document.

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

We hereby declare that all the information and supporting documents furnished as a part of our response to the said Invitation for EoI 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 EoI 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 compliance

- 1) Having examined the Technical specifications mentioned in this EOI & end customer tender, we hereby confirm that we meet all specifications.
- 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 partner after the receipt of corresponding payment from end customer by RailTel. Further we understand that in case selected partner 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 partner. 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.
- 3) 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.
- 4) 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.
- 5) 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.
- 6) We understand and agree that RailTel is intending to select partner 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
- 7) We hereby agree to submit that in case of being selected by RailTel as partner for the proposed

project(for which EOI is submitted), we will submit all the forms, appendix, relevant documents etc. to RailTel that are required and desired by end Customer well before the bid submission date and as and when required.

- 8) We hereby undertake to sign the Pre-Bid Agreement and Non-Disclosure Agreement with RailTel on a non-judicial stamp paper of Rs. 100/- in the prescribed Format.
- 9) We undertake that we will not submit directly or indirectly our bids and techno-commercial solutions/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:

Witnesses

By_____

Name:

Title:

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 **RailTel** in writing.

Date : DD-MM-YYYY

Place :

Annexure -7: INTEGRITY PACT

RailTel Corporation of India Limited, hereinafter referred to as “The Principal”. And
....., hereinafter referred to as “The Bidder/ Contractor”

1. Preamble

The Principal intends to award, under laid down organizational procedures, contract/s for

The Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relations with its Bidder(s) and /or Contractor(s).

In order to achieve these goals, the Principal will appoint an Independent External Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

2. Section 1- Commitments of the Principal

- 1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
 - a) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - b) The Principal will during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the process or the contract execution.
 - c) The Principal will exclude from the process all known prejudiced persons.
- 2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

3. Section 2- Commitments of the Bidder(s) / Contractor(s)

- 1) The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - a. The Bidder(s)/contractor(s) will not, directly or through any other persons or firm, offer promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage during tender process or during the execution of the contract.
 - b. The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This

applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

- c. The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s) /Contractors will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly, the bidder(s)/contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by the Bidder(s)/Contractor(s). Further, as mentioned in the Guidelines all the payments made to the Indian agent/representative have to be in Indian Rupees only. Copy of the "Guidelines on Indian Agents of Foreign Suppliers" as annexed and marked as Annexure A.
 - e. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

4. Section 3: Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process & exclude him from future business dealings as per the existing provisions of GFR,2017,PC ACT 1988) or take action as per the procedure mentioned in the "Guidelines on Banning of business dealings" and any other Financial Rules/Guidelines applicable to the Principal. Copy of the "Guidelines on Banning of business dealings" is annexed and marked as Annexure "B".

5. Section 4: Compensation for Damages

- 1.If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security.
- 2.If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to be terminated the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

6. Section 5: Previous Transgression

- 1.The Bidder declares that no previous transgressions occurred in the last three years with any other company in any country conforming to the anti- corruption approach or with any other public sector enterprise in India that could justify his exclusion from the tender process.
- 2.If the bidder makes incorrect statement on this subject, he can be disqualified from the tender process for action can be taken as per the procedure mentioned in "Guidelines on Banning of business dealings".

7. Section 6: Equal treatment of all Bidders /

Contractors/Subcontractors.

- 1.The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a signed commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
- 2.The Principal Contractor shall take the responsibility of the adoption of IP by the sub-contractors. It is to be ensured that all sub-contractors also sign the IP.
- 3.In case of a Joint Venture, all the partners of the Joint Venture should sign the Integrity pact.
- 4.The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions

8. Section 7: Criminal charges against violation by Bidder(s) / Contractor(s)

/ Sub contractor(s)

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

9. Section 8: Independent External Monitor / Monitors

1. The Principal appoints competent & credible Independent External Monitors for this pact as nominated by the Central Vigilance Commission (CVC) Government of India, from the panel of IEMs maintained by it. The task of the Monitors is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 2.The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, RailTel.
- 3.The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all project documentation of the Principal including that provided by the Contractor.
- 4.The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality.
- 5.The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

Note: However, the documents /records/information having National Security implications and those documents which have been classified as

Secret/Top Secret are not to be disclosed.

6.For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process or during execution of contract, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

The advice of the IEM panel is restricted to resolving issues raised by a bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders.

7.The panel of IEMs are expected to submit a joint written report to the CMD, RailTel within 30 days from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.

8.Monitor shall be entitled to compensation on the same terms as being extended to / provided to Independent Directors on the RailTel Board.

9.The IEMs would examine all complaints received by them and give their recommendations/views to the CMD, RailTel at the earliest. They may also send their report directly to the CVO in case of suspicion of serious irregularities requiring legal/administrative action. Only in case of very serious issue having a specific, verifiable vigilance angle, the matter should be reported directly to the Chief Vigilance Commission.

10.The word 'Monitor' would include both singular and plural.

11.In the event of any dispute between the management and the contractor relating to those contracts where Integrity Pact is applicable, in case, both the parties are agreeable, they may try to settle dispute through mediation before the panel of IEMs in a time bound manner. If required, the organizations may adopt any mediation rules for this purpose. In case, the dispute remains unresolved even after mediation by the panel of IEMs, the organization may take further action as per the terms & conditions of the contract. However, not more than five meetings shall be held for a particular dispute resolution. The fees/expenses on dispute resolution shall be equally shared by both the parties.

10. Section 9: Pact Duration

Integrity Pact, in respect of a particular contract, shall be operative from the date IP is signed by both the parties till the completion of contract. After award of work, the IEMs shall look into any issue relating to execution of contract, if specifically raised before them. However, the IEMs may suggest systemic improvements to the management of the organization concerned, if considered necessary, to bring about transparency, equity and fairness in the system of procurement.

In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the contract has been awarded.

If any claim is made / lodged by either party during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by CMD of RailTel.

11. Section 10: Other Provisions

1.This agreement is subject to Indian Law, Place of performance and jurisdiction is the Registered Office of the Principal, i.e., New Delhi.

2.Changes and supplements as well as termination notices need to be made in writing.

3.If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

4.Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

5.The parties signing the IP shall not approach the Courts while representing the matters to the IEMs and he/she will await the decision in the matter.

6.Principal contractor shall take the responsibility of the adoption of IP by the sub-contractor

7.The Integrity pact shall be deemed to form a part of contract and parties shall be bound by its provision.

8.Issues like warranty/guarantee etc. should be outside the purview of IEMs. (For & on behalf of the Principal) (For & On behalf of Bidder/Contractor)

(Office Seal)

(Office Seal)

Place:

Date:

Witness 1:

Address:

Witness 2:

Address:

Witness 1:

Address:

Witness 2:

Address:

Annexure-8: Price Bid Format (BOQ) (Financial Bid) with password protected PDF.

S. No.	Item Description	Rate Per School/Lab	GST	Total Price per Unit Including GST
		A	B	C=A+B
1	Integrated Science & Math Lab			
Total Price				

Note: -

- All the above price would be in INR only.
- The bidder has to compulsorily quote for all items failing which bid is liable to be rejected.
- GST shall be payable at prevailing rates.
- The bid price should include all taxes and levies.
- Any conditional bid would be rejected.

Appendix (A)

Integrated Science & Math Lab in Secondary/Senior Secondary Schools.

Part 1: Technical Specifications - Integrated Science and Math Lab

There is a growing recognition need of Integrated solution for Math and Science for providing students with a hands-on learning experience. It has been recognized as fundamental to fostering scientific and mathematical inquiry and understanding.

The Integrated Science and Math Lab aims to create a comprehensive learning environment where students from classes 9th to 12th can explore scientific and mathematical concepts through demonstration, observation, and hands-on experimentation. This approach ensures that students build a solid foundation in individual subjects before integrating their knowledge to solve real-world problems.

Integrated Math and Science Lab should be provided to gain the following learning outcomes:

- to provide students with the opportunity to explore real-life scenarios through a variety of hands-on activities.
- Should cover hands-on experiments and projects that can increase student interest and motivation in both subjects.
- Learners should be able to gain a comprehensive understanding of how math and science are interconnected, fostering a more holistic view of both subjects.
- Students should be better prepared for advanced studies in STEM fields by developing a strong foundation in both math and science.
- Students should understand the relevance of math and science in everyday life and various careers, fostering a sense of purpose in their studies.

The Integrated Math and Science Lab should include the following components:

Modern Equipment for better and practical understanding of various concepts pertaining to Science and Maths as below:

List of Items per Lab	
Sr. No.	Item Description
1	DIV Tools for Science along with user manual, video manuals, teacher training and posters
2	DIV Tools for Mathematics along with user manual, video manual, teacher training and posters
3	DIV Tools for STEM along with user manual, video manuals, teacher training and posters
4	Furniture & Storage

1. List of Science Equipment

S. No.	Product Name	Concepts to be covered	Qty	Technical Specifications
1	Cone Run Uphill	It illustrates how a double cone appears to roll uphill due to its centre of mass moving downward along V-shaped rails	1	The set includes a wooden cone of dia 3 inches, V shape wooden stand with dimensions 5x18 inch. The "Cone Runs Uphill" apparatus demonstrates the concept of the centre of mass. The conical shape of the double cone causes it to sink toward the wider end of the V-shaped rails, creating the illusion that it rolls uphill, even though its centre of mass is moving downward.
2	Newton's Cradle	Conservation of energy, conservation of momentum.	1	Newton's Cradle Apparatus consists of a wooden base measuring 6 x 6 x 1 inches, and a horizontal metal stand from which small balls with a diameter of 18 mm are suspended by strings, resembling a pendulum setup. This simple design is used to demonstrate the conservation of energy, momentum, and friction. When one ball is displaced and released, it collides with the others, transferring momentum and energy through the system. The device visually illustrates the principles of elastic collisions and energy dissipation due to friction.
3	Electric Bell	Electric Circuit, Electromagnet and magnetic effects of current	1	The Electromagnet and Magnetic Effects Apparatus consists of a wooden base measuring 12 x 5 cm, which supports a standing wooden block measuring 20 x 12 cm. This block holds a coil of wire and a magnet, forming an electric circuit to demonstrate electromagnetism and the magnetic effects of current. When current flows through the coil, it generates a magnetic field, turning the coil into an electromagnet. The setup allows for experimentation with magnetic field strength, the interaction between electric currents and magnets, and the visualization of concepts such as electromagnetic induction and the relationship between current and magnetic fields.
4	Cell Structure Model	It describes the unique features of a plant cell, highlighting its structural components	1	The apparatus consists of a wooden base measuring 35 x 30 x 3 cm, featuring a complex structure representing a plant cell. It includes various organelles and a defined nucleus. This model is designed to explain the concept of a plant cell.
5	Visual Illusion	Motion perception, optical illusion	1	This apparatus features a metallic base (5 x 5 x 13 inches) supporting two metallic rods, each connected by three rotating discs. These discs can be turned using a wooden handle. A second wooden handle is provided for manoeuvring the entire apparatus. The top of the apparatus includes a metallic card holder. It also comes with laminated square cards that display visual illusions when the discs rotate.
6	Fleming Left Hand Rule	Current, force and field	1	This Apparatus features a transformer-like setup with a vertical rod 6.5x5x7 inch. Fleming's Left-Hand Rule tells the direction of the force exerted on a current-carrying conductor in a magnetic field. By using the rule, you can determine how the force acts on the conductor: your forefinger indicates the direction of the magnetic field, your middle finger shows the direction of the current, and your thumb points in the direction of the force or motion experienced by the

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				conductor. It allows students to explore electromagnetism, the Lorentz force, and the interaction between electric currents and magnetic fields, providing a practical demonstration of fundamental electromagnetic principles.
7	Fleming Right Hand Rule	Electromagnetism, specifically the relationship between the direction of current, the magnetic field, and the resulting force on a conductor.	1	This Apparatus features a transformer-like setup with a vertical rod 6.5x5x7. Fleming's right-hand rule describes the direction of force on a current-carrying conductor in a magnetic field: Point your thumb in the direction of the current, your index finger in the direction of the magnetic field, and your middle finger will show the direction of the resulting force.
8	Hydro Dynamics	Energy conversion	1	Hydrodynamics works by using the energy of moving or falling water to turn a turbine, which then drives a generator to produce electricity. This tool consists of a wooden base (8.5 x 6.5 inches), two wooden poles, a 250 mL plastic beaker, a metallic turbine, a pipe, and a voltage output monitoring device.
9	Genetic Blueprint Model	Structure of DNA, base pairing, genetic code	1	The model features a plastic base measuring 4 x 4 x 15 inches, with a metallic rod and a double helical structure. It illustrates the structure of the double helix and demonstrates how genetic information is encoded in sequences of nucleotides.
10	Human Ear	Shows how sound is captured and processed by the ear for hearing.	1	The model is made up of three different parts: the outer ear, the middle ear, and the inner ear. It features a wooden base measuring 6 x 9.5 x 5.5 inches. The human ear model demonstrates the anatomy of the ear and how it detects sound waves and converts them into electrical signals for the brain.
11	Electric Motor	Electromagnetic induction	1	The electric motor converts electrical energy into mechanical energy through electromagnetic principles. It consists of a copper wire, a metallic case, a plastic base (4.5 x 4.5 x 4 inches) and a fan
12	Human Heart	Chambers of heart, blood vessels, Valves	1	The model features a plastic base measuring 4 x 4 x 5 inches, with a metallic rod that supports a detailed structure of the heart. It illustrates the heart's internal anatomy, including its four chambers: the right atrium, right ventricle, left atrium, and left ventricle. The model also demonstrates how blood flows through these chambers and valves.
13	Law Of Inertia	Newton's first law. Inertia is opposing change in state of rest.	1	This tool consists of a plastic base (6 x 4.5 x 5 inches), bulb, cardboard piece, wire, and a glass slide. The Law of Inertia Apparatus is designed to demonstrate Newton's First Law of Motion. It includes a frictionless track with a cart or sled and a set of weights. The setup features a smooth surface to minimize resistance and an adjustable incline to modify the cart's initial velocity. When the cart is set in motion and then allowed to coast, its continued movement or lack thereof illustrates the concept of inertia—an object remains at rest or in uniform motion unless acted upon by an external force. The apparatus is equipped with a mechanism to observe and measure changes in motion and inertia.
14	Newton's 2nd Law	The force acting on an object is equal to the mass of the object multiplied by its	1	This tool consists of a metallic rod with a spring wound around it attached to the plastic base (9 x 3 inches) and a plastic slider to push the spring.

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		acceleration ($F = ma$).		Newton's Second Law Apparatus is designed to demonstrate newton second law of motion which states that how the motion of an object is affected by forces. The law is often expressed with the equation: $F = ma$. Newton's Second Law states that the acceleration of an object is directly proportional to the net force acting on it and inversely proportional to its mass. With the help of this apparatus, we can simply learn concepts like mass, net force and acceleration.
15	Light Dispersion Model	Refraction of light, Dispersion	1	A polyhedron with two parallel, polygonal bases is known as a prism. Prisms are optical devices that use the phenomenon of refraction to bend light. They are particularly renowned for their ability to disperse white light into its constituent colours through a process called dispersion. When light enters a prism, it bends due to the difference in refractive indices between the prism material and air. This bending causes different wavelengths of light to spread out, creating a spectrum of colours.
16	Induced Current	The current generated in a conductor due to a changing magnetic field.	1	The apparatus features a plastic base (4 x 3 x 1 inches) with a coil of insulated copper wire wound on a cylinder with terminals, two LED bulbs, and magnets indicating the north and south poles. This apparatus demonstrates the concept of induced current in a conductor due to a changing magnetic field. Induced current occurs when a conductor is exposed to a varying magnetic field, as described by Faraday's Law of Induction. According to this law, the induced electromotive force (EMF) and current are proportional to the rate of change of magnetic flux. For example, moving a magnet near a coil of wire or changing the magnetic field around a loop induces a current in the wire. This principle is fundamental to many electrical devices, including transformers, generators, and inductors.
17	Demagnetizing and Magnetizing Coil	Coils are used to demagnetize or magnetize materials by generating magnetic fields.	1	The Demagnetizing and Magnetizing Coil apparatus features a solenoid wound with insulated copper wire and mounted on a base (11.5 x 6 x 0.5 inches). It includes a switch and a metallic rod. Magnetizing coils generate a magnetic field through an electric current, aligning the magnetic domains within ferromagnetic materials to magnetize them. These coils are essential in devices such as transformers, electric motors, and magnetic recording equipment. Conversely, demagnetizing coils use alternating current (AC) to reduce or eliminate the magnetism of materials.
18	Turning Fork Set	Sound waves, Resonance	1	Demonstrates how the vibration of the tuning fork creates sound waves and how physical vibrations can be felt or heard. It resonates at a specific constant pitch when set vibrating by striking it against a surface or with an object and emits a pure musical tone once the high overtones fade out. Set of eight U-shaped metallic forks of different sizes, made of steel, with frequencies of 128 Hz, 256 Hz,

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				512 Hz, 1024 Hz, 2048 Hz, and 4096 Hz.
19	Ampere Law	Ampère's Law relates magnetic fields to electric currents.	1	It includes a heavy brass/steel wire, one large compass, and three small compasses. To demonstrate Ampere's Rule, arrange the compasses around the wire, connect the wire to a power supply, and turn it on. The electric current will cause the compass needles to change direction. Size: 7.5 x 5 x 6 inches
20	Play with colour shadow	Combinations of colour lights, additive mixture of colour. Primary colours.	1	The wooden box includes three laser lights, two wires, and a power supply board, measuring 6 x 6 x 3 inches. This apparatus demonstrates how objects can cast shadows with varying colours based on the light they block.
21	Reflection Physics Kit	Laws of reflection	1	"This Apparatus is designed to demonstrate the reflection of light in a plane mirror. The setup includes a plane mirror mounted on a stable base, an adjustable light source, and a protractor or angle measuring device. The mirror's surface is precisely aligned to ensure accurate reflections. The light source allows for controlled incidence angles, and the protractor measures the angle of incidence and reflection. This apparatus visually confirms that the angle of incidence equals the angle of reflection, adhering to the laws of reflection.
22	Fun with Magnets	Magnetic properties, including fields, attraction, and repulsion	1	The Fun with Magnets Kit is designed to provide students with hands-on experience exploring magnetic properties through engaging experiments. The kit must include essential components such as a magnet compass, horseshoe magnet, bar magnet, four circular magnets, and two iron filings capsules. Students can observe magnetic fields, attraction, and repulsion, and experiment with various shapes of magnets. All materials must be safe, durable, and reusable, with clearly labelled components for easy identification and suitable for classroom use.
23	Wave Dynamic Model	Transverse wave concepts	1	The Mechanical Wave Experiment Kit offers an engaging way for students to explore key scientific concepts related to transverse waves. It includes a durable frame with nylon strings and 9 plastic balls, each suspended in an increasing length pattern to simulate wave motion. The apparatus demonstrates energy transfer, particle vibration, amplitude, and wavelength in a hands-on format. Designed for students in grades 6 to 10, the kit includes high-quality materials such as a wooden base, plastic balls with steel hooks, and string lengths for varied wave properties. Must have safety features and be easy to set up for repeated use. Overall Dimensions: 375mm x 150mm x 620mm Includes: 9 Plastic Balls (248mm) with steel hooks 9 Nylon Strings (Lengths: 255mm - 185mm) Sturdy Wooden Base
24	Lazy Tube	Lenz's Law, Eddy currents	1	The Lazy Tube Kit demonstrates key physics concepts like Lenz's Law using a non-magnetic conductive tube. When a magnet is dropped through the tube, it creates magnetic forces that oppose the motion,

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				visually showcasing Lenz's Law. Kit specification: Two tubes (150mm diameter, 255mm length) should hang on a plastic-type stand. Wooden base (165mm x 125mm x 285mm). Rectangle plate (135mm x 35mm x 8mm). Two cylindrical magnets (8mm diameter, 17mm length).
25	User Manual		1	Activity user manual to learn usage of tools and understand concepts. Each activity manual consists of a bar code which redirects to the relevant video manuals.
26	Video Manuals		1	Video tutorials to understand the usage of the tools
27	Posters		1	Posters on Science Topics Size - 2 x 3 ft, printed on banner media with 100 micron thickness and 80 micron matt lamination.
28	Drill Machine Set	Project Work	1	Item Dimension: 300mm x 200mm x 70mm , Material: Plastic, 400W motor, Reversible rotatable brush plate for optimum F/R operations Variable speed switch with variable speed dial wheel for optimum output needs Lock-on button for continuous drilling, ergonomic design for comfortable and fatigue free use
29	Allen Key Set	Project Work	1	10 Piece Ring Imperial Allen Hex key
30	Soldering Kit	Project Work	1	Variable Wattage of Soldering Iron: 15-30 watts/230 volts/Soldering Iron Temperature Range: 280°C to 450°C De-Soldering Pump, Soldering Flux (Paste) 100 grams, Copper Braid Co DE-soldering pp (Solder Wick) - 1.5m*2mm Compatible Soldering Tip - Bevel, Chisel, Conical - each per kit. Soldering Wire: 20/22 AWG soldering Wire with rosin core flux (100 Grams)
31	Safety Goggles	Project Work	02	Polycarbonate Safety goggles Clear lens with no tint
32	Hot Glue Gun	Project Work	1	Works with standard inch glue sticks. Temperature - 230 to 280 degree Celsius.
33	Paper Microscope	Illustration of Microscopic objects	2	DIY Paper microscope. Magnification range - 100x to 2000x
34	Digital P ^H Meter	Measuring P ^H Value	1	Accuracy +/- 0.01%, LCD Display, Measurement range 0.01-14, Calibration Three Point automation
35	Power Extension Board	Project Work	2	4 way power extension board
36	Laser Light	Light	4	Battery operated multipurpose laser light pointer pen beam
37	Banana Pin (Red & Blue)	Electricity	1 Packet	Type: Alligator Clip Material: Nickel-plated pin, metal clip with plastic insulation
38	Bread Board	Electricity	2	800 point breadboard; 15 X 6 cm in size. Comes with wires to perform activities
39	Hacksaw Blade with Frame	Project Work	1	Size: 12 inches
40	Steel Shaft Claw Hammer	Project Work	1	Claw Hammer Steel Shaft/Weight- 0.22kg

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41	Plier	Project Work	1	Wire Stripper Cutter Plier
42	Screw Driver Set	Project Work	1	40 pc multi-purpose screwdriver set
43	Digital Multi Meter	Electricity	1	Packing Content: 1 x Digital Multimeter, 2 x Test Leads Line, Small and compact design Low battery voltage indication. Power: 9V battery (Included). Dimension: 142 x 69 x 30mm. Max AC Voltage Range: 600V. Max DC Voltage Range: 600V. Resistance Measurement: 200 Ohm-2000K Ohm 3 1/2 digits, 8 segment, 15mm high LCD Display. Max Display: 1999, Auto polarity display.
44	Tester	Electricity	2	Digital Voltage line tester to measure AC DC Voltage, troubleshooting. Size approx 20 cm, weight approx 50 gm
45	Spanner Set (Double Handed)	Project Work	1	12-piece combination Spanner Set Range - 4 mm to 30 mm
46	Inorganic and Organic Chemistry Molecular Models	Atomic Structure	1	This set consists of 37 connecting lugs & 75 balls of different colours & sizes packed in a moulded box.

2. List of Mathematical Equipment

S. No.	Product Name	Concepts to be covered	Qty	Technical Specifications
1.	Coordinate Grid Board	Cartesian Coordinate System	4	Coordinate grid board of 16 x 16 cm with transparent moveable axis. It also includes 30 to 40 pegs and 8 to 10 rubber bands.
2.	Angle Sticks	Angles, Triangles	4	Set of 50 sticks in 5 different sizes and colours, designed to be plugged in and out. The set also includes a protractor that can be attached to these sticks.
3.	9" Pegboard	Area, Perimeter of 2D Shapes	4	9" transparent square plastic pegboard with a 10x10 fix pegs array and 8-10 coloured rubber bands.
4.	Circular Pegboard	Circle	4	8" two-sided plastic pegboard. one side circular with 17 fix pegs, the other side square with 25 fix pegs. It includes 8-10 rubber bands.
5.	Geo-Fusion Set	Surface Area of 3D Shapes	4	Set of 6- three dimensional shapes • Cube • Cone • Cylinder • Triangular Prism • Triangular Pyramid • Square Pyramid
6.	Volume Master Set	Volume of 3D Shapes	2	Set of 17 transparent three-dimensional shapes, each 5 cm in size, including 2 square prisms, 2 rectangular prisms, 1 pentagonal prism, 2 triangular prisms, 1 square pyramid, 1 triangular pyramid, 1 pentagonal pyramid, 2 cylinders, 1 cone, 1 sphere, 1 hemisphere, 1 hexagonal pyramid, and 1 hexagonal prism. Each shape has removable base and stopper for easy filling with dry or wet material.

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7.	Linking Bricks	Algebraic Identities	4	Plastic linking Bricks set of 100 in 10 different colours. Each brick has an edge length of 2 cm and features external connecting holders and internal connecting holes.
8.	Graphical Wipe Board	Graphs	1	Set of 40 write-and-wipe A4 size double-sided graph, made from 300 GSM laminated card.
9.	XY Dry Erase Board	Cartesian Coordinate System	1	Set of 40 write and wipe A4 size double sided Cartesian axis, made from 300 GSM laminated card.
10.	Cylindrical Tunnel	Concept of Hollow Cylinder	4	One hollow cylinder with diameter 8 cm, one sided completely open and another side having inward circular strip of width 1cm. Another hollow cylinder of diameter 4cm open both side completely, having one side outward circular strip of 1cm. Both cylinder is of height 12cm and combines together to form cylindrical tunnel.
11.	Hollow Ball Kit	Concept of Hollow Sphere	4	Two transparent hollow hemisphere of diameter 10 cm, each having one connecting dome of radius 6cm with circular strip of width 2 cm.
12.	Probability Learning Set	Concepts of Probability	4	Set includes 52 deck of cards, 3 coins, 3 dice, and a calendar representing both leap and non-leap years, all on A5 size 300 GSM double-sided laminated card.
13.	Incline Navigator	Application of Trigonometry	4	A Navigator of length 25 cm that includes a handle, a compass, and a movable needle to indicate different angles.
14.	Cube-Sphere Volume Analysis	To determine the ratio of the volume of a cube to that of a sphere which will exactly fit inside the cube	4	The kit contains a transparent cube with a 9 cm edge, open at the top, and 2 connecting hemispheres with an 8 cm diameter, which can be placed inside the cube.
15.	Trigonometry Board	Trigonometric Ratios, Identities	4	The set includes a square trigonometry board with dimensions 20 x 20 cm, representing the circular system in trigonometry. It also comes with connectors, pins, a set of rubber bands, and plastic measuring strips.
16.	AP Kit	n th term of AP, Sum of n terms of an AP	4	Set of 50 magnetic rectangular foam tiles in two sizes: Type 1: 8.4 x 2.4 x 0.5 cm and Type 2: 5.8 x 2.4 x 0.5 cm, and 50 magnetic square foam tiles, each 2.4 x 2.4 x 0.5 cm.
17.	Conic Section Kit	Concepts on Conic Sections	4	The set consists of 4 models of Cones - Circle, Hyperbola, Eclipse and Parabola
18.	Set Theory Kit	Sets, Subsets, Superset	4	The set contains multiple activities models designed to help in understanding set theory.
19.	Relation Function Kit	Relations and Functions	4	Write and Wipe Laminated Sheet includes Venn diagram representing two sets.
20.	Geometric Progression Kit	Concepts of Geometric progression	4	The set contains multiple 2D shapes used to understand GP concepts.
21.	User Manual		1	Activity user manual to learn usage of tools and understand concepts. Each activity manual consists of a bar code which redirects to the relevant video manuals.
22.	Video Manuals		1	Video tutorials to understand the usage of the tools along with the credentials to access the tutorials.
23.	Posters		1	Posters on Math Topics Size - 2 x 3 ft, printed on banner media with 100 micron thickness and 80 micron matt lamination.

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24.	Chess Board	Explain the concept of limit	1	Square shaped 300 GSM laminated chess board of size 12 x 12 inches.
25.	Teacher Geometry Box	Geometry- Understanding the concept of angles and solving Geometrical constructions	1	Set Contains Ruler, Compass, Protractor and 2 Set Squares of big size.
26.	Inclined Plane	Trigonometry & Friction - Understanding the concept of height and distances and several other concepts such as motion and friction	1	Incline plane kit includes wooden base connected with incline plane 550 x 60 mm along with pulley. Linear scale is fixed at inclined plane and angular scale 0-45° scale is fixed to the base. It also includes a metal roller 50 x 15 mm length, two wooden blocks and a scale pan with cord.
27.	Ruler Set (Flexible rules 30cm length)	Measurement - For Measurement and drawing	1	Flexible ruler of plastic- Set of 4 each of 30 cm length
28.	Algebra Tiles (Set of 35 Tiles)	Algebraic expression and equation - Used to model and solve algebraic expression and equation	1	Set contains 20 small square tiles, 10 rectangular tiles and 5 big square tiles.
29.	Fraction Tiles (Set of Fraction Tiles in various sizes)	Concept of Fraction - Used to help students Understanding the concept of Fractions	1	9 Plastic Fraction Circles of diameter 80mm. One circle represents whole. Other circles are divided into half, thirds, quarter, fifths, sixths, eighths, tenths and twelfths parts of circles. Transparent casing is also provided in order to hold all 9 circles together.

3. List of STEM Equipment

S. No.	Product Name	Concepts to be covered	Qty	Technical Specifications
1.	Straw bot	The "Straw Bot" kit comes with 100+ pieces and an instruction manual for 25 activities. Experiment by implementing the linkages mechanism concept in Straw Bot to imitate the movement pattern of various creatures.	8	The kits are required to feature a robust physical framework constructed from MDF material and connecting parts for other components, providing the necessary structure like a Bat, Swimmer, Crawler, Skipper, Paralympic, etc. The Kit should include MDF sheets (240mm x 100mm x 3mm) cut into specific shapes (O, Y, L, X, T, I, T-Lock, 3 Leg, 1 Leg), bottom plates (80mm x 20mm x 3mm) cut into H shapes, motor arms (25mm x 20mm) in Z shapes, top plates (30mm x 25mm x 20mm) in U shapes, plastic straws (200mm length, 6mm diameter), 3 to 12 V DC, 150RPM two-side shaft BO motors with compatible wheels (70mm diameter, 6mm width, rubber grip). The kit should include all necessary accessories battery casings for two AA cells with switches, standard AA batteries, thin rubber bands (3 inches), DIY craft scissors, and 15cm plastic scales.
2.	Mechanical Construction Kit	This kit is used to teach students the concepts of mechanics like force, friction, gear etc along with the coding concepts by making Autonomous Robots.	8	The kits are required to feature a robust physical framework constructed from metal and mounting points for other components, providing the necessary structure like excavators, cranes, dumping trucks, rollers, forklifts, ball shooters, catapults, rovers, line follower robot, obstacle avoider robot, edge avoider robot, light follower. The kit's brain should include a programmable CPU utilizing AVR architecture, operating at a clock speed of 16 MHz and a voltage of 5V. It should offer a minimum of 14 digital I/O ports

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				and 6 analog input ports, along with essential features such as USB connectivity, and a power jack. Additionally, the brain module should have four indicators led for mode selection, motor drive, program switch, on-off switch, motor connector, and sensor connector, allowing all functional components can be connected via JST connectors. The kits should feature DC Motors with dimensions minimum 4.5mm x 4mm x 2mm L-shape, plastic module blocks compatible with provided parts. It should have connected via the JST connector. The motors must operate within a voltage range of 3-12V, with a minimum speed of 150 RPM and the kit is the plastic wheel, featuring a minimum 75mm diameter and 9.5mm thickness compatible with a provided shaft, and rubber grip for the provided wheel. Kit must include different types of metal plates like the bar, L-shape, C-shape, shaft, nuts, and bolts. Power distribution board with RJ11 connectors, a Remote controller (with DPDT switch), and other accessories like screwdriver, hook, gear, and axle lock. It should have a rated input AC voltage of 100V-240V and output voltage of 12VDC-1A with a minimum 0.5 meter long 24 AWG cable and offer short circuit and overload protection. The kits should include all necessary hardware components such as contained nuts, bolts, spacers, and wires ensuring ease of construction and structural integrity.
3.	Little Science Bot	With the help of this kit's students can learn different kinds of STEM concepts like force, friction and energy conservation etc.	8	The kit should include a variety of MDF cutouts and components for creating battery-operated models. It contains MDF pieces for different models including cutouts measuring 140x104x3mm, 112x114x3mm, and 92x74x3mm. The kit also includes over 35 unique interlocking pieces such as T Pieces, Motor Arm Pieces, and Linker Pieces for creating rotating legs for a walking dog model. An MDF sheet should be cut into three sizes: 140x107x3mm, 82x72x3mm, and 172x136x3mm for a walking robot. It also needs over 35 unique interlocking pieces such as hands, legs, and the robot face. An MDF sheet needs to be cut into three sizes: 156x154x3mm and 136x152x3mm cutouts for a cart-pushing robot. The robot features over 30 unique interlocking pieces such as wheels, linkers, hands, legs, and a cart. An MDF sheet needs to be cut into three sizes: 188x114x3mm, 146x134x3mm, and 134x102x3mm for a flying dinosaur model. The model has over 35 unique interlocking pieces, including wings with living hinge mechanisms and wheels. An MDF sheet needs to be cut into three sizes: 142x164x3mm, 124x148x3mm, and 163x104x3mm for a walking dino, consisting of over 45 unique interlocking pieces including 16 Teeth Gears, 12 Teeth Gears, and 8 Teeth Gears. The kit should include all necessary accessories

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				candle wax, thin rubber bands (minimum 3 inches), transparent cello tape (at least 15 meters), a plastic geared DC motor (60mm x 20mm x 20mm, 3 to 12 V DC, 150 RPM with dual shafts), a battery holder for two AA cells with a two-way slide switch and cover, standard AA batteries, and a DIY craft scissor.
4.	STEM Electronics	This kit will be used to teach electronic concepts. They will understand the working principle of Input and Output devices and the scientific concepts used behind it. LED control using the switch, Brightness control using the potentiometer, Smart Morning alarm, Anti-Theft System, Understanding of Logic gates	8	The kit Should have a power distribution module (onboard 3 inputs and 3 outputs in the form of a JST connector), at least 18 different types of input-output modules. The power distribution module must have a distributing signal and power to up to three other modules. It must have a minimum of three input ports and three output ports. The power distribution module's PCB board must have handle protection, with a minimum size of 59mm x 47mm, and be encased in color-coded rubber or plastic casings with openings for connections. The modular design of the power modules must ensure that all functional components can be connected via JST connectors. The kit should have different types of sensor modules that cover a wide range of sensing capabilities and must have a light sensor, IR sensor, switch, POT, and more. Additionally, the kit should have gate modules like AND, OR, and NOT gates. The PCB board must have handling protection, with a minimum size of 37mm x 27mm, and be encased in color-coded rubber or plastic casings with openings for connections. The sensor module should be designed to be modular, allowing it to be connected via JST connectors with a supporting microcontroller. The kit should have various output modules such as LED modules in different colours, a buzzer module, a motor module, a vibro motor module, and a laser module. The PCB board should have protection for handling, a minimum size of 37mm x 27mm, and be encased in color-coded rubber or plastic casings with openings for connections. The output module is designed to be modular, allowing it to be connected via JST connectors with a supporting microcontroller. It must have the essentials for powering and connecting various components. These should consist of a power bank, JST wires, and power cables for connecting the power board to other peripherals. The power distribution module must have a distributing signal and power to up to three other modules. It must have a minimum of three input ports and three output ports. The power distribution module's PCB board must have handle protection, with a minimum size of 59mm x 47mm, and be encased in color-coded rubber or plastic casings with openings for connections. The modular design of the power modules must ensure that all functional components can be connected via JST connectors.
5.	Arduino Science Kit	The Science Arduino Kit provides a comprehensive introduction to	2	The arduino science kit shall meet specification as outlined in original arduino science kit along with necessary accessories. It should include WiFi and original arduino microcontroller, sensors for light and temperature, and Grove connectors for easy

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		electronics and coding, enabling students to build and program interactive projects. It helps explore concepts like automation, data collection, and environmental monitoring.		assembly. It supports Wi-Fi and Bluetooth connectivity, featuring digital and analog I/O pins. The kit includes a flat micro USB cable, Grove cables, crocodile clips, a magnet, Velcro strap, PCB encoder, and various fastening tools for conducting diverse physics experiments.
6.	User Manual		1	Activity user manual to learn usage of tools and understand concepts. Each activity manual consists of a bar code which redirects to the relevant video manuals.
7.	Video Manuals		1	Video tutorials to understand the usage of the tools along with the credentials to access the tutorials.
8.	Posters		1	Posters on STEM Topics Size - 2 x 3 ft, printed on banner media with 100 micron thickness and 80 micron matt lamination.

4. Furniture and Storage

S. No.	Product Name	Description	Quantity
1.	Wooden Table	size - 5 by 4 ft, made of 18 mm thick high quality prelaminated wood-based particle board with PVC Strip edge bending.	4
2.	Stool	Wooden top - made of 18 mm prelaminated MDF board. Size - 14" diameter Frame/ legs - made of 25 x 25 mm square CRC pipe, powder coated black color Shoes - PVC	30
3.	Storage Cabinet	Plastic Almirah with lock. H: 1750 mm W: 580 mm D: 350 mm 2 storage cabinet each for Science, Math and STEM equipment	6

Part 2: Technical Specifications – LMS and QR based Supply Chain Monitoring Software

Specifications of Learning Management Software

1. Admin/School Portal
a. Configure/Manage Masters
b. View Dashboard for Schools Analytics
2. Teacher Portal
a. Create Assignments
b. Assign Assignments to Students
c. Assessment Creation
d. Preview Assessment
e. Online Course Material Upload
f. Profile Management
g. View Student Activity Reports
3. Student Portal
a. Profile Management
b. View Assignments

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- c. Access to online course materials
 - d. Attempt Assessment/Assignments
 - e. View Scorecard
 - f. View Subjects Content/Videos
4. School Management
- a. Teachers Management
 - i. Teachers Import
 - ii. Transfer
 - iii. Teacher Subject Mapping
 - b. Student Management
 - i. Students Import
 - ii. Subject Mapping
 - c. Add Class/Section/Subjects to school.
 - d. Add Chapters/Topics in Subject
5. Assessment/Assignments Creation
6. Questions Creation Subject/Chapter/Topic wise

Details:

Overview: This online platform is a web-based platform designed to facilitate the creation, delivery, and evaluation of online assignments, assessments for Schools institutions. The primary goal of the portal is to provide a user-friendly and efficient solution for sharing contents and conducting various types of assessments, such as quizzes, exams, and skill-based tests, online course material for the students.

The application should provide class wise mapping of the tutorial videos with the curriculum. It should be easy to access the videos and they should be completely mapped with the learning outcomes of each class.

Key Features and Functionality:

User Management:

a. Admin Panel:

Create an intuitive and feature-rich admin dashboard for managing user accounts, roles, and permissions.

Configure and manage master's to be used in the school.

Enable administrators to view and export user data, assessment results, and reports.

b. Teacher Portal:

Teachers can create and manage assessment content, assessment evaluation, view results, and generate reports.

Provide Teacher's with a user-friendly dashboard to manage assessments.

Allow teachers to create, edit, and delete assessment content, including various question types.

Enable the uploading of multimedia elements for questions and answers.

Implement options for randomizing questions and answer choices to minimize cheating.

c. Student Portal:

Students can access assessments, view their scores, and track their progress.

Enable students to create accounts or sign in securely.

Students can have access to online course material uploaded by the teachers.

Allow students to view available assessments.

Include progress tracking for students to monitor their performance.

1) Assessment Creation:

- a. Question Bank: A repository to store and organize various types of questions (multiple-choice, short answer, essay, etc.).
- b. Implement support for different assessment types (multiple-choice, true/false, short answer, essay, etc.).
- c. Media Support: Allow the inclusion of multimedia elements (images, videos, audio) in questions.
- d. Include options for setting time limits, pass marks, etc
- e. Provide real-time previews of assessments before publishing.

2) Assessment Delivery:

- a. Online Testing: Students can take assessments online, either in real-time or within a specified time frame.

3) Result Analysis and Reporting:

- a. Instant Results: Students receive immediate feedback on completion of the assessment.
- b. Detailed Reports: Teachers and administrators can access comprehensive reports with individual and group performance analysis.
- c. Analytics: visual representations (charts, graphs) to present data trends and insights.

Specifications of QR based Supply Chain Monitoring Software

S. No.	Product Details
1	This scope of work is for design & development of an 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

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	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.
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