DIRECTORATE OF TECHNICAL EDUCATION AND TRAINING, ODISHA (DTE&T)

Killa Maidan, Buxi Bazar,Cuttack-753001
Phone No-0671(2301061),Fax-0671(2301961)

NIT No. DTET/2025-26/426/04 Date: 12.01.2026

File No: DTET-PROC-ET-0002-2025

REQUEST FOR PROPOSAL (RFP)

TO

ESTABLISH CENTRE OF EXCELLENCES IN

ADVANCED MECHATRONICS AT GOVERNMENT INDUSTRIAL TRAINING INSTITUTE BALUGAON

DTE&T under the administrative control of Skill Development & Technical Education Department, Government of Odisha (the Client) invites both Technical & Financial proposals from the world's leading OEM companies or their authorised channel partners through e-tender process for **"Establishment of Centre of Excellence (CoE) in Advanced Mechatronics at Government Industrial Training Institute (ITI) Balugaon"** on Turnkey Basis**.** Bidders fulfilling the prescribed eligibility criteria of the RFP can access and download the complete RFP Document and other details from **www.dtet.odisha.gov.in/www.tendersodisha.gov.in**.

The major events under the bid process are:

Sr. No.	List of Key Events	Critical Dates
1	Date of Issue of RFP	13.01.2026
2	Last date for submission of Pre-Bid Queries	22.01.2026 (by 5:00 PM)
3	Date of Pre-proposal Meeting	31.01.2026 (at 03:00 PM)
4	Issue of Addendum/Corrigendum (if any)	04.02.2026 (by 05:00 PM)
5	Due Date for Submission of Proposal	20.02.2026 (by 5:00 PM)
6	Date of Opening of Technical proposal	21.02.2026 (by14:00 PM)
7	Date of Technical Presentation	To be informed to the technically qualified bidders later
8	Date of Opening Financial Proposal	Through the e-tender portal to be intimated later by e-mail to the technically qualified bidders.
9	Method of Selection	Least Cost Selection (LCS)

The proposals complete in all respect must be submitted through e-tender process latest by 20.02.2026 before 5:00 PM) clearly mentioning **'Request for Proposal for establishment of CoE in Advanced Mechatronics at Govt. ITI Balugaon''.** The proposals received beyond the last date and time will be rejected without assigning any reason. Prospective bidders are advised to regularly visit the DTE&T Odisha website (www.dtet.odisha.gov.in/en/tenders) and e-procurement (Tenders Odisha) Portal https://tendersodisha.gov.in for any Updates/Corrigendum/Amendment. Any subsequent updates will be announced on the DTE&T Odisha website and e-procurement Odisha portal. The authority reserves all the rights to reject any/ all proposals at any stage without assigning any reason thereof.

Sd/-
Director
DTE&T, Odisha

Memo No. **Date:**

1. Copy to e-Governance Cell, SD&TE Department, Government of Odisha for publication in the website of the Department for wide publicity.

2. Copy to Smt. Kalpana Panigrahi, I/c S&B Section, for publication in the Website and Notice Board of DTE&T without delay for wide publicity.

Sd/-
Director
DTE&T, Odisha

REQUEST FOR PROPOSAL

FOR

ESTABLISHMENT OF CENTRE OF EXCELLENCE IN INDUSTRIAL AUTOMATION & ROBOTICS AT GOVERNMENT INDUSTRIAL TRAINING INSTITUTES

Directorate of Technical Education and Training, Odisha
Killa Maidan, Buxi Bazar,
Cuttack-753001
Phone No-0671(2301061),
Fax-0671(2301961)
Email: dtetorissa@gmail.com; dtetodisha.procuremeent@gmail.com

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Disclaimer

The information contained in this Request for Proposal (herein after referred to either "RFP") document or subsequently provided to the Bidders, whether verbally or in documentary or any other form by or on behalf of the Directorate of technical Education and Training, Odisha herein after referred to as DTE&T, or any of their employees or advisors, is provided to the Bidder(s)on the terms and conditions set out in this RFP document and all other terms and conditions subject to which such information is provided.

DTE&T reserves the right to reject any or all of the proposals submitted in response to this RFP document at any stage without assigning any reasons whatsoever. DTE&T, ODISHA also reserves the right to withhold or withdraw the process at any stage with intimation to all who submitted the RFP document response. DTE&T, ODISHA reserves the right to change/ modify/amend any or all of the provisions of this RFP document. Such changes would be posted only in its website (www.dtetodisha.gov.in). Prospective bidders are requested to visit the website frequently to keep them abreast with the latest developments on this tender.

This is not an agreement and is not an offer or invitation to enter into an agreement of any kind with any party. The purpose of this RFP is to provide interested parties with information that may be useful to them in making their technical & financial offers (Bids) pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the DTE&T, ODISHA in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require. This RFP document may not be appropriate for all persons, and it is not possible for the DTE&T, ODISHA, their employees or advisors to consider the business/investment objectives, financial situation and particular needs of each Bidder who reads or uses this RFP document.

The assumptions, assessments, statements and information contained in this RFP may not be complete, accurate, adequate or correct. Each Bidder should conduct its own investigations and analysis and should check the accuracy, reliability and completeness of the information in this RFP document and wherever necessary obtain independent advice from appropriate sources. DTE&T, ODISHA, their employees and advisors make no representation nor warranty and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of the RFP document.

1. FACT SHEET

Sl. No.	Particular	Details
1.	**Name of the Client**	Director, Directorate of Technical Education and Training (DTE&T) under the administrative control of Skill Development & Technical Education Department, Government of Odisha.
2.	**Method of Selection**	Least Cost Selection (LCS)
3.	**Mode of Submission**	Online (e-tender) **www.tendersodisha.gov.in**
4.	**Date of Issue of RFP(e-tender)**	13.01.2026
5.	**Deadline for Submission of Pre-Proposal Query**	22.01.2026 (by 5:00 PM) (Through email to: **dtetodisha.procurement@gmail.com**)
6.	**Date of Pre-Proposal Meeting**	31.01.2026 (at 03:00 PM) (Through Hybrid Mode)
7.	**Due date for submission of proposals**	20.02.2026 (by 5:00 PM) (**www.tendersodisha.gov.in**)
8.	**Date of opening of Technical Proposal**	21.02.2026 (by 15:00 PM)
9.	**Date of Technical Presentation and**	To be informed to the technically qualified bidders later.
10.	**Date of Opening of Financial Proposal**	Through the e-tender portal to be intimated later by e-mai to the technically qualified bidders
11.	**Bid Processing Fee (Non-Refundable)**	Rs. 10,000/- + GST: 18 % = Rs. 11,800/- (Rupees Eleven Thousand Eight Hundred Only) (through Demand Draft in favour of "DTE&T Odisha" & payable at Cuttack).
12.	**Earnest Money Deposit (EMD) (Refundable)**	**INR 10,00,000/-** valid for minimum 225 days from last date of bid submission. EMD amount to be submitted in shape of Bank Guarantee/e-Bank Guarantee in favour of "DTE&T Odisha" from any scheduled commercial bank.
13.	**Performance Security**	The selected Bidder shall furnish 5% of the Contract value in shape of Bank Guarantee/e-Bank Guarantee in favour of "DTE&T Odisha" from any scheduled commercial bank and valid for 68 months.
14.	**Address of the Client:**	Director, Directorate of Technical Education and Training (DTE&T) Odisha, Killa Maidan, Buxi Bazar, Cuttack, Pin Code: 753001 **E-mail**:dtetorissa@gmail.com; & dtetodisha.procuremeent@gmail.com **Contact person**: 1. Sri. S. K. Patra, Joint Director (Procurement), DTE&T Odisha, Mob. 9437404277

NOTE:

- Amendments/Corrigendum(a) to the RFP document, if any, would be published on the website of DTE&T Odisha and Odisha e-Procurement portal only. Please visit the website: www.dtet.odisha.gov.in/www.tendersodisha.gov.in regularly for the same.
- A bidder may submit their both technical and commercial proposals after fulfilling the minimum eligibility criteria mentioned in Section 4.
- Proposals must be submitted before the date, time and venue mentioned in the Factsheet through Online (e-tender) www.tendersodisha.gov.in. Proposals that are received after the deadline will not be considered.
- The Director, DTE&T reserves all the rights to cancel the Selection Process and reject any or all the proposals at any point of time.
- No contractual obligation whatsoever shall arise from the RFP document unless and until a formal contract is signed and executed between the Director, DTE&T and the Selected Bidder.
- The Director, DTE&T disclaims any factual or other errors in the RFP document (the onus is purely on each Bidder to verify such information) and the information provided therein are intended only to help the Bidder(s) to prepare a proposal in accordance with the terms and conditions as set out in this RFP document.
- **Exemption may be given to the local MSMEs/local Start-Ups (registered in Odisha) for submission of Tender Fee & EMD as per the Odisha Procurement Preference Policy for Micro and Small Manufacturing Enterprises-2023 (MSME Department Notification No. 566/MSME dated 24.01.2024) and Odisha General Finance Rules (OGFR) only after submission of proper documents as proof. An AFFIDAVIT may be submitted as per the TECH-11.**
- **Price Preference is not applicable in this tender.**
- Tender Fee and EMD exemption are not available to any Dealer/ Distributor/ Trader etc., who is not registered as a Manufacturer of similar category of Goods in Odisha.
- If a Bidder participates as Joint Venture (JV) /Consortium, the exemptions for submission of Tender Fee & EMD shall not be applicable for them.

2. E-TENDERING

Procedure for Participation in e-tendering

1) Web address of E-tendering website: https:// www.tendersodisha.gov.in.
2) The Digital Signature enrollment has to be done with the e-token, after logging into the portal. The e-token may be obtained eMudhraCA/GNFC/IDRBT/MtnlTrustline/SafeScrpt/TCS.
3) Bidder then logs into the portal giving user id / password chosen during enrolment.
4) The e-token that is registered should be used by the bidder and should not be misused by others.
5) DSC once mapped to an account cannot remap to any other account. It can only be inactivated.
6) The Bidders can update well in advance, the documents such as certificates, purchase order details etc., under My Documents option and these can be selected as per tender requirements and then attached along with bid documents during bid submission. This will ensure lesser upload of bid documents.
7) After downloading / getting the tender schedules, the Bidder should go through them carefully and then submit the documents as per the tender document; otherwise, the bid will be rejected.
8) The BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for that tender. Bidders are allowed to enter the Bidder Name and Values only.
9) If there are any clarifications, this may be obtained online through the eProcurement Portal, or through the contact details given in the tender document. Bidder should take into account of the corrigendum published before submitting the bids online.
10) Bidder, in advance, should prepare the bid documents to be submitted as indicated in the tender schedule and they should be in PDF formats. If there is more than one document, they can be clubbed together.
11) Bidder should arrange for the EMD as specified in the tender.
12) The bidder reads the terms and conditions and accepts the same to proceed further to submit the bids
13) The bidder has to submit the tender document(s) online well in advance before the prescribed time to avoid any delay or problem during the bid submission process.
14) There is no limit on the size of the file uploaded at the server end. However, the upload is decided on the Memory available at the Client's System as well as the Network bandwidth available at the Client side at that point of time. In order to reduce the file size, bidders are suggested to scan the documents in 75- 100 DPI so that the clarity is maintained and also the size of file also gets reduced. This will help in quick uploading even at very low bandwidth speeds.
15) It is important to note that, the bidder has to Click on the Freeze Bid Button, to ensure that he/she completes the Bid Submission Process. Bids which are not Frozen are considered as Incomplete/Invalid bids and are not considered for evaluation purposes.
16) The Tender Inviting Authority (TIA) will not be held responsible for any sort of delay, or the difficulties faced during the submission of bids online by the bidders due to local issues.

17) The bidder may submit the bid documents online mode only, through this portal. Offline documents will not be handled through this system.
18) At the time of freezing the bid, the eProcurement system will give a successful bid updating message after uploading all the bid documents submitted and then a bid summary will be shown with the bid no, date & time of submission of the bid with all other relevant details. The documents submitted by the bidders will be digitally signed using the e-token of the bidder and then submitted.
19) After the bid submission, the bid summary has to be printed and kept as an acknowledgement as a token of the
20) The bid summary will act as a proof of bid submission for a tender floated and will also act as an entry point to participate in the bid opening event.
21) Successful bid submission from the system means, the bids as uploaded by the bidder is received and stored in the system.
22) System does not certify for its correctness.
23) The bidder should see that the bid documents submitted should be free from virus and if the documents could not be opened, due to virus, during tender opening, the bid is liable to be rejected
24) The time that is displayed from the server clock at the top of the tender Portal, will be valid for all actions of requesting bid submission, bid opening etc., in the e-Procurement portal. The Time followed in this portal is as per Indian Standard Time (IST) which is GMT+5:30. The bidders should adhere to this time during bid submission.
25) All the data being entered by the bidders would be encrypted at the client end and the software uses PKI encryption techniques to ensure the secrecy of the data. The data entered will not be viewable by unauthorized persons during bid submission and not viewable by any one until the time of bid opening. Overall, the submitted bid documents become readable only after the tender opening by the authorized individual transferred over secured Socket Layer (SSL) with 256-bit encryption technology. Data encryption of sensitive fields is also done.
26) The bidders are requested to submit the bids through online eProcurement system to the TIA well before the bid submission end date and time (as per Server System Clock).

3. SECTION I: Letter of Invitation

NIT No: DTET/2025-26/426/04 **Date: 12.01.2026**

Name of the Assignment: "RFP for establishment of CoE in Advanced Mechatronics at Govt. ITI Balugaon".

1. DTE&T under the administrative control of Skill Development & Technical Education Department, Government of Odisha (The Client) invites online Bids (both Technical & Financial) from the Original Equipment Manufacturer (OEM) or authorised Technology Partner/Channel Partner for **"Establishment of CoE in Advanced Mechatronics at Govt. ITI Balugaon".** More details on the proposed assignment are provided at **Section-3: Terms of Reference (ToR)** of this bid document**.**
2. Bidder will be selected under **Least Cost Selection (LCS) method** as prescribed in the RFP Document.
3. The proposal, complete in all respect as specified in the RFP document must be accompanied with a **Non-refundable** amount of **Rs. 10,000/- + Rs. 1800 (GST @18%) = Rs. 11,800 (Rupees Eleven Thousand Eight Hundred)** towards **Tender Processing Fee** and a **refundable amount of equal to INR 10,00,000/-** towards **EMD** valid for minimum 225 days from the last date of bid submission, failing which the bid will be rejected.
4. The last date and time for submission of Bid complete in all respects is mentioned as per the data sheet in **www.tendersodisha.gov.in** and the date of opening of the technical proposal, Technical Presentation & financial bid in the presence of the bidder's representative at the specified address as mentioned in the Bidder Data Sheet . Representative of the bidder may attend the meeting with due authorization letter on behalf of the bidder.
5. This RFP includes following sections:
   a. Letter of Invitation **[Section – I]**
   b. Information to the Bidder **[Section – II]**
   c. Terms of Reference [**Section – III]**
   d. Technical Bid Submission Forms **[Section – IV]**
   e. Financial Bid Submission Forms **[Section –V]**
   f. Annexure **[Section – VI]**
6. While all information/data given in the RFP are accurate within the consideration of scope of the proposed assignment to the best of the Client's knowledge, the Client holds no responsibility for accuracy of information and it is the responsibility of the bidder to check the validity of information/specifications/narrations included in this document. No claim whatsoever shall be admissible for the alleged loss/damage suffered by the bidders on account of such rejection. In case of any dispute/ ambiguity arising in the process relating to documents, the decision of the Tender calling authority shall be final, binding and cannot be challenged.
7. **The Client reserves the right to accept / modify/ reject any/all Bids / cancel the complete tender or part of it at any stage without assigning any reason thereof.**

Sd/-
Director
DTE&T Odisha

4. SECTION II: Information to the Bidders

4.1 Pre-Qualification/Eligibility Criteria:

Before opening and evaluation of the technical proposals, each bidder will be assessed based on the following pre-qualification criteria. The bidder is required to produce the copies of the required supportive documents / information as part of their technical proposal failing which the proposals will be rejected.

Sr. No.	Pre-Qualification Criteria	Specific Requirement	Documents Required
1	**Legal Entity**	The Bidder must be registered as either of the following: a. Company under Companies Act, 1956/2013 or b. Partnership Firm registered under the Indian Partnership Act, 1932 or c. Joint Ventures (JV)/Consortium* or d. Limited Liability Partnership registered under The Limited Liability Partnership Act, 2008 registered	Registration documents of the Bidder as a duly registered legal entity in India along with: ● Registration document showing incorporation of the Bidder, ● Certified copy of registered Partnership Deed, ● PAN Card of the registered legal entity, ● GST certificate of the registered legal entity (Form GST REG-06), ● Any other supporting document, as may be required.
2	**OEM or Authorised Technology/ Channel Partner**	The bidder should be an original equipment manufacturer (OEM) or Authorised Channel Partner/Technology Partner of the OEM.	• **For Original Equipment Manufacturer (OEM)** - Copy of the manufacturing license, or • **For the Authorized Channel Partner/ Technology Partner:** An undertaking from the OEM is required stating that they would facilitate the Bidder on a regular basis with technology/product updates and extend support for the warranty as well and along with manufacturing license of OEM. (TECH-9)
3	**Operation**	The Bidder Firm should have been in operation in relevant field for the past **07 (seven) years** as on the date of issue of RFP and filed ITRs for the last three FYs (i.e., FYs 2022-23, 2023-24 & 2024-25)	Audited Financial Statements for the last three financial years duly sealed & signed by a Chartered Accountant in practice, along with ITR for the said periods and the latest GST Return (GSTR-3B). **Provisional Audit Report for any of the FYs will not be accepted.**
4	**Financial Capacity**	The Bidder shall have an average annual turnover of at least **Rs. 22.00 Crore** over the last three Financial Years i.e., FY: 2022-23, 2023-24 & 2024-25. This must be the Bidder's turnover and not that of group companies/ organizations.	Audited financial statements/CA certified true copy stating the turnover. Financial Details of the bidder (TECH - 3) along with copies of last three FY's Audited Financial Statement duly sealed &signed by a Chartered Accountant in practice.

5	**Net Worth**	i) The net worth of the Bidder firm (manufacturer or authorized partner) should not be negative in '**FY 2024-25**' and ii) also should have not eroded by more than 30% (thirty per cent) in the last three years, ending on '31st Mar'2025'.	A Certificate duly sealed & signed by a Chartered Accountant in practice with Registration Number
6	**ISO Certificate**	The Technology Partner/Channel Partner or the OEM company should have ISO 9001, ISO 14001 & ISO 45001 certification.	Copy of valid ISO certificates of the agency/ the OEM must be submitted.
7	**Past Experience**		
7.1	**Setting-up CoEs**	The bidder, during **last 03 (Three)** financial years must have the experience in i. Setting-up at least **01 (One)** Centre of Excellence (CoE) in same sector or execution of single work order involving supply of equipment/machineries of same sector with minimum order value of **Rs.10.00 Crore or above**, Or ii. Setting-up at least **02 (Two)** Centre of Excellences (CoEs) in same sector or execution of two work orders involving supply of equipment/machineries of same sector with minimum order value of **Rs.5.00 Crore or above each**, at any Government or Private organization/ Government or Private educational institute/ Government or Private training institute/ any Industry.	Copies of Relevant Work Orders/Sanction Orders/ Contract or MOUs/MOAs containing value of the supplies/ Work Completion Certificate/ Successful Project Completion and Performance Certificate/Commissioning Certificates or equivalent documentary evidence from the client should be provided as proof (TECH-5)
7.2	**Training & Placement**	The bidder must have experience of providing training to the minimum 100 trainees/students in last 03 years in similar sector and must achieved minimum 50% placements for 100 trainees trained and certified in last 03 years.	Bidder shall submit Documentary evidence: Draft agreements/ MoUs/ Work Orders with numbers/ completion certificates. & Documentary evidence: records of placement with average salaries – with contact details of employers.
8	**Quality Certification**	The bidder/vendor should have ISO/ISI Certification with every Machinery Test Certificate Mandatory as applicable.	Copy of valid ISO/ISI certificates along with Machinery Test Certificate as applicable.
9	**Mandatory Documents**	The bidder shall submit the Technical data in compliance with the technical specifications mentioned in the tender document (ToR).	Submission of product wise brochure & catalogues and relevant pages from the website with available technical data in compliance with the technical specifications mentioned in the ToR.
10	**Blacklist**	The Bidder shall not have been blacklisted by any Central / State Government Ministry in India or Public Sector Undertakings or any Government Agencies. Any Bidder that has been barred by the Central Government, any State Government, a statutory authority, or a	Notarized Undertaking by the Authorized Signatory (TECH-6)

		Public Sector Undertaking from participating in any project and the bar subsists as on the date of the Proposal Due Date, would not be eligible to submit a Proposal.	
11	***Consortium /Joint Venture**	Consortium /Joint Venture may be allowed but with a condition that OEM should be the lead partner and will be responsible for execution of contract. Sub-Contracting will not be allowed.	Submission of a consortium agreement, power of attorney for the lead partner, proof of legal status for each member (like registration or partnership deeds), and a GST registration certificate for the lead member. (TECH -7)
12	**Authorized Representative**	A Power of Attorney in the name of the person signing the proposal.	Original Power of Attorney (Notarized on a Rs.100/- Non-Judicial Stamp Paper) (TECH-4)
13	**No failure of performance**	A Bidder including any Associate should, in the last 3 (three) years, have neither failed to perform on any contract, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against the Bidder, or Associate, as the case may be, nor has been expelled from any project or contract by any public entity nor have had any contract terminated by any public entity for breach by such Bidder, or Associate.	The Director, DTE&T would place sole reliance on the certification provided by the Bidder in this regard in its Cover Letter. Any misrepresentation or concealment of any information in this regard shall render the Bid liable for outright rejection at the sole discretion of the Director, DTE&T.
14	**Bid Processing Fee (Non-Refundable)**	The Bidder shall furnish a Tender Fee of Non-refundable amount of Rs. 10,000/- + Rs. 1800/- (GST @18 %) = Rs. 11,800 (Rupees Eleven Thousand Eight Hundred Only).	Payment to be done through Demand Draft in favour of "DTE&T Odisha" & payable at Cuttack.
15	**Earnest Money Deposit (EMD) (Refundable)**	The Bidder shall furnish EMD amount equal to INR 10,00,000/- valid for minimum 225 days from last date of submission of bid.	EMD to be submitted in shape of Bank Guarantee/e-Bank Guarantee in favour of "DTE&T Odisha" from any scheduled commercial bank.

4.2 Documents to be submitted along with TECHNICAL BID (PART-A):

The bidder must furnish the following documents duly signed in along with their Technical Proposal:

- Filled in Bid Submission Check List in Original (Annexure-I)
- Covering letter (TECH – 1) on bidder's letterhead requesting to participate in the selection process
- Bid Processing Fee & EMD as applicable
- Copy of Certificate of Incorporation/ Registration
- Copy of PAN
- Copy of Goods and Services Tax Identification Number (GSTIN)
- Copies of IT Return for the last three financial years i.e., FY:2022-23, 2023-24 & 2024-25 and the copy of latest GST Return (in GSTR-3B)
- General Details of the Bidder (TECH – 2)

- Financial Details of the bidder (TECH – 3) along with all the supportive documents such as Balance Sheet and Income/ Expenditure Statement duly signed as per the instruction.
- Power of Attorney (TECH – 4) in favour of the person signing the bid on behalf of the bidder or Board of Directors
- List of setting-up of CoEs/supply of equipment/machines from same sector (Past Experience Details, (TECH – 5) along with copies of contracts / work orders / completion certificate from previous Clients (as provided in the RFP).
- Notarized Undertaking from the Bidder on not blacklisted (TECH - 6)
- Consortium Agreement (if Consortium/JV) (TECH-7)
- Technical Compliance Sheet (Requirements and specifications as per the ToR) (Tech-8)
- Manufacturing License or the Manufacturer's Authorization Form (TECH-9)
- Declaration regarding "Restrictions on procurement from a Bidder of a country which shares a land border with India" (TECH - 10)
- Bidder's Affidavit for Micro and Small Manufacturing Enterprises to get an exemption as per the Odisha Procurement Preference Policy (TECH - 11).
- Net worth Certificate duly sealed & signed by a Chartered Accountant.
- Copy of valid ISO/ISI certificates along with Machinery Test Certificate as applicable.
- Submission of product wise brochure & catalogues and relevant information on products supplies
- Certification in its Cover Letter by the Bidder regarding non-failure to perform on any contract

Note:

Bidders should submit the required supporting documents as mentioned above. Bids not conforming to the eligibility criteria and non-submission of required documents as listed above will lead to rejection of the bid. Submission of forged documents will also result in rejection of the bid. Bidders are advised to study all instructions, forms, terms & conditions, and other important information as mentioned in the RFP document. The proposal must be completed in all respect, indexed. Each page should be numbered and signed by the authorized representative. Client at its own discretion reserves the right to ask for clarifications/supporting documents at any time during evaluation.

4.3 In case of Joint Venture/Consortium

***Joint Venture (JV)/Consortium**

Two Companies/Agencies may jointly undertake contract(s). Each entity will be jointly and severally responsible for completing the task as per the contract.

Joint Venture/Consortium details:

Name of all Members of a JV/Consortium (not more than 2):

1. Lead Member (minimum participation share – 50%)
2. Other Member (minimum participation share – 20%)

Joint Venture/Consortium must comply the following requirements:

I. The qualifying criteria parameter e.g. past experience, financial capacity/turnover (of the relevant period) and other eligibility of the individual member of the JV/Consortium will be added together and the total criteria should not be less than as spelt out in qualifying/ Experience and Eligibility criteria as specified in e-tender Notice/ Bid document/ Experience and Eligibility Criteria.

II. In case the Bidder is a Joint Venture, the work experience of any one, or two of the individual Partners of JV or the JV itself may be furnished as the work experience of the Bidder.

Work Order, BOQ, TDS etc. may be sought during clarification or along with deficient documents, if felt necessary by the Tender Committee.

III. The formation of JV/Consortium or change in the JV/Consortium character/ members after submission of the bid and any change in the bidding regarding JV/Consortium will not be permitted.

IV. The bid, and in case of a successful bid - the agreement, shall be signed so as to legally bind all members jointly and severally and any bid shall be submitted with a copy of the JV/Consortium Agreement providing the joint and several liabilities with respect to the contract.

V. The bid submission must include documentary evidence to the relationship between JV/Consortium members in the form of JV/Consortium Agreement to legally bind all partners jointly and severally for the proposed agreement which should set out the principles for the constitution, operation, responsibilities regarding work and financial arrangements, participation (percentage share in the total) and liabilities (joint and several) in respect of each and all of the firms in the JV/Consortium. Such JV/Consortium Agreement must evidence the commitment of the parties to bid for the facilities applied for (if pre-qualified) and to execute the contract for the facilities if their bid is successful.

VI. One of the members shall be nominated as 'In-charge' of the contract and shall be designated as Lead Partner. This authorization shall be evidenced by submitting with the bid a Power of Attorney signed by legally authorized signatories of all the members.

All the partners of a JV/Consortium may together authorize the Lead Partner to submit the bid on behalf of the JV/Consortium, along with an undertaking that in case of a successful bid. the work shall be executed by the JV/Consortium as per contract terms of the bid document.

Note: This authorization must be a part of the JV/consortium agreement if the Bid is submitted by the lead partner on behalf of the JV/Consortium.

VII. The JV/Consortium must provide that the Lead Member shall be authorized to incur liabilities and receive instructions for and on behalf of any and all members of the JV /Consortium and the entire execution of the contract shall be done with active participation of the Lead Member.

VIII. The contract agreement should be signed by each JV/Consortium members. Subsequent declarations/letters/documents shall be signed by lead member authorized to sign on behalf of the JV/Consortium or authorized signatory on behalf of JV /Consortium.

IX. The bid should be signed by the person submitting the bid, duly authorized by all the members of the JV /Consortium.

X. An entity can be a member of only one JV /Consortium. Bid submitted by JVs /Consortium /Lead Partner, consisting of the common entities as member will be rejected.

XI. The JV /Consortium agreement may specify the share of each individual member for the purpose of execution of this contract. This is required only for the sole purpose of apportioning the value of the contract to that extent to individual member for subsequent submission in other bids if he intends to do so for the purpose of the qualification in that Bid.

XII. The earnest money / bids security can be submitted by the Joint Venture /Consortium or one or more partners of the Joint Venture /Consortium.

XIII. The JV /Consortium agreement must specifically state that it is valid for the project for which bidding is done. If JV/Consortium breaks up midway before award of work and during bid validity period bid will be rejected.

If JV /Consortium breaks up midway before award of work and during bid validity/after award of work/during pendency of contract, in addition to normal penalties as per provision of bid document, all the members of the JV /Consortium shall be debarred from participating in future bids for a minimum period of 24 months.

XIV. JV /Consortium agreement shall be registered in accordance with law so as to be legally valid and binding on the members before making any payment.

Note: If the work is awarded to a JV /Consortium firm, they will register the JV /Consortium agreement under Registration Act in accordance with law

XV. JV/Consortium shall open a bank account in the name of JV/Consortium and all payments due to the JV/Consortium shall be credited by purchaser to that account only. To facilitate statutory deductions all statutory documents like PAN, GST registration etc. shall be submitted by JV/Consortium at the time of execution of Agreement.

XVI. In case of JV /Consortium, PAN card for each partner of JV /Consortium must be submitted.

XVII. In case of Joint Venture/Consortium, the Bidder should submit Scanned Copy of GST status of Lead Partner of the Joint Venture/Consortium.

XVIII. Scanned copy of JV /Consortium Agreement as per **TECH-7** of General Terms and Conditions/SLA, containing name of partners and lead partner, Power of Attorney to the lead partner and share of each partner.

XIX. Power of Attorney of the respective partners from the Board of Directors of the concerned Company, or from the partners of the entity, or from the proprietor, authorizing the signatory of JV /Consortium agreement on behalf of them;

XX. The document(s) (any of them as applicable) regarding legal status of all the individual partners of JV /Consortium mentioned below:

a) Affidavit or any other document to prove proprietorship/Individual status of the Bidder,

OR

b) Partnership deed containing name of partners.

OR

c) Memorandum & Article of Association with certificate of incorporation containing name of Bidder.

1. **Bid Processing Fee (Non-Refundable):**

The bidder must furnish as part of technical Bid, the required bid processing fee amounting to **Rs. 10,000/- + Rs. 1800 (GST @18 %) = Rs. 11,800 (**Rupees Eleven Thousand Eight Hundred) through Demand Draft in favour of "DTE&T Odisha" & payable at Cuttack. 'Bid Processing Fee' must reach DTE&T Office at least 3 days before the last date of bid submission. Proof of submission must be attached with the technical bid. Bids received without bid processing fee will be rejected.

2. **Earnest Money Deposit (EMD):**

The bidder must furnish, as part of the technical Bid, an Earnest Money Deposit (EMD) amounting equal to **INR 10,00,000/-** in shape of Bank Guarantee/e-Bank Guarantee in favour of "DTE&T Odisha" from any scheduled commercial bank and valid for minimum 225 days from the last date of submission of bids. Bids received without EMD will be rejected. 'Bid Security' must reach DTE&T Office at least 3 days before the last date of bid submission. Proof of submission must be attached with the technical bid.

The EMD amount is interest free and would be refunded to the unsuccessful Bidders within 30 Days of the Bidder being notified as being unsuccessful. The EMD, for the amount mentioned above, of the successful Bidder would be returned within 60 Days, only after furnishing the required Performance Security and signing of the contract. The EMD will be forfeited on account of the following reasons:

- A Bidder engages in a corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice as envisaged under this RFP (including the standard form of Work Order); or,
- If any Bidder withdraws its Proposal during the Bid Validity Period as specified in this RFP and as extended by the Bidder from time to time; or,
- In the case of the Selected Bidder, if the Selected Bidder fails to accept the Work Order or execute the Contract or fails to furnish the Performance Security within the specified time limit; or,
- If the Bidder commits any breach of terms of this RFP or is found to have made a false, representation to the client.

3. **Performance Security:**

a. The successful bidder, within 15 days after the receipt of notification of award of the Contract (LoA) from DTE&T, shall furnish Contract Performance Guarantee to the DTE&T, Odisha which shall be equivalent to 5% of Total Bid Value (excluding taxes) and shall be in the form of a Bank Guarantee /e-Bank Guarantee from any of the commercial banks in India in the Performa given here-in-after in this document valid initially 68 months and may be extended beyond three years of completion of warranty period from the date of award of Contract as specified in the document.

b. The proceeds of the performance guarantees shall be payable to the DTE&T, Odisha as compensation for any loss/ penalties resulting from the Selected Bidders failure to complete its obligations under the Contract.

c. The performance guarantee will be released by DTE&T, Odisha and returned to the Selected Bidder after 60 days of completion of warranty period subject to fulfillment of all obligations on recommendation of respective Principal.

4. Proposal Validity:

Proposal shall remain valid for a period of **180 (One Hundred Eighty) days** from the date of opening of the technical proposal. The Client reserves the right to reject a proposal valid for a shorter period as non-responsive and will make the best efforts to finalize the selection process and award of the contract within the bid validity period. The bid validity period may be extended on mutual consent. If agreed upon, the bid security so deposited shall also be suitably extended.

5. Pre- Proposal Queries and Meeting:

The Bidder may request a clarification of any part of the RFP prior to the last date for submission of queries through email, as indicated in the Bidder's Data Sheet. Bidders are allowed to submit their queries in respect of the RFP and other details if any, to DTE&T in the following format.

Sl	Section/Page No and RFP Clause reference.	Content of RFP requiring clarifications	Queries/ Change/Clarification requested

A Pre-Bid meeting will be organized by DTE&T to address the queries relating to the overall selection process and scope of the work through Hybrid Mode (both **virtual & physical mode) as per the timeline mentioned in the Data Sheet**. The client will address the queries submitted by the bidders.

i. The purpose of Pre-Bid discussion is to provide the Bidders with information regarding the RFP, project requirements, and opportunity to seek clarification regarding any aspect of the RFP and the project. However, DTE&T, Odisha, reserves the right to hold or to reschedule the Pre-Bid meeting.
ii. DTE&T, Odisha shall not be responsible for ensuring that the Bidder's queries have been received by them. Any requests for clarifications received after Pre-Bid meeting will not be entertained.
iii. However, DTE&T, Odisha makes no representation or warranty as to the completeness or accuracy of any response made in good faith, nor does it undertake to answer all the queries that have been submitted by the Bidders
iv. The Client's responses to Bidder queries will be made available to all Bidders and shall be uploaded on the Client's website. It shall be the Bidder's responsibility to check the Client's website for the responses to the queries or requests for clarification.
v. Any such corrigendum shall be deemed to be incorporated into this RFP and binding on all Bidders.

6. Submission of Proposals:

The bid should be submitted through Online mode only in **www.tendersodisha.gov.in**.

The tender is to be submitted electronically in two separate Cover No.1 (Technical Cover) and Cover No. 2 (Financial Cover) and contents as indicated below:

Cover No.1 (Technical Cover)

The bidder must furnish the following documents duly signed in along with their Technical Proposal:

- Filled in Bid Submission Check List in Original (Annexure-I)
- Covering letter (TECH – 1) on bidder's letterhead requesting to participate in the selection process
- Bid Processing Fee & EMD as applicable
- Copy of Certificate of Incorporation/ Registration
- Copy of PAN
- Copy of Goods and Services Tax Identification Number (GSTIN)

- Copies of IT Return for the last three financial years i.e., FY:2022-23, 2023-24 & 2024-25 and the copy of latest GST Return (in GSTR-3B)
- General Details of the Bidder (TECH – 2)
- Financial Details of the bidder (TECH – 3) along with all the supportive documents such as Balance Sheet and Income/ Expenditure Statement duly signed as per the instruction.
- Power of Attorney (TECH – 4) in favour of the person signing the bid on behalf of the bidder or Board of Directors
- List of setting-up of CoEs/supply of equipment/machines from same sector (Past Experience Details, (TECH – 5) along with copies of contracts / work orders / completion certificate from previous Clients (as provided in the RFP).
- Notarized Undertaking from the Bidder on not blacklisted (TECH - 6)
- Consortium Agreement (if Consortium/JV) (TECH-7)
- Technical Compliance Sheet (Requirements and specifications as per the ToR) (Tech-8)
- Manufacturing License or the Manufacturer's Authorization Form (TECH-9)
- Declaration regarding "Restrictions on procurement from a Bidder of a country which shares a land border with India" (TECH - 10)
- Bidder's Affidavit for Micro and Small Manufacturing Enterprises to get an exemption as per the Odisha Procurement Preference Policy (TECH - 11).
- Net worth Certificate duly sealed & signed by a Chartered Accountant.
- Copy of valid ISO/ISI certificates along with Machinery Test Certificate as applicable.
- Submission of product wise brochure & catalogues and relevant information on products supplies
- Certification in its Cover Letter by the Bidder regarding non-failure to perform on any contract.

In Case of Joint Venture/Consortium, the above mentioned documents (Point No.4.3) must be submitted along with technical proposal.

Cover No.2 (Financial Cover)

Price Bid. (Cover -2 in BoQ Ms-Excel format.)

The following supporting documents to be attached (in PDF format) with the seal & signature of the signing authority along with the Price Bid (BoQ Ms-Excel format) within the Cover-2.

1. FIN-1: Financial Bid covering letter.
2. Annexure: Equipment wise cost breakup

The offer must be submitted in Two Bid - Two covers only though uploading in the eProcuremnet Portal, before the last date & time for bid submission.

Tender document (s) and all enclosures must contain the signature of the competent authority of the firm.

7. Evaluation of Proposals

A Three stage evaluation process will be conducted as explained below for evaluation of the proposals:

A. Preliminary Evaluation (1st Stage):

Preliminary evaluation of the proposals will be done to determine whether the proposal complies with the prescribed eligibility condition and the requisite documents / information have been properly furnished by the bidder or not. Submission of documents/ information as per Pre-Qualification/Eligibility Criteria will be verified.
The bidder is required to produce the copies of the required supportive documents/information as part of their technical proposal failing which the proposals will be rejected.

B. Technical Evaluation (2nd Stage):

Technical proposal will be opened and evaluated for those bidders who qualify the preliminary evaluation stage. Detailed evaluation process as per the following parameters will be adopted for proposal evaluation:

Sl. No.	Criteria	Maximum Mark	Documents Required
1	**Financial Capacity & Experience**	**30 Marks**	
1.1	**Turnover:** The Bidder should have an Average annual turnover of Rs. **22.00 Crore** in the last three financial years **(i.e., FY: 2022-23, 2023-24 & 2024-25).** *Scoring Criteria:* • Greater than or equal to Rs.22 Crore and less than Rs.50 Crore: **05 Marks** • Greater than or equal to Rs.50 Crore: **10 Marks**	**10**	Financial details of the Bidders in TECH-3 duly signed by the CA
1.2	**Past Experience:** The bidder, during **last 03 (Three)** financial years must have experience in Setting-up of Centre of Excellence (CoE) in any Government or Private organization/ Government or Private educational institute/ Government or Private training institute/ any Industry same sector or execution of work order involving supply of equipment/ machineries of same sector with order value as follows. *Scoring Criteria:* • For every work order value of Rs.10 Crore or more: **10 Marks will be given.** • For every work order value more than or equal to Rs.5 Crore but less than Rs.10 Crore: **05 Marks will be given.** (Maximum up to 20 marks)	**20**	Copies of Relevant Work Orders/ Sanction Orders/ Contract, MOUs containing value of the work/ Work Completion Certificate/ Successful Project Completion and Performance Certificate/ Commissioning Certificates or equivalent documentary evidence from the client should be provided as proof (TECH-5)

2	**Quality, Training & Placement**	**60 Marks**	
2.1	**Quality of proposed equipment/ machines:** Quality of the proposed Equipment/ Machines with respect to the technical specifications offered by the bidder, subjected to adherence of technical specifications asked for	**50**	Technical Compliance Sheet **(Tech-8)** with Submission of product wise brochure & catalogues and relevant pages from the website with available technical data in compliance with the technical specifications mentioned in the tender document.
2.2	**Experience in providing Training:** **<u>Training</u>** Bidder during last 03 financial years must have experience of imparting training to the minimum trainees/Students: • Trained and certified to 100 – 200 students: **05 marks** • trained and certified to more than 200 students: **10 marks**	**10**	**Documentary Evidence:** **Training:** Draft agreements/ MoUs/ Work Orders with numbers/ completion certificates
3	**Technical Presentation**	**10 Marks**	
3.1	**Technical PPT Presentation:** • Understanding the scope of work – **02 Marks** • Methodology and Implementation – **02 Marks** • Response to questions **- 02 Marks** • Proposed Plan for Training and Certification of Trainees – **02 Marks** • Placement plan for certified trainees etc.- **02 Marks**	**10**	
	Grand Total (1 + 2 + 3)	**100**	

- **The minimum qualifying mark is: 70**
- **Bidder has to score at least 50% in each category i.e. (1.1 to 1.2, 2.1 to 2.2 & 3.1).**
- **Bidder must score at least 70% to qualify for opening of Financial Bid.**
- **The scores provided by the Technical Committee will be considered as final.**
- **The Technical PPT presentation on Bidder's proposals includes description of products make, model & proposed specifications of items in their Technical Proposal, past experience, objective, proposed plan, approach and methodology etc.**

Selection of Bidder

All responsive Bids will be considered for further processing as below:

a. Technical Evaluation Committee will prepare a list of responsive Bidders, who comply with all the Terms and Conditions of the Tender. All eligible bids will be considered for further evaluation by the Committee according to the evaluation process defined in this RFP document. The decision of the committee will be final and binding on all bidders and cannot be questioned at any stage of evaluation.

b. DTE&T reserves the right to ask for a technical elaboration/clarification in the form of a technical presentation from the Bidder on the already submitted Technical Proposal at any point of time before opening the Financial Proposal by providing at least 3 days of advance notice.

c. DTE&T, Odisha also reserves the right to seek confirmation/clarification from the issuing agency for the supporting documents submitted by the bidder. To assist in the examination, evaluation and comparison of the bids, and qualification of bidders, the committee may, at its discretion, ask any bidder for a clarification of its bid. The committee's request for clarification and the response shall be in writing through approved mode only and no other mode shall be entertained. Any clarification submitted by a bidder that is not in response to a request shall not be considered.

d. If any bidder fails to provide the requested presentation/clarification/information within the stipulated date and time given by the DTE&T, Odisha, the bid shall be technically disqualified. The request for clarification and the response shall be in writing, without any alterations regarding the price or substance of the bid submitted.

e. Further the scope of evaluation committee also covers taking any decision regarding the Tender document, execution/ implementation of the project including management period.

f. A detailed evaluation of the bids shall be carried out by the Technical Evaluation Committee in order to determine whether the Bidders are competent enough and whether the technical aspects are substantially responsive to the requirements set forth in the RFP document. The bidders must submit the Make, Model, Features, and Technical Specifications along with the images of equipment for which they are submitting the bid. Bidders may propose better technical specifications which may fit for the labs.

g. Bidders failing to comply with any of the above then the Bid will be summarily rejected. Bidders who score at least 70% marks in Technical Evaluation criteria set forth in this RFP document will be eligible for opening of their Financial Bid. If a bid does not meet minimum score, it will be deemed technically non-compliant and will not proceed to the financial evaluation.

h. Bidders are requested to visit the respective proposed institute for setting-up the CoE and they need to project thru 3D view, how they are planning to setup the labs and place all equipment at CoE.

i. The bidders are expected to provide following details along with their technical bids.
   - Detailed 3D design (in CAD format) of the CoE along with 3D view of the lab and specifications of proposed Civil, Electrical, Plumbing works, Furniture & Fittings etc.
   - Detailed Execution Plan
   - Human Resource Deployment Plan/ CV of proposed trainers.
   - Project Delivery Plan
   - Plan for Industry-Academia GAP analysis and preparation of industry relevant Course Curriculum.
   - Assessment and Certification Plan
   - Placement Plan
   - any suggestions (if any)
   - Other Requirements (if any)

C. Evaluation of Financial Proposal (3rd Stage)

The financial proposals shall be opened on the prescribed date in the presence of the bidder/bidder's representative who wishes to attend the meeting with proper letter of authorization. The name of the bidder along with the quoted financial price will be announced during the meeting.

1. The financial bids of bidders whose bids have been technically qualified (i.e., obtained minimum **70 marks** in Technical Evaluation) shall be opened by the Committee on the date and time specified in the RFP
2. Least Cost Selection (LCS) method will be followed during the Financial Evaluation and overall selection process.
3. Price Quoted without tax (as applicable) of the following will be considered together for Evaluation of the Financial Bid Evaluation.
   I. Total Cost of the Project
   II. Total Cost of Comprehensive Annual Maintenance Contract (CAMC) for 03 Years
4. The bidder with Lowest Quoted Price (L1) will be considered as Final Selected Bidder.
5. In case two or more bidders quoted the same prices, the Committee shall decide on the L1 bidder based on the following tie-breaking criteria:
   i. The bidder's turnover for the financial year 2024-25 will be considered first.
   ii. If the tie persists, the turnover for the financial year 2023-24 will be considered.
   [If further tie-breaking is required, the turnover for the financial year 2022-23 will be considered.
   iii. If the tie remains unresolved after considering the above financial years, the L1 bidder will be determined by a draw, which will take place in the presence of the concerned bidders. The Committee's decision on this matter should be final and binding.
6. If a tenderer submits a bid with what appears to be predatory pricing or an abnormally low bid, the Tender Evaluation Committee may request a written clarification from the bidder. The bidder will be asked to provide a detailed price analysis, price break up, or justification of the quoted price, considering the scope, schedule, risk allocation, and any other requirements outlined in the tender documents.
   If, after reviewing the price analysis or justification, the bidder fails to provide adequate supporting documentation, evidence, or calculations to substantiate the quoted price, the Committee may, at its sole discretion, reject the bid.

8. Contract Negotiations:

Contract negotiation, if required will be held at a date, time and address as intimated to the selected bidder/s. The bidder will, as a pre-requisite for attendance at the negotiations, confirm availability of all the proposed staff or the assignment. Representative conducting negotiations on behalf of the bidder must have written authority to negotiate and conclude a contract.

9. Award of Contract:

a. Being the lowest bidder (L1) is not the sole criterion for the award of the contract. The feasibility of the lowest quoted price will be assessed by the Committee, taking into consideration the relevant rules, terms and conditions outlined in the tender. The Committee's decision in this regard will be final and binding on all parties involved. Upon completion of the evaluation process, the contract will be awarded to the bidder who quoted the lowest price (L1) and complies with all applicable laws, regulations, and provisions stated in the tender.

b. DTE&T shall inform those Bidders whose Proposals did not meet the requirement or were considered non-responsive, informing them that their Financial Proposals will not be opened after completing the selection process. DTE&T shall simultaneously notify those Bidders who technically qualify on the Technical Evaluation process, informing them of the date and time set for opening of the Financial Proposals.

c. The Bidder's name, the Proposal Price, the total amount of each Proposal and other such details, will be announced and recorded by the DTE&T at the opening of Proposal.

d. After acceptance of LoA (Letter of Award) of Contract, Performance Security has to be deposited as specified in this document for signing an Agreement with DTE&T.

e. The selected Agency shall sign the Agreement within 21 (twenty-one) days from the issuance of LoA (Letter of Award) of Contract:
   i. DTE&T will sign the Agreement with the successful Bidder for a period as mentioned in 'Duration of Contract' in the document.
   ii. DTE&T may extend the Agreement for a time period beyond what has been specified in 'Duration of Contract' in the document.
   iii. DTE&T will also have the right to provide extension/ increase in the scope of work as per the mutually agreed terms and conditions between both the parties.

f. In case of unsatisfactory or rejection of equipment or performance of L1 bidder, only L2 bidder will be invited for negotiation to supply and fulfill the contract at L1 prices.

10. Payment Modalities:

Payment will be made to the selected company as per the schedule mentioned on achieving milestones/agreed work plan as per the Section-7 (Deliverables & Payment Schedule).

11. Duration of Contract and other timelines:

The contract shall be valid initially for a period of 66 months from the date of issuance of LOA and other timelines are detailed below.

i. **Supply of equipment/machines:** 4 months from the date of signing the Contract.
ii. **Installation & commissioning:** 1 months from the date of receiving site readiness confirmation from the Principal of respective Institute.
iii. **Comprehensive Maintenance Warranty:** 60 months from the date of successful commissioning.

12. Conflict of Interest:

A Bidder shall not have a conflict of interest (the "Conflict of Interest") that affects the Bidding Process. Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, the Authority shall be entitled to forfeit and appropriate the Bid Security, as mutually agreed genuine pre-estimated loss and damage likely to be suffered and incurred by the Authority and not by way of penalty for, inter alia, the time, cost and effort of the Authority, including consideration of such Bidder's proposal (the "Damages"), without prejudice to any other right or remedy that may be available to the Authority under the Bidding Documents and/ or the Agreement or otherwise. Without limiting the generality of the above, a Bidder shall be deemed to have a Conflict of Interest affecting the Bidding Process, if:

- The Bidder or its Associate and any other Bidder or its Associate thereof have common controlling shareholders or other ownership interests.
- A constituent of such Bidder is also a constituent of another Bidder; or
- Such Bidder or any Associate thereof receives or has received any direct or indirect subsidy, grant, concessional loan or subordinated debt from any other Bidder or any Associate thereof or has provided any such subsidy, grant, concessional loan or subordinated debt to any other Bidder or any Associate thereof; or
- Such Bidder has the same legal representative for purposes of this Bid as any other Bidder; or
- Such Bidder, or any Associate thereof has a relationship with another Bidder, or any Associate thereof, directly or through common third party/ parties, that puts either or both of them in a position to have access to each other's information about, or to influence the Bid of either or each other; or
- Such Bidder, or any Associate thereof has participated as a consultant to the Authority in the preparation of any documents, design or technical specifications of the Project.

13. Disclosure:

a. Bidders have an obligation to disclose any actual or potential conflict of interest. Failure to do so may lead to disqualification of the bidder or termination of its contract.
b. Bidders must disclose if they are or have been the subject of any proceedings (such as blacklisting) or other arrangements relating to bankruptcy, insolvency or the financial standing of the Bidder, including but not limited to appointment of any officer such as a receiver in relation to the Bidder's personal or business matters or an arrangement with creditors, or of any other similar proceedings.
c. Bidders must disclose if they have been convicted of, or are the subject of any proceedings relating to:
    - Criminal offence or other serious offence punishable under the law of the land, or where they have been found by any regulator or professional body to have committed professional misconduct;
    - Corruption including the offer or receipt of an inducement of any kind in relation to obtaining any contract;
    - Failure to fulfill any obligations in any jurisdiction relating to the payment of taxes or social security contributions.

14. Anti-corruption Measure:

- Any effort by Bidder(s) to influence the Client in the evaluation and ranking of financial Bids, and recommendation for award of contract, will result in the rejection of the Bid.
- A recommendation for award of Contract shall be rejected if it is determined that the recommended bidder has directly, or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the contract in question. In such cases, the Client shall blacklist the bidder either indefinitely or for a stated period of time, disqualifying it from participating in any related bidding process for the said period.

15. Force Majeure

"Force Majeure" means an event which is beyond the reasonable control of a Party, and which makes a Party's performance of its obligations here under impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by government agencies.

Force Majeure shall not include: (i) any event which is caused by the negligence or intentional action of a Party or agent's employees thereof, nor (ii) any event which a diligent Party could reasonably have been expected to take into account or avoid or overcome in the carrying out of its obligations during the subsistence of this Agreement. Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

16. Language of Proposals:

The proposal and all related correspondence exchanged between the bidder and the Client shall be written in the English language. Supporting documents and printed literature that are part of the proposal may be in another language provided they are accompanied by an accurate translation of the relevant passages in English with self-certification for accuracy, in which case, for the purposes of interpretation of the Proposal, the translated version shall govern.

17.Cost of bidding:

The Bidder shall bear all costs associated with the preparation and submission of its proposal. The Client shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process. Bidder/s is/are not allowed to submit more than one proposal under the selection process. Alternate bids are also not allowed.

18. Legal Jurisdiction:

All legal disputes are subject to the jurisdiction of competent court of Cuttack /Bhubaneswar only.

19. Governing Law and Penalty Clause:

The schedule given for delivery is to be strictly adhered to in view of the strict time schedule. Any unjustified and unacceptable delay in delivery shall render the bidder liable for liquidated damages and thereafter the Client holds the option for cancellation of the contract for pending activities and complete the same from any other Bidder. The Client may deduct such sum from any money from their hands due or become due to bidder. The payment or deduction of such sums shall not relieve the bidder from his obligations and liabilities under the contract. The rights and obligations of the Client and the bidder under this contract will be governed by the prevailing laws of Govt of India/ Odisha.

i. Notwithstanding the right of DTE&T, Odisha to cancel the order, Delay Charges for late delivery at 0.5% (Half percent) of the undelivered portion of order value per week will be charged for every week's delay in the specified delivery schedule subject to a maximum of 5% of the value of the contract. Delay Charges should be recouped from pending payment or Performance Security as per the payment schedule. No Delay Charges will be charged in case of circumstances beyond control of the selected Bidder. The decision of the authority placing the contract, whether the delay in delivery has taken place on account of reasons attributed to the bidder shall be final.
ii. Please note that the above Delay Charges for delay in delivery and delay in commissioning are independent of each other and shall be levied as the case maybe.
iii. DTET, Odisha reserves its right to recover these amounts from Performance Guarantee and the payments due to the bidder as per the payment schedule. Delay Charges will be calculated on per week basis.
iv. The cumulative and aggregate limit of Delay Charges for delay in delivery and Delay Charges for delay in commissioning would be limited to maximum of 5% of the total Bid Value. The aggregate liability of the selected Bidder shall in no event exceed the total Bid Value under this Contract.
v. Delay charges shall also be applicable for delay in Comprehensive Warranty (CMC) during the warranty period i.e. 60 months from the date of successful commissioning. For every week's delay, 0.5% (Half percent) of order value (excluding taxes) will be charged for the specified CMC schedule mentioned in the Section-5 (Point No.V), subject to a maximum of 5% of the value of the contract.

20. Client's right to accept any Bid, and to reject any or all Bid/s

The Client reserves the right to accept or reject any Bid, and to annul or amend the bidding / selection / evaluation process and reject all Bids at any time prior to award of contract award, without assigning any reason there of and thereby incurring any liability to the bidders. Misrepresentation/improper response/ by the bidder may lead to the disqualification of the bid. If such disqualification/rejection occurs after the Bids have been opened and the highest-ranking bidder gets disqualified/rejected, then the client reserves the right to consider the next best bidder, or take any other measure as may be deemed fit in the sole discretion of the Client, including annulment of the selection Process.

21. Number of Bids:

Each Bidder shall submit only one (1) Bid, in response to this RFP. Any Bidder who submits or participates in more than one Bid shall be disqualified. The Bidder shall be responsible for all costs associated with the preparation of its Bid and its participation in the bidding process.

22. Amendment of the RFP Document:

At any time before submission of proposals, the Client may amend the RFP by issuing an addendum through Department website. Any such addendum will be binding on all the bidders. To give bidders reasonable time in which to take an addendum into account in preparing their proposals, the Client may, at its discretion, extend the deadline for the submission of the proposals.

23. Confidentiality:

Information relating to evaluation of proposals and recommendations concerning awards shall not be disclosed to the bidders who submitted the proposals or to other persons not officially concerned with the process, until the publication of the award of contract. The undue use by any Consultant of confidential information related to the process may result in rejection of its proposal and may be subject to the provisions of the Client's antifraud and corruption policy. During the execution of the assignment except with prior written consent of the Client, the consultant or its personnel shall not at any time communicate to any person or entity any confidential information acquired in the course of the contract.

24. Settlement of Dispute:

The Client and the Bidder shall make every effort to resolve amicably, by direct negotiation, any disagreement or dispute arising between them under or arising from or in connection with the contract. All claims and disputes arising under or relating to this Agreement are to be settled by binding arbitration in the state of Odisha. An award of arbitration may be confirmed in a court of competent jurisdiction. Arbitration shall be as per Indian Arbitration Act, 1996.

Disputes not so resolved amicably within 30 days of receipt of notice of such as a dispute shall be resolved by Commissioner –cum-Secretary to Government, SD&TE Department, Government of Odisha which is binding and final.

25. Disqualification of Proposal:

The proposal is liable to be disqualified in the following cases as listed below:

- Proposal submitted without Bid Processing Fee & EMD as applicable
- Proposal not submitted in accordance with the procedure and formats as prescribed in the RFP
- During validity of the proposal, or its extended period, if any, the bidder increases his quoted prices
- Proposal is received in incomplete form
- Proposal is received after due date and time for submission of bid
- Proposal is not accompanied by all the requisite documents / information
- A commercial bid submitted with assumptions or conditions
- Bids with any conditional technical and financial offer
- If the bidder provides any assumptions in the financial proposal or qualifies the commercial proposal with its own conditions, such proposals will be rejected even if the commercial value of such proposals is the lowest / best value
- Proposal is not properly sealed or signed
- Proposal is not conforming to the requirement of the scope of the work of the assignment.
- Bidder tries to influence the proposal evaluation process by unlawful/corrupt/fraudulent means at any point of time during the bid process

- If, any of the bid documents (including but not limited to the hard and soft/electronic copies of the same, presentations during evaluation, clarifications provided by the bidder), excluding the commercial bid, submitted by the bidder is found to contain any information on price, pricing policy, pricing mechanism or any information indicative of the commercial aspects of the bid;
- Bidders or any person acting on its behalf indulges in corrupt and fraudulent practices
- Any other condition / situation which holds the paramount interest of the Client during the overall section process.

26. Fraud and Corrupt Practices

The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Bidding Process. Notwithstanding anything to the contrary contained herein, Director, DTE&T may reject a Bid without being liable in any manner whatsoever to the Bidder, if it determines that the Bidder, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bidding Process. In such an event, Director, DTE&T shall be entitled to forfeit and appropriate the Bid Security or Performance Security, as the case may be, as Damages, without prejudice to any other right or remedy that may be available to Director, DTE&T under the Bidding Documents and/ or the Agreement, or otherwise.

Without prejudice to the rights of the Director, DTE&T herein above and the rights and remedies which Director, DTE&T may have under the RFP, or otherwise if a Bidder is found to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Bidding Process such Bidder, at the sole and absolute discretion of Director, DTE&T, shall not be eligible to participate in any tender or RFP issued by Director, DTE&T during a period of 2 (two) years from the date such Bidder, is found to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practices, as the case may be. The following terms shall have the meaning hereinafter respectively assigned to them.

5. SECTION III: Terms of Reference (ToR)

"RFP for establishment of CoE in Advanced Mechatronics at Govt. ITI Balugaon".

I. Introduction:

The Directorate of Technical Education and Training, Odisha, having its principal office at Killa Maidan, Buxi Bazaar, Cuttack-753001(herein after referred to as the "DTE&T" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and permitted assigns), looks after technical education at Technical Institutes/Colleges, Diploma and formal CTS training at ITI level. It also provides Dual System Training, On-the-Job Training, Apprenticeship Training in order to prepare the Youth suitable for gainful wage and self-employment through Nano Unicorn Project of OSDA for a decent livelihood.

The goal of the DTE&T is to aims upgrade Government Industrial Training Institutes (ITls) into advanced skill development hubs by establishing Centres of Excellence (CoEs) equipped with state-of-the-art, industry-integrated laboratories, smart classrooms, and technology-enabled learning facilities. These CoEs will act as anchor institutions for providing high-quality vocational training, future-ready skilling, and continuous faculty development.

Each CoE will serve not only its host ITI but also extend training, resources, and technical support to nearby lTls, thereby fostering an ecosystem of excellence, and industry-readiness across the State.

DTE&T invites proposals from the leading OEM/Authorised Channel Partner/Authorised Technology Partner of OEM having experience of setting-up Centre of Excellences (CoEs) in similar sectors or supply, installation and commissioning of the similar advanced lab equipment.

II. Objective:

- To align training with emerging industry requirement and future technologies through industry partnerships for offering specialized courses in high-demand sectors.
- To upgrade lTls with industry-standard equipment, advanced laboratories, and modern infrastructure to deliver training at par with global benchmarks.
- To strengthen faculty capacity in pedagogy, advanced technologies, and digital tools for ensuring quality learning outcomes.
- To enhance employability by providing soft skills, exposure to best practices, and industry-academia linkages through curriculum co-design, apprenticeships, and dual-training models.

These centers should be on Build, Operate and Transfer Mode. All the Hardware should be of industrial standards. The software should not be restricted to educational limits. Should be provided with industrial features allowing DTE&T to offer Industrial consultancy apart from the skill development.

DTE&T shall provide the lab infrastructure with required space with electrical power supply, water supply (if required), furniture and other pre-requisite amenities before supply of equipment. The role of the successful bidder shall be to design and set up the CoEs on turnkey basis. (including complete setup of CoEs, supply and installation of equipment/machineries, commissioning & maintenance, and provide hand-holding support for minimum 3 (three) years which may be extended further (if needed) with mutual agreement. The selected bidder will be responsible for Comprehensive Warranty for 60 months, and provide operational training (as per the requirement) to the nominated staff from the consignee institutes.

III. Scope of the Project

The mission of establishing Centre of Excellences are to promote advancement and implementation of automation concepts through Skill Development of students in state of Odisha along with self-sustainability of the institute through technology support services to the industries.

These CoEs, to be designed by the Technology Partner (TP), is envisioned to be setup as a State of the Art Centre of Excellences (CoEs) in which the TP brings in their best-in-class equipment/ tools/ machines/ software (commonly referred to as equipment) to be used for training purposes. These CoEs will be located in an appropriate space offered by the DTE&T. These CoEs will be managed professionally by the Technology Partner. The infrastructure for the CoE will be made ready by Technology partner as per the proposed design by them and the specifications finalized and provided by DTE&T Odisha.

These CoEs will run under the overall operational management of the CoE Management Committee. The CoE Management Committee, under the Guidance of the DTE&T Odisha, will be responsible for devising and implementing a three-year rolling plan and ensuring that these CoEs are constantly upgraded and provides a high technology ecosystem for skilling/ up- skilling/ re-skilling/ cross-skilling and multi-skilling. The Technology Partner, under the Guidance of the CoE Management Committee, will be expected to assist the DTE&T Odisha to mobilize students from other Private Technical Training Institutes/employees from the relevant industries for skilling, upskilling or re-skilling training, which will help to generate internal revenues (IRG) at these CoEs, and can help in the sustainability of these CoEs.

Overall monitoring, administrative, quality and financial responsibilities including the management of these CoEs, management of hostels etc. will be the responsibility of the DTE&T. But, marketing, branding, development of training course content, training plan, deployment of technical experts to provide training, assessments, award certificates to the successful trainees/trainers, provide placement to the successfully certified trainees etc. will be the responsibilities of the Technology Partner.

A- Scope of DTE&T (the Buyer/Client):

The scope of work of the DTE&T inter alia states that;

I. DTE&T shall provide required space in the lab along with design/layout of the labs within the premises of the Govt. ITIs and Polytechnics/Engineering Schools.
II. Facilitate additional space (covered area) if required upon availability at the institute premises at free of cost.
III. Provide basic amenities like approach road and water supply (if required) nearest to the lab for running the machinery/equipment. Three phase electrical connection at nearest distribution/panel board will be provided at the designated labs by the consignee institutes.
IV. Required space, furniture, air conditioners (if required) etc. will be provided by DTE&T Odisha.
V. Conduct Pre-Delivery Inspection of sample equipment through Physical mode by its own technical experts or 3rd party agency/consultants/advisors appointed by DTE&T before the proposed equipment dispatch by the selected bidder and Post Delivery Inspection of all equipment by its own technical experts or by an independent agency appointed by DTE&T at any point of time. The operational expenses like testing the machines/equipment will be borne by the supplier.
VI. Provide the requisite hostel facilities for the students/trainees to be trained from other Govt. ITIs/Polytechnics within the existing infrastructure of the institute.
VII. CoEs, may train the passed-out trainees for nearby private ITIs & Polytechnics as a value addition course, on the fees as fixed by CoE Management Committee. CoE can generate revenue through fees deposited by the admitted trainees and provide skilling, upskilling/re-skilling training to the trainees from other private institutes.
VIII. CoE may train the semi-skilled technicians of nearby industries on payment, as fixed by CoE Management Committee.

IX. DTE&T Odisha and the consignee institutes will be responsible to monitor the performance of the Selected Bidders and progress of the work.

B- Scope of the Successful Bidder:

1. These CoEs, to be designed by the OEM/Technology Partner, is envisioned to be setup as a State of the Art Centre of Excellences (CoE) in which the selected company brings in their best-in-class equipment/ tools/ machines/ software (commonly referred to as equipment) to be used for training purpose. Selected Bidder must supply all machines/equipment compliant with ISO/ISI/BIS/CE or equivalent certification. Equipment wise relevant certificates must be submitted with the technical bids.
2. Supply, installation and commissioning of all machines/equipment in compliance to the technical specifications mentioned in Section-6 of the RFP, will be done by the Selected Bidders to setup these CoEs at the consignee institutes.
3. Complete lab infrastructure readiness including necessary civil works for installation and commissioning of the equipment, electrical connections from nearest distribution panel board to the machines, plumbing (if required) and other works to setup these CoEs and installation of the equipment/machines at these CoEs, falls within the ambit of scope of work of selected bidder.
4. All necessary works including minor civil (i.e. earthling/grounding of the machines), electrical (i.e. all type of cables connections, circuit breakers etc. required for connecting power supply point to machine), plumbing and other works for the installation & commissioning of the equipment/machines at the designated labs, falls within the ambit of scope of work of selected bidder.
5. Required Room/space, Furniture, Air Conditioners, Water Supply etc. will be provided by DTE&T Odisha but Selected Bidder is expected to supply all other installation accessories, facilities and services required for successful installation and smooth operation of the equipment. Bidders may conduct the site survey before installation at no additional cost.
6. Any accessories that must be needed for operation of the equipment but not mentioned in the specification shall also be quoted by the selected bidder.
7. Suitable and essential tool kit is to be supplied by the selected bidder with the equipment for the required maintenance.
8. The equipment/machines should be installed and commissioned at site. Site requirement along with the layout drawing for installation of equipment, electrical & water supply if any from main/ nearest sources shall be provided by the selected bidder upon issuance of Letter of Award of Contract (LoA).
9. The bidder shall not charge extra for additional items including fuel & lubricants, Gas Cylinders (if required), raw materials, consumables etc. required to meet the operational requirement during installation, commissioning and hand-holding training at consignee institutes.
10. Arrangement of Fire safety equipment like Carbon Dioxide or Dry Chemical Fire Extinguishers or any superior fire safety equipment with sensors.
11. Provide necessary safety & training posters for these CoEs. Branding and Marketing of these CoEs, along with the Digital Hoarding Board and banner at each CoE.
12. The selected bidder shall provide comprehensive warranty of supplied machineries/equipment for 60 months from the date of successful commissioning. The warranty does not include tools & tackles, consumables, PPE etc (if any).
13. The selected bidder must sign an agreement for Comprehensive Annual Maintenance Contract (CAMC) with DTE&T Odisha for 03 (three) years for the all equipment/machines of these CoEs. This CAMC contract must be signed 02 (two) months before expiry of the comprehensive warranty period i.e. 60 months. A performance security @5% of the Annual awarded Value of Comprehensive Annual Maintenance Cost (CAMC) (without tax) for the respective year must be

submitted by the selected bidder and the same will be initially valid for fifteen months and may be extended further, if necessary.

14. Handholding for 36 months from the date of successful commissioning. Handholding should include the following but not limited to
    - I. The OEM/Technology Partner shall identify and formulate training programs to develop skills in futuristic/ disruptive technologies and associated skill sets required for industry ready.
    - II. To develop courses, course content, course work, manuals, standard operating procedures and standards, disseminate the same with the overall intent of improving the skill sets of individuals.
    - III. To impart high-end skills (and not generic skills) to Students, unemployed individuals and employed individuals (looking to up skill/ re-skill themselves).
    - IV. To conduct train the trainers program for 01 (one) month of each batch and train the trainees' programs for 03 (three) months of each batch with a batch size of 20 students/trainees. Maximum 04 (four) batches of trainees may be trained in a year.
    - V. To conduct need based/ on-request training programs to cater to specialized requirements of corporate, and to generate revenues through these programs.
    - VI. To carry out assessment, certification of trainees as per the NSQF/NCVT prescribed guidelines.
    - VII. Preparation of Training Modules for Train the Trainers and Trainees. Advanced skill training curriculum with minimum equivalent to NSQF level 5 or 6, in addition as per the demand of the industries should be included.
    - VIII. Select appropriate courses; design the course structure, curriculum and pedagogy based on industry demand. Selected bidder shall identify and formulate training programs to develop skills in futuristic/disruptive technologies and associated skill sets required for industry ready.
    - IX. The OEM/Technology Partner shall design courses, curriculum, and pedagogy based on industry demand for placing before the CoE Management Committee constituted by DTE&T and shall comply with the recommendations of CoE Management Committee and the same should be incorporated in the curriculum prior to the course commencement.
    - X. Conduct training that meets industry standards by engaging appropriate faculties (qualified & experienced), facilities and technology like virtual classroom. **The agency must provide at least two (02) Qualified and Experienced Faculties for each CoE with minimum Graduate Engineer and minimum 5 years of industry experience in relevant field. Hand-holding training (Skilling/Up-Skilling/Re-Skilling) to be given for minimum 03 (three) years to the Trainers and Trainees from Govt. & Private ITIs/Polytechnics or Employees from nearby industries etc.**
    - XI. Providing Soft Copies or Hard Copies of Training materials for at least 01 (one) batch with minimum 20 trainees during hand-holding training of the Trainers and Trainees.
    - XII. The company has to ensure that the assessment is completed as per the standards in a fixed time frame and shall issue joint certificate to the passed-out students with the help from Principal of designated institute or any valid certificate from international bodies.
    - XIII. The selected bidder shall furnish the proposal with details of courses, course content, course, work, manuals, pedagogy, standard operating procedures and standards, disseminate the same with the overall intent of improving the skill sets of individuals.
    - XIV. Provide necessary Raw Materials & Consumables (if any) during hand-holding period.
    - XV. Selected OEM/Technology Partner shall provide Placement Support to the successfully trained and certified students. Placement opportunities to be given at least 50% of the successfully trained/certified trainees within maximum 01 (one) Year from their

successfully certification. Overall Placement Assistance to be given for the trainees trained within the 03 (three) Years from the start date of hand-holding training.

C- Specifications of Civil & Electrical Works:

Design of CoEs including interior design with fire retardant, plastic coating painting, design of shop floor/labs with anti-skid, electrical insulating, fire retardant with epoxy flooring (with minimum 3mm thickness), required electrical, civil and plumbing works and furnishing of the labs etc. Selected Bidder shall mutually finalize the design and drawing of the labs and specifications of the Civil and other works with DTE&T Odisha. DTE&T Odisha will monitor the entire CoE setup centrally.

D- Pre-Delivery Inspection and Post-Delivery Inspection of all equipment:

DTE&T may conduct a Pre-Delivery inspection of all equipment/sample equipment through Physical mode by its own technical experts or 3rd party agency/consultants/advisors appointed by DTE&T before the dispatch of the proposed equipment by the selected bidder at the supplier's premises or at the manufacturer's factory site. The operational charges i.e. testing charges for samples, raw material, consumables (if any) etc. shall be borne by the supplier. But, other expenses like travelling, boarding and lodging of the technical experts, will be borne by the Authority.

All tests and inspections of all equipment during Post-Delivery Inspection shall be made at the place of delivery. Officers authorized by DTE&T shall be entitled at all reasonable time to inspect and supervise and test during installation and commissioning. Such inspection will not relieve the selected Bidder of their obligation in the contract.

If the OEM/Technology Partner fails to comply with any of the quality, technical specification or clause mentioned in the RFP, and then the Contract will be terminated by DTE&T Odisha.

E- Management of CoEs:

I. The CoE Management Committee will be consisting of representatives from selected bidder company, DTE&T, representatives from industries, DSDE officer, and Principal of the institute as member convener.

II. DTE&T Odisha shall be sole authority to oversee all the training and administrative activities in the best interest of the State of Odisha.

III. Company/firm shall support placement of trainees with the help of the particular Industry of each skill.

IV. CoE Management Committee will be constituted by DTE&T for the overall guidance and the role of the committee will generally be limited to:

a) Review the periodic updating of syllabus, curriculum and course content ii). Review adequacy of courses offered viz - a - viz industry demand and suggest addition/ modification or discontinuation of courses and fixation of fees.

b) Periodic performance and placement evaluation against pre - defined milestones detailed under RFP document to be published.

c) Review, and if necessary, engage third party to evaluate the quality of equipment and training.

d) It will fix the eligibility criteria for admission/reservations etc. and mobilize students/industry employees from nearby cluster for admission.

IV. Special Terms and Conditions:

1. Manufacturer (OEM) / Authorized Channel Partner/ Authorized Technology Partner having valid manufacturing license of OEM/ authorization certificates from OEM are eligible to participate in this tender. OEM must provide necessary documentary evidence of being an Original Equipment Manufacturer of the related equipment. Bid specific authorisation must be submitted in case of participation by channel partner/technology partner of OEM.
2. OEM should be nationally / internationally reputed Company.
3. For Technology Partner/Channel Partner, an undertaking from the OEM is required stating that they would facilitate the Bidder on a regular basis with technology/product updates and extend support for the warranty as well.
4. In this tender, either the authorized channel partner/technology partner on behalf of the OEM or OEM itself can submit bid proposals, but both cannot submit bids simultaneously for the same CoE.
5. If authorized channel partner/technology partner submits bid on behalf of the OEM, the same authorized channel partner/technology partner shall not submit a bid on behalf of another OEM for the same CoE.
6. In a scenario, if both OEM and or its channel partner/authorized dealer participated in the bidding process, bids of both OEM & an authorized partner/dealer will be technically disqualified and EMD will be forfeited as per prevailing rules. The authorization from OEM should indicate bid reference number.
7. The supplier of the equipment must confirm in writing that the spares for the entire supplied equipment will be available for a period of at least five years after the model of equipment supplied has been phased out. For frequently required spares, there should be adequate inventory with the Indian agency.
8. The successful bidder is responsible for the supply, installation and maintenance of the equipment. Equipment documentation including user manuals and operation and troubleshooting guides to be provided.
9. Comprehensive Warranty period shall specifically be mentioned in the offer. The selected bidder must adhere to the warranty clause mentioned herein.
10. Selected Bidder must sign Comprehensive Annual Maintenance Contract (CAMC) with DTE&T Odisha for at least 03 (three) years for the equipment/machines mentioned here in this RFP.
11. Financial Proposal must be submitted as per the BoQ MS-Excl format along with formats shared in FIN-1 & Annexure (PDF file).
12. Bidders must submit Technical Specification Compliance sheet within their technical bid. The bidders must be kept in their mind that mere copying of our specifications in the technical specification compliance sheets, shall not make the technical bid eligible for consideration. A bid has to be supported with original catalogue of the quoted item/s duly signed by the authorized person participating in the bid. Non-compliance with the above conditions shall be treated as incomplete/ambiguous and the bid shall be rejected without giving an opportunity to the bidder for further clarification/negotiation etc.
13. The bidder must produce documentary evidence of past supply experience of the offered make & model of the major equipment/machineries to any Govt./Private organization/industry.

14. Details of foundation drawing for instruments and equipment, if any, should be provided.
15. The Bidder shall quote their lowest possible price, and prices quoted by the Bidder shall be "fixed" during the Bidder's performance of the contract and not subject to any variation and/or escalation.
16. Bidder must quote **Cost of the Project**, which shall indicate clearly the including all taxes and charges towards packing, forwarding, handling, insurance, comprehensive warranty for 60 months, freight, incidental service, civil, electrical and other works, (if any), installation & commissioning of the goods and training to the consignee's personnel at site and **Cost of Comprehensive Annual Maintenance Cost (CAMC) in BoQ MS-Excel Format and FIN-1 (PDF File)**, indicating the total cost of Comprehensive Annual Maintenance Cost for the equipment/machines offered for the CoE' for 03 Years and applicable after the expiry of comprehensive warranty of 60 months**.** The price shall be quoted in Indian Rupees only.
17. The cost of standard accessories shall be included in basic price and optional accessories shall have to be quoted separately.
18. Any component, fitting etc. which may not have been specifically mentioned in the specifications but which are usual and necessary for the equipment, shall be supplied by the bidder at no extra cost.
19. In case of items of import, the bidder should take full responsibility for customs clearance, handling, tax payment, etc. and same should be inclusive in the financial bid.
20. DTE&T Odisha shall sign a **Comprehensive Annual Maintenance Contract (CAMC)** for 03 (three) years (which may be extended further as per the requirement of DTE&T Odisha) for the equipment/machines mentioned in 'Point No. 6' of the RFP, with the Selected Bidder beyond the warranty period of 60 months and shall be as per the terms and conditions mentioned in Annexure-III. Year wise cost of such maintenance contract (CAMC) shall be quoted**.**
21. Higher technical specifications may be considered subject to competitive price offer.
22. DTE&T Odisha reserves the right to accept, split, divide, negotiate, cancel or reject any bid or to annul and reject all bids at any time prior to the award of the contract without incurring any liability to the affected bidders or any obligation to inform affected bidder, the grounds of such action.
23. Price bid should be submitted in the BoQ MS-Excel Format and given format in **FIN-1** along with item wise rate in **Annexure** (PDF File). Price bid should have equipment wise breakup (Annexure).
24. Performance Security – A performance security in the form of Bank Guarantee/e-Bank Guarantee for 5% of the Awarded Value (excluding taxes) to be submitted within 15 days of issuance of the Letter of Award (LoA). The Bank Guarantee will be valid initially for 68 months and may be extended further if required. The performance guarantee will be released by DTE&T, Odisha and returned to the Selected Bidder after 60 days of completion of warranty period subject to fulfillment of all obligations on recommendation of respective Principal of the institutes.

V. Comprehensive Warranty (60 Months) Clause:

The final selected bidder must provide Comprehensive Warranty Maintenance Services for all supplied equipment/machines (except consumables, PPE and tools & tackles) at the CoEs for 60 months from the date of successful installation & commissioning. The scope of the bidders is as below.

i. Maintenance Services shall consist of Preventive and Corrective maintenance of equipment specified in Point No. 6 (excluding consumables, PPE and tools & tackles) & will include repair and replacement of parts free of cost.
ii. Preventive maintenance, half-yearly once, which includes:
    i. Check-up to ensure that device connection is proper; cabling is at proper condition etc.
    ii. Cleaning of the above instruments & equipments and checking the System Performance.
iii. The selected bidder must conduct preventive maintenance services at least twice (2 times) in a year at each CoE.
iv. The parts replaced must be new parts or equivalent in performance to new parts.
v. Any complaint informed through telephone/email must be acknowledged with a Complaint No. by the Supplier which will be noted by Consignee. All further contact with the Supplier on such complaint will be initiated through that Complaint No. Once rectification done, that No. will be cancelled by both parties. A register is to be maintained by the Supplier where complaints are to be noted along with Complaint No.
vi. The maintenance shall be attended by the service engineer within one week of intimation to the Bidder.
vii. The Service Engineer of the Supplier will be allowed to handle the respective plant & machineries only in the presence of the officer in charge at the institute site.
viii. The selected bidder should ensure that maintenance job is not hampered/ delayed due to paucity of spares/inadequate manpower etc.
ix. Minor repair to be done within 3 days of complaint registered and for major breakdown or replacement of parts must be completed by 15 days from the complaint registered to supplier. For imported parts, the replacement should be done within 4 weeks maximum.

VI. Comprehensive Annual Maintenance Contract (CAMC):

i. The Selected Bidder shall be under the obligation of entering into a Comprehensive Annual Maintenance Contract (CAMC) with DTE&T Odisha for a minimum period of 03 (three) years, renewable if felt necessary, on mutually acceptable rates, terms, and conditions mentioned herein. CAMC shall start after the completion of Warranty.
ii. The scope of CAMC shall cover maintenance and supply/replacement of materials and components, for smooth and reliable operation of the systems without trouble.
iii. Accordingly, the Bidders has to offer rates in BoQ MS-Excel Format and given **FIN-1 (PDF File),** for the CAMC charges for the CoE.
iv. Selected agency must sign the Comprehensive Annual Maintenance Contract (CAMC) with DTE&T Odisha for 03 (three) years for the equipment/machines supplied at the CoE (except tools, tackles, raw materials, PPE etc.). This CAMC contract must be signed before expiry of the comprehensive warranty period i.e. 60 months. A performance security @5% of the Annual cost of CAMC (excluding Taxes) in the form of Bank Guarantee/Fixed Deposit Receipt/Term Deposit Receipt, must be submitted by the selected Agency before signing the CAMC contract for the respective lot and which will be initially valid for 15 months and may be extended further if necessary.
v. The Performance security towards CAMC for the particular year shall be returned only after submission and confirmation of BG/TDR/FD/DD of subsequent years.

6. List of equipment/machines and their Technical Specifications /Compliance Statement:

List of Equipment for the CoE in Advanced Mechatronics at Govt. ITI Balugaon.

S. No.	PRODUCT	Qty
1.	**Pneumatic**	
1.1	Pneumatic Trainer Kit	5 Sets
1.2	Electro-Pneumatic Trainer Kit	5 Sets
1.4	Cut sections - Pneumatics	2 Sets
1.5	Wall posters - Pneumatics	1 Set
1.6	Vertical workbench with double draw unit	2 Sets
1.7	Compressor – 30L	2 Nos
1.8	Animated software to teach different Pneumatic components (1 User)	1 Set
2.	**Hydraulic**	
2.1	Hydraulic Trainer kit	5 Sets
2.2	Electro-Hydraulic Trainer Kit	5 Sets
2.3	Cut sections – Hydraulics	2 Sets
2.4	Wall posters - Hydraulics	1 Set
2.5	40L Hydraulic Power Pack with Oil	5 Sets
2.6	Vertical workbench with single draw unit	2 Sets
3.	Sensor & Vacuum	
3.1	Sensor Trainer kit	2 Sets
3.2	Smart Sensor Trainer kit	2 Sets
3.3	Vertical workbench with double draw unit	2 Sets
4	**Motor and Drive Trainer kit**	1 Set
5	**PLC and HMI**	
5.1	PLC Trainer kit (min. 30 users with perpetual license) Compatible with Electro-Pneumatic, Electro-Hydraulic & Sensor Trainer kits	1 Set
5.2	HMI Module	1 Set
6.	**Mechatronics and Automation**	
6.1	Mechatronics Do it yourself Kit	1 Set
6.2	Modular automated system – 7 Station	1 Set
6.3	Automated manufacturing system integrated with Industry 4.0 technologies. Like IOT, Augmented Reality	1 Set
6.4	CNC Milling - System Simulator and Software (10 Users with perpetual license)	1 Set
7.	**Digital learning solution**	
7.1	VR Based application for building automation (10 Users with perpetual license)	1 Set
8.	**Software**	
8.1	Multi automation technologies Simulation software (10 Users with perpetual license)	1 Set
8.2	3D Virtual Simulation Software (10 Users with perpetual license)	1 Set
8.3	SCADA Software(10 Users with perpetual license)	1 Set
8.4	IOT Development Software (10 Users with perpetual license)	1 Set
9	**Desktop System**	
9.1	intel Core i7 13th Generation or higher, Min. 16GB DDR4 or latest, expand memory upto 64GB (Min. 2 DIMM) or Higher, Minimum 1TB SSD, Windows 11 Professional or latest.	10 Nos.

Technical Specifications of equipment to setup CoE in Advanced Mechatronics:

1. PNEUMATIC

1.1.PNEUMATIC TRAINER KIT

This kit should be designed with the capability to demonstrate the design, construction and application of pneumatic components and circuits. Should contain the below items in it.
The bidders should provide OEM Technical datasheets all pneumatic components in the trainer kits:

- Rated operating pressure
- Maximum allowable pressure
- Rated flow capacity (l/min)
- Port size and standard (ISO)

<table>
<tr><th>S. No</th><th>Description</th><th>Qty</th></tr>
<tr><td>A</td><td>The Training system should consist the following features
Using actual industrial standard valves and components
No tools should be used for connecting the tubes with fittings. All the pneumatic fittings should be of Push-in type fittings (One Touch Fittings) for easily connecting and disconnecting the tubes manually with fittings.
All One Touch Fittings should be suitable for tube size 4 mm outer diameter.
Cylinders and limit switches should be fitted on an aluminum plate coupled with a moulded plastic guide plate base unit (to avoid scratching on the Aluminum anodized work table).
Cylinders and limit switches should be provided with turn-to-lock / unlock mechanism for clamping &unclamping with the work table.
All valves and other components should be mounted on an Aluminum cast block (of 40 mm x 60 mm size) fitted with plastic base (to avoid scratching on the Aluminum anodized work table) and with in built button operated Push-to-lock / unlock mechanism for easy clamping & unclamping with the work table.
Working medium: Compressed air filtered.
Minimum Five Years warranty on manufacturing defect.</td><td></td></tr>
<tr><td>1.</td><td>FRL Unit with pressure gauge<table><tr><td>Port size</td><td>1 / 4”</td></tr><tr><td>Flow rate</td><td>Atleast 500 lts / min</td></tr><tr><td>Filtration</td><td>Minimum 40 micron</td></tr><tr><td>Pressure range</td><td>1 - 10 bar</td></tr><tr><td>Tubing Connection</td><td>Inlet / outlet - Atleast ø8</td></tr></table></td><td>1</td></tr>
<tr><td>2.</td><td>Junction box with Slide valve<table><tr><td>Pressure range</td><td>1 - 10 bar</td></tr><tr><td>Tubing Connection</td><td>Inlet – ø8, Outlet-ø4</td></tr><tr><td>No.of outputs</td><td>Minimum 7 nos</td></tr></table></td><td>1</td></tr>
<tr><td>3.</td><td>Flow control valve unit<table><tr><td>Pressure range</td><td>1 - 10 bar</td></tr></table></td><td>4</td></tr>
</table>

	Tubing Connection: Inlet / Outlet – ø4 Atleast Control type: Bidirectional	
4.	Single acting cylinder (SAC) Cylinder bore size: 25 – 32 mm Dia Stroke: 50 – 60 mm	1
5.	Double acting cylinder (DAC) Cylinder bore size: 25 – 32 mm dia Stroke: 100 – 125 mm	2
6.	Union tee Dia4	4
7.	Union Y Dia4	4
8.	Plug Dia4	6
9.	Tube (PU) OD8 (blue)	5 Meter
10.	Tube (PU) OD4 (blue)	10 Meter
11.	Tube cutter	1
12.	3/2 NC Push Button (Green) Valve Operation: Spring return	1
13.	3/2 NC Push Button (Red) Valve Operation: Spring return	1
14.	5/2 Double external pilot operated valve	4
15.	5/2 External pilot operated valve with Spring return	1
16.	5/2 Hand lever operated valve with spring return	1
17.	5/2 Hand lever operated valve with Detent	1
18.	Shuttle valve (OR Valve)	3
19.	Quick Exhaust valve Type: Silencer type	1
20.	Dual pressure valve (AND Valve)	1
21.	Multi distributor fittings (for cascading)	3
22.	5/2 Valve with Lever head switch with detent	1
23.	5/2 Valve with Mushroom head switch operated with detent	1
24.	M5 Roller lever valve (Forwarding) Type: 3/2 Operation: Roller lever with spring return	2
25.	M5 Roller lever valve (Reversing) Type: 3/2 Operation: Roller lever with spring return	2
26.	5/3 Double external pilot operated valve with spring centered (All ports blocked)	1
27.	Idle return valve assembly – Forwarding Type: 3/2 Operation: Roller lever with spring return	1
28.	Time delay valve Type: Time delay (2 – 30s) Operation: Spring return	1
29.	Pneumatic counter Type: Pulse count (0-99999) Operation: Spring return	1

30.	Pneumatic proximity switch Size: 1/8” Pressure range: 1 - 6 bar Tubing connection: Ø4 atleast	1
31.	Pressure sequence valve Adjustment method: Adjusting knob Type: Direct operated poppet type Flow rate: 70 lts / min @6bar	1
32.	Back pressure valve	1
33.	Pressure indicator	1
34.	Cable mounting clamp – Should be compatible with the workbench that will be used to mount the components	1 Set

1.2.ELECTRO-PNEUMATIC TRAINER KIT

This kit should be designed with capability to demonstrate the design, construction and application of Electro-pneumatic components and circuits. Should contain the items below in it.

S. No	Description	Qty
1.	FRL Unit with pressure gauge Port size: 1 / 4” Flow rate: 500 - 550 lts / min Filtration: 40 Micron	1
2.	Junction box with Slide valve No. of outputs: Minimum 7 nos.	1
3.	Flow control valve unit Control type: Bidirectional	4
4.	Single acting cylinder (SAC) Cylinder bore size: 25 – 32 mm dia Stroke: 50 – 60 mm	1
5.	Double acting cylinder (DAC) Cylinder bore size: 25 – 32 mm dia Stroke: 100 – 125 mm	2
6.	Union tee Dia4	4
7.	Union Y Dia4	4
8.	Plug Dia4	6
9.	Tube (PU) OD8 (blue)	5 Meter
10.	Tube (PU) OD4 (blue)	10 Meter
11.	Tube cutter	1
12.	5/2 Single solenoid valve with spring return (with LED)	1
13.	5/2 Double solenoid (with LED)	2
14.	Magnetic reed switch with clamp Operating voltage: DC 24V Switching logic: Solid state output -PNP Connection type: 3 pin male QD connector	6
15.	Electrical connection set Connector type: 4mm Banana plug Cable colours: Red and black	1

16.	Electrical push button module Operating voltage: 24V - DC Operation: NO / NC type with Led indicator Led indicator operating voltage: 24V - DC Push button with spring return: Green colour button Push button with detent: Red colour button	1
17.	Relay logic unit – 4C/O – 3 Relays Operating voltage: 24 VDC Operation: NO / NC type Type: 4-Changeover, 3 relays	2
18.	Inductive proximity sensor assembly Operating voltage: 24 VDC Operating distance: 5mm ± 10% Connector Type: 3pin male QD connector Sensor type: Flush head type	1
19.	Capacitive proximity sensor assembly Operating voltage: 24 VDC Operating distance: 8mm ± 10% Connector Type: 3pin male QD connector Sensor type: Non-flush head type	1
20.	Optical proximity sensor assembly Operating voltage: 24 VDC Operating distance: 290mm ± 10% Connector Type: 3pin male QD connector Sensor type: Light sensing type	1
21.	Electronic counter module Operating voltage: 24 VDC Operation: NO / NC type Connection type: 4mm banana plug Display: 6 digits LCD display	1
22.	Electrical buzzer with indicator module Operating voltage: 24 VDC Buzzer decibel value: 60 dB Connection type: 4mm banana plug	1
23.	ON & OFF delay timer Module Operating voltage: 24 VDC On delay timer: 1 – 10s Off delay timer: 0.5 – 10s Connection type: 4mm banana plug	1
24.	Switch Mode Power Supply Input voltage: 230V AC 50 HZ Output voltage: 24V DC Output indication LED indicator: AMBER color Protection (Overload & Short circuit): Fuse glass type (Input 2A; Output 4A) No. of output: at least 1 number	1

<table>
<tr><td>25.</td><td>Proportional pressure regulator
<table>
<tr><td>Size</td><td>1/2”</td></tr>
<tr><td>Operating Voltage</td><td>24V DC</td></tr>
<tr><td>Command signal</td><td>0-10V</td></tr>
<tr><td>Analog output</td><td>1-5V</td></tr>
</table>
Proportional Pressure Regulator-Control resolution shall be ≤ 0.5% of full-scale output pressure or better.
Proportional Pressure Regulator-Repeatability shall be ±0.5% of full-scale pressure or better under steady-state operating conditions.
Proportional Pressure Regulator-The step response time (from 10% to 90% of commanded pressure change) shall be ≤ 500 ms.</td><td>1</td></tr>
<tr><td>26.</td><td>Flow Sensor with display
<table>
<tr><td>Portsize</td><td>1/ 4”</td></tr>
<tr><td>Flow measuring range</td><td>0 to 250 LPM</td></tr>
<tr><td>Pressure range</td><td>1-16bar</td></tr>
<tr><td>Operating voltage</td><td>24V DC</td></tr>
<tr><td>Switching output</td><td>PNP NO, Analog 0 – 10V</td></tr>
<tr><td>Electrical Connection</td><td>M12, 4pin</td></tr>
</table></td><td></td></tr>
<tr><td>27.</td><td>Pressure sensor with Analog output
<table>
<tr><td>Operating voltage</td><td>24 VDC</td></tr>
<tr><td>Digital output</td><td>1 PNP</td></tr>
<tr><td>Analog output</td><td>4-20 mA</td></tr>
</table></td><td></td></tr>
<tr><td>28.</td><td>Emergency Switch</td><td></td></tr>
<tr><td>29.</td><td>Rodless Cylinder with ISO 15552 standard
- Stroke: 170mm
- Adjustable end cushioning
It has replaceable seal kits</td><td></td></tr>
<tr><td colspan="3">Textbooks and Manuals related to technologies should be provided along with the hardware.</td></tr>
</table>

1.3.PLC MODULE FOR ELECTRO-PNEUMATIC TRAINER KIT.

- PLC Trainer with Industry Standard PLC such as latest version of Siemens PLC / Allen Bradley PLCor from equivalent Globally Reputed Brand PLC
- Control software for programmingwith perpetual license for minimum 10 users.
- Hardwired PLC with a proprietary I/O interface for banana plug connections
- Provision for OPC interface

Digital IO’s	DI: 12, DO: 8
Connection type	4mm banana plug
Communication	RJ45

1.4.CUT SECTIONS VIEW FOR PNEUMATICS COMPONENTS

Pneumatic cut section enabling a trainer to demonstrate the internal construction of a product with real world products that are to actual scale and makes the trainees to visualise them and gives a realistic view of components in a better way than the graphical representations on books and animations.

S. No	Description	Qty
1.	Double acting cylinder	1
2.	Single acting cylinder	1
3.	FRC	1
4.	Hand lever valve with detent	1
5.	NRV	1
6.	Flow control valve	2
7.	Push button valve	2
8.	Roller lever valve	1
9.	Double external pilot operated valve	1
10.	Quick exhaust valve	1
11.	AND valve	2
12.	OR valve	5

1.5.Technical Illustration Posters – Pneumatics

Sl. No	Description	Qty
1.	Classification of Pneumatic Elements	1no
2.	Working Elements	1no
3.	Final Control Elements	1no
4.	Signal Elements	1no
5.	Directional Control Valves	1no
6.	Air Preparation Units	1no
7.	ISO Symbols – Air Preparation Units, Working Elements, Supplementary Elements	1no
8.	Directional Control Valves	1no

1.6.VERTICAL WORKBENCH WITH DOUBLE DRAW UNIT

It should have 2 faces, so that each side one set of kit can be mounted.
• Size (L x W x H) – atleast (1150 x 850 x 1650) mm
• Profile groove width – between 8 - 9 mm So that it can accommodate more grooves and items there by
• Groove to groove distance – atleast 40 mm
• Leveling casters for quick setting and smooth movement
• Draw unit for storing the components – 2nos (Each number should have atleast 4 Draws in it)
Electrical controls mounting tabletop (One for each Workbench)
• Size (L x W x H) – atleast (1150 x 80 x 140) mm
• Profile groove width – between 8 - 9 mm So that it can accommodate more grooves and items
• Hose mounting clamp – Should be compatible with the workbench in which the products will be mounted.

1.7.COMPRESSOR

- Motor power – 0.75 HP
- Tank - 30 litre
- Output – 45 litre / Minute
- Noise - 55 dB
- Power supply - 230V, 50Hz
- Minimum duty cycle of 60%

1.8.ANIMATION SOFTWARE FOR PNEUMATICS(Min. 10 USERS with Perpetual License)

The Animation software shall contain the following features

a) Virtual cut sectional animation of all the products categorised according to Pneumatic classification and shall also help to understand the functions simultaneously.
b) Functional animation of products and symbols
c) Circuit designing tutorial with step by step simulation
d) Product description with its function
e) Possible to illustrate the construction of elements
f) Industry oriented application examples

2. HYDRAULIC

2.1.HYDRAULIC TRAINER KIT

This kit should be designed with capability to demonstrate the design, construction and application of hydraulic components and circuits. Should contain the below items in it.

<table>
<tr><th>S. No</th><th>Description</th><th>Qty</th></tr>
<tr><td>B</td><td>The Training system should consist of the following features
Using actual industrial standard valves and components.
No tools should be used for connecting the hoses with fittings. All the hydraulic fittings should be of quick coupler for easily connecting and disconnecting the hoses manually with nipples.
All quick couplers should be suitable for nipples size 1/4 inch.
Cylinders and accessories should be fitted on an SS plate coupled with a molded plastic guide plate base unit (to avoid scratching on the Aluminium anodized work table).
Cylinders , accessories and P&T junction box should be provided with turn-to-lock / unlock mechanism for clamping & unclamping with the work table.
All valves and other components should be mounted on an Aluminium cast block (of 40 mm x 60 mm size) fitted with plastic base (to avoid scratching on the Aluminium anodized work table) and with inbuilt button operated Push-to-lock / unlock mechanism for easy clamping & unclamping with the work table.
Working medium: Hydraulic oil with suitable grade.
All Hydraulic components shall be complied with CETOP standards.
Oil cleanliness requirement – As per ISO 16/30 or better.
Minimum Five Years warranty on Manufacturing defect.</td><td></td></tr>
<tr><td>1.</td><td>Hydraulic cylinder<table><tr><td>Size</td><td>Cylinder Dia 32 – 40 mm
Piston Dia 12 – 15 mm
Piston length 200 – 250 mm</td></tr><tr><td>Type</td><td>Double acting Cylinder</td></tr><tr><td>Max operating pressure</td><td>20 bar</td></tr><tr><td>Pressure range</td><td>1 - 20 bar</td></tr></table></td><td>1</td></tr>
<tr><td>2.</td><td>4/2 Hand lever Operated valve spring return<table><tr><td>Construction</td><td>Spool type</td></tr><tr><td>Pressure Range</td><td>0 - 60 bar</td></tr><tr><td>Nominal Flow</td><td>60 – 70 lpm</td></tr><tr><td>Working Temperature range</td><td>(-20C to +70C)</td></tr></table></td><td>1</td></tr>
<tr><td>3.</td><td>4/3 Hand lever Operated valve with detent (A B to T)<table><tr><td>Construction</td><td>Spool type</td></tr><tr><td>Nominal flow</td><td>60 – 70 lpm</td></tr><tr><td>Operating pressure</td><td>0 - 60bar</td></tr><tr><td>Working temperature range</td><td>20C to +70C</td></tr></table></td><td>1</td></tr>
<tr><td>4.</td><td>4/3 Hand lever Operated valve with detent (closed mid. Pos)<table><tr><td>Construction</td><td>Spool type</td></tr><tr><td>Nominal flow</td><td>60 – 70 lpm</td></tr><tr><td>Operating pressure</td><td>0-60bar</td></tr><tr><td>Working temperature range</td><td>20C to +70C</td></tr></table></td><td>1</td></tr>
</table>

5.	Flow Control Valve (2 way flow control valve) Operating pressure: 0 – 60 bar Max. Operating pressure: 120 bar Flow: 2 – 32 L/Min	1
6.	Flow Control Valve (one flow control valve) Operating pressure: 0 – 60 bar Max. Operating pressure: 120 bar Flow: 2 – 32 L/Min	1
7.	Pressure Gauge with Mounting (100kg/cm^2)\ Port Size (inch): G 1/4 Accuracy: 1.6% of full scale Range: 0-100	3
8.	Non-Return Valve type Pilot operated Flow direction: Free flow A to B; Piloted flow B to A Operating pressure: 0-60 bar Cracking pressure: 1 bar Max Flow: 80 – 100 lpm	1
9.	Non return valve (0.6 Mpa opening)	1
10.	Mounting Kit for cylinders (Scale & Scale holder)	1
11.	4 Way junction box - Port Size (inch) - G ¼	2
12.	P&T Junction box (shut off valve) Type: 2/2 Ball valve Working temperature range: -20C to +70C Size (inch): G ¼ Max operating pressure: 120bar	1
13.	T-distributor Port Size (inch): G ¼ Mounting: End connected with couplers	1
14.	Hose-1200,1000,500 Material: Thermoplastic Nominal size: 6mm Mounting: Both end with quick coupler	1
15.	Pressure relief valve Operating Pressure: 0-60bar Max. Operating Pressure: 120bar Pressure Setting range: 0-100bar Working Temperature range: -20C to +70C	1
16.	Hydraulic motor Displacement: 19.9cm^3/rev Maximum RPM: 1200 – 1400 rpm Max oil flow: 25 – 50 lpm Max inlet pressure: 175 – 200 bar Max return line pressure: 140 – 150 bar	1
17.	Weight unit: Mass: 9 – 10 Kg	1
Textbooks and Manuals related to technologies should be provided along with the hardware.		

2.2.ELECTRO-HYDRAULIC TRAINER KIT

This kit should be designed with capability to demonstrate the design, construction and application of Electro-Hydraulic components and circuits. Should contain the below items in it.

S. No	Description	Qty
1.	Hydraulic cylinder size: Cylinder Dia 30 – 40 mm; Piston Dia 12 – 15 mm; Piston length 200 – 250 mm Type: Double acting Cylinder Max operating pressure: 20 bar Pressure range: 1 - 20 bar	2
2.	4/3 Double Solenoid Valve Construction: Spool Type Nominal flow: 80 – 100 lpm Operating pressure: 0 – 60 bar Working temperature range: -20C to +60C	1
3.	4/2 Single Solenoid Valve Construction: Spool type Nominal flow: 80 – 100 lpm Operating Pressure: 0 – 60 bar Working temperature range: -20C to +60C	1
4.	4/2 Double Solenoid Valve Construction: Spool type Nominal flow: 80 – 100 lpm Operating Pressure: 0 – 60 bar Working temperature range: -20C to +60C	1
5.	Flow Control Valve (2-way flow control valve) Operating pressure: 0 – 60 bar Max. Operating pressure: 120 – 150 bar Flow: 2 – 32 L/Min	1
6.	Flow Control Valve (one flow control valve) Operating pressure: 0 – 60 bar Max. Operating pressure: 120 – 150 bar Flow: 2 – 32 L/Min	1
7.	Pressure Gauge with Mounting (100kg/cm^2) Port Size (inch): G 1/4 Accuracy: 1.6% of full scale Range: 0-100	2
8.	Non return valve Flow Direction: Free Flow A to B, Leak free closure in opp. direction Cracking pressure: 6 – 7 bar Operating pressure: 0 – 60 bar Nominal flow handling capacity: 15 – 20 lpm	1

9.	Mounting Kit for cylinders (Scale & Scale holder) Material: CRCS Scale: 0-300 mm Scale material: Acrylic	1
10.	4 Way junction box - Port Size (inch) G ¼	2
11.	P&T Junction box (shut off valve) Type: 2/2 Ball valve Working temperature range: -20C to +70C Size (inch): G ¼ Max operating pressure: 120 – 150 bar	1
12.	T-distributor Port Size (inch): G ¼ Mounting: End connected with couplers	1
13.	Hose-1200,1000,500 Material: Thermoplastic Nominal size: 6 – 8 mm Max working pressure: 220 – 250 bar Mounting: Both end with quick coupler	1
14.	Pressure relief valve Operating Pressure: 0-60bar Max. Operating Pressure: 120bar Pressure Setting range: 0-100bar Working Temperature range: -20C to +70C	1
15.	Hydraulic motor	1
16.	Weight unit Mass 9 – 10 Kg	1
17.	Pressure switch Max operating pressure: 0-100bar Switching frequency: 80cyl/min Electrical rating: 6A,125/250V AC Electrical Connector: Plug in connector conforms to DIN 43650	1
18.	4 change over 3 relay Operating voltage: 24 VDC Operation: NO / NC type Type: 4-Change over,3 relays	2
19.	Push button module Operating voltage: 24V - DC Operation: NO / NC type with Led indicator Led indicator operating voltage: 24V - DC Push button with spring return: Green colour button Push button with detent: Red colour button	1
20.	Inductive proximity sensor assy Operating voltage: 24 VDC Operating distance: 5mm ± 10% Connector Type: 3pin male QD connector Sensor type: Flush head type	2
21.	Electrical connection set Connector type: 4mm Banana plug	1

	Cable colours: Red and black	
22.	Switch Mode Power Supply Input voltage: 230V AC 50 HZ Output voltage: 24V DC Output indication LED indicator: AMBER color Protection (Overload & Short circuit): Fuse glass type (Input 2A; Output 4A) No. of output: at least 1 number	1
23.	Pressure sensor Portsize: 1/ 4” Pressure measuring range: 0 to100 bar Temperature range: -25° to 80° C Medium: Hydraulic oil Operating voltage: 24V DC Switching output: PNP NO, Analog 4…20Ma / 0-10V Electrical Connection: M12, 4pin	
24.	Hydraulic Flow sensor Portsize: 3/ 4” Flow measuring range: 0.5 to 25 LPM Pressure range: 1-100bar Temperature range: -10° to 100° C Medium: Hydraulic oil Operating voltage: 24V DC Switching output: PNP NO, Analog 4…20mA Electrical Connection: M12, 4pin	
Textbooks and Manuals related to the technologies should be provided along with the hardware		

2.3.CUT SECTIONS VIEW FOR HYDRAULIC COMPONENTS

Hydraulic cut section enabling a trainer to demonstrate the internal construction of a product with real world products that are to actual scale and makes the trainees to visualise them and gives a realistic view of components in a better way than the graphical representations on books and animations.

S. No	Description	Qty
1.	Double acting cylinder	1
2.	One way flow control valve	1
3.	Two-way flow control valve	1
4.	4/2 Single solenoid valves	1
5.	4/2 Double Solenoid valves	1
6.	4/3 Double Solenoid valves	1
7.	4/3 Hand lever valves	1
8.	Pilot Operated. NRV	1
9.	Pressure relief valve	1

2.4.Technical Illustration Posters – Hydraulics

Sl. No	Description	Qty
1.	Classification of Hydraulic Elements	1
2.	Working Elements	1
3.	Control Elements	3
4.	Sourcing Elements	1
5.	ISO Symbols – Hydraulics	2

2.5.40L HYDRAULIC POWER PACK WITH OIL

Tank capacity	40 – 50 ltr
Operating voltage	230V AC 50Hz
Maximum pressure	60 – 75 bar
Motor capacity	1 HP
Output flow	4.8 – 5 Ltrs/min
Power cord	3 Pin, Type D

2.6.VERTICAL WORKBENCH WITH SINGLE DRAW UNIT

It should have 2 faces, so that each side one set of kit can be mounted.
• Size (L x W x H) – atleast (1150 x 850 x 1650) mm
• Profile groove width – between 8 - 9 mm So that it can accommodate more grooves and items there by
• Groove to groove distance – atleast 40 mm
• Leveling casters for quick setting and smooth movement
• Draw unit for storing the components – 1 no (IT should have atleast 4 Draws in it)
Electrical controls mounting tabletop (One for each Workbench)
• Size (L x W x H) – atleast (1150 x 80 x 140) mm
• Profile groove width – between 8 - 9 mm So that it can accommodate more grooves and items there by
• Hose mounting clamp – Should be compatible with the workbench in which the products will be mounted

3. SENSOR

3.1.SENSOR TRAINER KIT

This kit should be designed with capability to demonstrate the design, construction and application of electrical components and circuits. Should contain the below items in it.

S.no	Description	Qty
1	Magnetic field sensor Operating voltage: 24V DC Sensing Range: 60 – 75 mm LED: Yellow Type: Flush Switching element function: PNP, NO	1
2	Inductive sensor (Flush) Operating voltage: 24V DC Sensing Range: 4 – 6 mm LED: Yellow Type: Flush Switching element function: PNP, NO	1
3	Inductive sensor (non-Flush type) Operating voltage: 24V DC Sensing Range: 8 – 10 mm LED: Yellow Type: Non-Flush Switching element function: PNP, NO	1
4	Inductive Analog sensor Operating voltage: 24V DC Sensing Range: 1 to 5m (Non flush) Type: Flush Output: 4-20 mA	1
5	Capacitive sensor Operating voltage: 24V DC Sensing Range: 4 – 6 mm LED: Yellow Type: Flush Switching element function: PNP, NO	1
6	Optical Thru beam sensor Operating voltage: 24V DC Sensing Range: 0 - 10 m Display: Signal –Yellow, Operating - green Light: Infrared (Red) Switching element function: PNP, NO	1
7	Optical sensor - Retro reflective with polarization filter Operating voltage: 24V DC Sensing Range: 0 to 5mm (Non flush) LED: Yellow Light: Infrared (Red) Switching element function: PNP, NO	1
8	Reflector Rectangular	1

<table>
<tr><td>9</td><td>Optical sensor – Diffuse with background suppression.<table><tr><td>Operating voltage</td><td>24V DC</td></tr><tr><td>Sensing Range</td><td>5 - 350 mm</td></tr><tr><td>LED (Green)</td><td>Power ON</td></tr><tr><td>LED (Yellow)</td><td>Lights ON, when object is detected</td></tr><tr><td>Light</td><td>Infrared (Red)</td></tr></table></td><td>1</td></tr>
<tr><td>10</td><td>Optical sensor – Diffuse<table><tr><td>Operating voltage</td><td>24V DC</td></tr><tr><td>Sensing Range</td><td>0 to 1000 mm</td></tr><tr><td>LED (Green)</td><td>Power ON</td></tr><tr><td>LED (Yellow)</td><td>Lights ON, when object is detected</td></tr><tr><td>Light</td><td>Infrared (Red)</td></tr></table></td><td>1</td></tr>
<tr><td>11</td><td>Fiber optic sensor amplifier unit<table><tr><td>Operating Voltage</td><td>24V DC</td></tr><tr><td>Sensing Range</td><td>Upto 150 mm</td></tr><tr><td>Light Type</td><td>Modulated visible red light</td></tr></table></td><td>1</td></tr>
<tr><td>12</td><td>Plastic Fiber optic – Diffuse type<table><tr><td>Bending radius</td><td>min.25 mm</td></tr><tr><td>Fiber optic length</td><td>2000 - 2500 mm</td></tr><tr><td>Fiber optic diameter</td><td>2.2 mm</td></tr></table></td><td>1</td></tr>
<tr><td>13</td><td>Plastic Fiber optic – Thru - beam type<table><tr><td>Bending radius</td><td>min.25 mm</td></tr><tr><td>Fiber optic length</td><td>2000 – 2500 mm</td></tr><tr><td>Fiber optic diameter</td><td>2.2 mm</td></tr></table></td><td>1</td></tr>
<tr><td>14</td><td>Colour sensor<table><tr><td>Operating voltage</td><td>24V DC</td></tr><tr><td>Sensing Range</td><td>9 – 10 mm</td></tr><tr><td>Light source</td><td>LED</td></tr><tr><td>Light type</td><td>Visible green/red/blue</td></tr><tr><td>Switching element function</td><td>PNP, NO</td></tr></table></td><td>1</td></tr>
<tr><td>15</td><td>Ultrasonic sensor<table><tr><td>Operating voltage</td><td>24V DC</td></tr><tr><td>Sensing Range</td><td>30 to 400mm</td></tr><tr><td>Type</td><td>Flush</td></tr><tr><td>Output</td><td>4-20 mA</td></tr></table></td><td>1</td></tr>
<tr><td>16</td><td>LM guide unit<table><tr><td>Workpiece moment in X-axis</td><td>0 - 320 mm</td></tr><tr><td>Workpiece moment in Y-axis</td><td>0 - 65 mm</td></tr><tr><td>Barrier guide</td><td>Ball type</td></tr></table></td><td>1</td></tr>
<tr><td>17</td><td>Workpiece for Magnetic sensor</td><td>1</td></tr>
<tr><td>18</td><td>Workpiece for Inductive & Capacitive sensor</td><td>1</td></tr>
<tr><td>19</td><td>Workpiece for Optical & Ultrasonic sensor</td><td>1</td></tr>
<tr><td>20</td><td>Workpiece for Colour sensor</td><td>1</td></tr>
<tr><td>21</td><td>Multimeter</td><td>1</td></tr>
<tr><td>22</td><td>Switch Mode Power Supply<table><tr><td>Input voltage</td><td>230V AC 50 HZ</td></tr><tr><td>Output voltage</td><td>24V DC</td></tr><tr><td>Output indication LED indicator</td><td>AMBER color</td></tr><tr><td>Protection (Overload & Short circuit)</td><td>Fuse glass type (Input 2A; Output 4A)</td></tr></table></td><td>1</td></tr>
</table>

	No. of output: at least 1 number	
23	Push button module Operating voltage: 24V - DC Operation: NO / NC type with Led indicator Led indicator operating voltage: 24V - DC Push button with spring return: Green colour button Push button with detent: Red colour button	1
24	Relay logic unit – 4C/O – 3 Relays Operating voltage: 24 VDC Operation: NO / NC type Type: 4-Changeover, 3 relays	1
Textbooks and Manuals related to technology should be provided along with the hardware.		

3.2.SMART SENSOR TRAINER KIT

This kit should be designed with the capability to demonstrate the design, construction and application of smart sensors components and circuits. Should contain the below items in it.

S.no	Description	Qty
1	Optical sensor – Diffuse with background suppression Operating voltage: 24V DC Sensing Range: 10 - 1000 mm Output: Push pull: PNP / NPN Communication interface: IO link Light source: Laser – Visible red light	1
2	Inductive sensor (Flush) Operating voltage: 24V DC Sensing Range: 8mm LED: Yellow Type: Flush Output: PNP NO Communication interface: IO link	1
3	Ultrasonic sensor Operating voltage: 24V DC Sensing Range: 20 to 250 mm Type: Flush Output: 4-20 mA Communication interface: IO link	1

<table>
<tr><td>4</td><td>IO link Interface module<table><tr><td>Operating voltage</td><td>24V DC</td></tr><tr><td>No. of IO channels</td><td>4 x M12, 5 pin female connectors</td></tr><tr><td>Input / Output type</td><td>PNP</td></tr><tr><td>Communication</td><td>via Ethernet</td></tr><tr><td>Power supply</td><td>1 x M8, 4pin male connector
1 x M8, 4 pin female connector</td></tr><tr><td>Communication protocol</td><td>• PROFINET
• EtherNet/IP
• Modbus TCP</td></tr></table></td><td>1</td></tr>
<tr><td>5</td><td>LM guide unit assembly<table><tr><td>Workpiece moment in X-axis</td><td>0 - 320 mm</td></tr><tr><td>Workpiece moment in Y-axis</td><td>0 - 65 mm</td></tr><tr><td>Barrier guide</td><td>Ball type</td></tr></table></td><td>1</td></tr>
<tr><td>6</td><td>Workpiece assembly
Work piece for Inductive & Capacitive sensor (SS, Aluminium, Nylon)</td><td>1</td></tr>
<tr><td>7</td><td>Workpiece assembly
Work piece for fiber optic sensor (Nylon)</td><td>1</td></tr>
<tr><td colspan="3">Textbooks and Manuals related to the technology should be provided along with the hardware.</td></tr>
</table>

3.3.VERTICAL WORKBENCH WITH DOUBLE DRAW UNIT

It should have 2 faces, so that each side one set of kit can be mounted.
• Size (L x W x H) – atleast (1150 x 850 x 1650) mm
• Profile groove width – between 8 - 9 mm So that it can accommodate more grooves and items there by
• Groove to groove distance – atleast 40 mm
• Leveling casters for quick setting and smooth movement
• Draw unit for storing the components – 2nos (Each number should have atleast 4 Draws in it)
Electrical controls mounting tabletop (One for each Workbench)
• Size (L x W x H) – atleast (1150 x 80 x 140) mm
• Profile groove width – between 8 - 9 mm So that it can accommodate more grooves and items there by
• Hose mounting clamp – Should be compatible with the workbench in which the products will be mounted

4. Motor And Drive Trainer kit

S. No	Description	Qty
1	Servo Motor Trainer kit	1
2	Stepper Motor Trainer kit	1
3	AC Motor Trainer Kit	1
4	DC Motor Trainer Kit	1

4.1.Servo Motor Trainer kit

Drive Specification	
Details	**Specification**
Power Rating	200 W (1.5 A continuous, 5.8 A peak)
Supply Voltage	200 VAC (single or three-phase)
Power Rating	200 W (1.5 A continuous, 5.8 A peak)
Dimensions (H × W × D)	172 × 40 × 180 mm
Control Interfaces	Pulse/Dir, Analogue, CAN open
Overload Capability	350%
Setup Interface	USB or keypad via Motion Perfect
Feedback Type	Serial encoder from MX motors
Ambient Temp Range	−5 °C to 55 °C (single); ≤ 40 °C (grouped)
Humidity	5% to 95% RH (no condensation)
Commissioning Ports	USB/Ether CAT (only available on AEG/DMG)
Voltage	5V
Max.Frequency	500KHz
Motor Specification	
Power Rating	0.2 kW (200 W)
Voltage	200 VAC
Encoder Type	17-bit absolute (magnetic)
Flange Size	60 mm
Rated Speed	3000 rpm (max up to 6000 rpm)
Rated Torque	≈ 0.63 Nm
Peak Torque	≈ 2.21 Nm
Rated / Peak Current	≈ 1.5 A / ≈ 5.8 A
Rotor Inertia	≈ 0.147×10^{-4} kg·m²
Weight	≈ 0.9 kg (1.3 kg with brake)
Protection / Enclosure	IP65, oil-sealed
Brake Option	Optional
Encoder Cable	EC3S-I1724-RX-nn series (drag chain)

4.2.Stepper Motor Trainer kit

Drive Specification	
Control Modes	PUL/DIR or CW/CCW
Input Voltage	18–80 VAC or 24–110 VDC
Pulse Frequency Limit	Up to 200 kHz
Micro step Resolution	400–51,200 (via DIP), up to 51,200 via SW
Output Current Range	2.4–7.2 A peak (configurable), or 1.0–7.2 A software
Logic Input Voltage	Configurable for 5 V or 24 V
Fault / Brake Output	Optically isolated, up to 30 V / 100 mA
Tuning Features	Auto-tuning, anti-resonance, smoothing
Idle Current Reduction	50% or 90% via switch
Ambient Temperature	0–50 °C operating; -20 to 65 °C storage
Humidity	40–90% RH
Weight	~510 g (1.13 lbs)
Control I/O Isolation	Opto-isolated inputs
Protection Functions	Over-voltage, over-current
Motor Specification	
Frame Size (NEMA)	42 (110 mm)
Motor Length	150 mm
Holding Torque	~20 Nm
Step Angle	1.8°
Phase Current	6.5 A
Resistance/Phase	≈ 0.72 Ω
Inductance/Phase	≈ 13 mH
Rotor Inertia	10.9 kg·cm²
RPM	1200
Center Diameter	55.5 mm
Weight	≈ 8.4 kg
IP Rating	IP40

4.3.AC Motor Trainer kit

Input Voltage	200–240V AC, Single-phase
Input Frequency	50/60 Hz (±5%)
Output Voltage	0–230V AC, Three-phase
Rated Output Current	2.5 A
Motor Power Rating	0.5 HP (0.4 kW) – ND & HD
Output Frequency Range	0–500 Hz
Overload Capacity	150% for 60 sec (every 10 minutes)
Switching Frequency	2 kHz to 16 kHz (default: 4 kHz)
Displacement Power Factor	>0.95
Efficiency	>97%
Control Type	V/Hz, Sensor less Vector Control (SVC)
Speed Reference Sources	Keypad, analog input, digital input, communication
Acceleration/Deceleration	0–600 seconds

Inputs	5 digital (sink/source), 1 analog (0–10V or 4–20mA)
Outputs	1 analog (0–10V), 1 relay (Form C)
Embedded RS-485	Included
Modbus RTU	Supported
EtherNet/IP	Optional (via module)
Motor Specification	
Power	0.38KW
Phase	3-phase (3 φ)
Voltage	~220 VAC
Current	~0.24–0.28 A
Speed	~1,350 RPM (50 Hz), ~1,600 RPM (60 Hz)
Insulation	Class B
Protection	IP54
Weight	~1.7 kg

4.4.DC Motor Trainer kit

Motor specifications	
Rated Output Power	100 W
Power Input Voltage	DC 24V
Rated Current	≈ 6.2 A (max: ≈ 9.8 A
Rated Torque	0.4 N·m (≈ 3.54 lb.-in)
Starting Torque	0.5 N·m (≈ 4.43 lb.-in)
Rated Speed	2500 rpm
Speed Control Range	200 – 2500 rpm (control ratio ≈ 1:15)
Speed Regulation	±0.5% under rated conditions
Drive Specifications	
Input Voltage	DC 24 V ±10%
Weight	~ 0.3 kg
Speed Control	Potentiometer (built-in or external) + 0–5 V DC
Ramp-up/down	0.5–15 sec slow-run/slow-stop
External control inputs	Run/Stop, CW/CCW, Stop via photocoupler
Speed signal output	Open-collector frequency pulse output
Alarm signal	Open-collector output at < 26.4 V, ≤10 mA
Protection mechanisms	Overload, overvoltage shutdown
Startup torque boost	~120% of rated torque up to ~5 sec

NOTE: All Trainer Kit should be modular and expandable to future update.

5. PLC and HMI Module

5.1.PLC MODULE

- PLC Trainer with Industry Standard PLC such as latest version of Siemens PLC / Allen Bradley PLC or from equivalent Globally Reputed Brand along with perpetual license of relevant PLC programming software applicable to the PLC hardware.
- Software for programming with perpetual license for minimum 10 users.
- Hardwired PLC with a proprietary I/O interface for banana plug connections
- Provision for OPC interface

Digital IO's	DI: 16, DO: 16
Analog IO's	AI: 4, AO: 2
Connection type	4mm banana plug
Digital Simulation modules	Inputs – Toggle switch
	Outputs – LED indication
Communication	Ethernet
Cable Length in mm & Qty	Red – 1000x2, 750x2, 300x10 Black - 1000x2, 750x2, 300x10

5.2.HMI MODULE:

Display Size/model	10.1" TFT Display
Supply voltage	24V DC
Communication	Ethernet & USB
Interface	Provision and cable to be provided to connect with the PLC
Software	Programming software

6. MECHATRONICS AND AUTOMATION

6.1.MECHATRONICS DO-IT-YOURSELF KIT

This training kit should be modules of different mechatronic systems that can be built and assembled fully to make it a functional mechatronic system by the trainees without the aid of experts or professionals. It should be like a "Do It Yourself" (DIY) kits as an outcome, enabling students to build and test new automation systems of their own with various technologies such as pneumatics, electrical, PLC, mechanical and sensor to produce actual applications that replicate real life industrial scenario.

This kit should also teach them engineering assembly, thereby looking at the document with different engineering specifications, they should be able to assemble the entire system by themselves and connect the PLC and program it to see the output. Each and every component should be provided in a dismantled way in a foam packed suitcase.

SCOPE OF SUPPLY:

A.	FEEDER STATION	-	1no
B.	PLC Programming software and cable	-	1no
C.	TOOL KIT	-	1Sets
D.	TECHNICAL DOCUMENTS	-	1 Set
E.	Compressor	-	1 No
F.	Horizontal profile plate	-	1 No

A. FEEDER STATION

The Feeder Station should be possible to separate the components from the Stack Magazine and distribute the components one by one via rotary pick and place module for further processing.

The Station should consist of the following major parts

S. No	Item with description	Qty
1.	Horizontal Aluminium profile table: a) (L x W x H)- 540 x 640 x 790 mm b) Aluminium profile Table top profile – 40 x 160 mm Supporting profile- 40 x 40 mm c) Grid spacing(From slot to slot) – 40 mm d) Profile groove width – 8.3 mm e) Leveling casters for quick setting and smooth movement f) Profile plate connectors: Length 55 mm, thickness 5mm Mounting method M6 Socket head screw with M6 hammer head nut	1
2.	I/O Interface module: a) 25 Pin D-Sub connector interface board for interfacing valves and actuators b) 25 Pin D-Sub cable for transferring the I/O to the terminals which in turn are to be connected to PLC	1
3.	Valve Manifold: • L x W x H : 60 X 26.5 X 65 mm	1

	• Grid spacing – 19 mm • Mountable valve port size 1/8'' • Provided with Conical silencers for reducing the dB level of exhausted air • 5/2 Double solenoid pilot operated valve: Material- Extruded aluminium with anodized Finish Size – 1/8 '' Design – Spool type Pressure range – 2 – 10 bar Flow rate – 450 l / min Manual override- Resetting Fitted with 1/8'' flow control valve for varying the flow	
4.	Filter Regulator Combination with Lubricator (FRL Unit) with pressure gauge and start up valve: • Port size -1/4 inch • Flow rate – 500 l/min • Maximum supply pressure – 10 bar • Operating pressure- 6 bar • Filtering element grade – 40 µm • Minimum operating flow – 12 l/min • Filter Bowl capacity – 9 ml • Lubricator Bowl capacity – 20 ml • Connection for tube 8 dia input and 8 dia output • Mounting – Socket head cap screw with M6 hammer head nut	1
5.	Stack Magazine module: • Comprising of Miniature cylinder of dia 25 and stroke 80 mm Height: 516 mm, Width: 125 mm and Length: 390 mm • Magnetic sensor for position sensing • Light barrier Module: Type: Infra -red Sensing range: 2m Supply Voltage and Current: 10 to 30V DC (10% max. ripple) @ 20 mA max current, Switch output: PNP, normally open/normally Output Protection: Protected against false pulse on closed contact power- up, short-circuit protected	1
6.	Transfer Module: a) Cylinder rotation angle (rotary cylinder fitted with shock absorbers),180 degrees (freely selectable) b) Compact guided cylinder dia 40 mm, Stroke - 50 mm c) Height: 325.5 mm, Width: 127 mm, Length: 223 mm d) Vacuum gripper module capable of handling 100gm e) Magnetic sensor for position sensing	1
7.	Control console: a) Cycle start push button –Green with illuminated b) Auto /Manual selector switch -Black c) Home position push button –Red with illuminated d) Emergency button -Red	1
8.	Cable duct and accessories: • Wire duct size 45x25 • Fastening screws	

9.	Work piece Set: Contains 18 approved work pieces of diameter 40 mm and height 25 mm 6 rejected work pieces of diameter 40 mm and height 23.5 in every material made of Aluminium, Delrin and Hylum respectively	1
10.	PLC control panel with S7 1200 PLC: a) Power supply: Input voltage :230/115 V AC (47 – 63 Hz), Output voltage: 24 V DC, short-circuit-proof Output current: Maximum 3A b) Miniature circuit breaker DC voltage with max.5A current rating c) Digital inputs-14, Digital outputs 10, Analog inputs 2, d) Ethernet interface 1 x TCP/IP, 10 Mbit/s e) Terminal blocks f) 25pin D-sub I/O data cable length 1.5 m, wire used 0.25 mm^2 g) Cable ducts h) Power Connection cable:3pin plug with length of 1.3m	1

B. PLC Programming software and cable

- PLC software should be supplied with perpetual and floating license for minimum 10 users.
- PLC program should be open and editable. No password lock should be there.
- PLC Software and Programming cable should be compatible with PLC used in the above stations for programming and real time communication.
- PLC Software must be genuine, legal and transferrable to the institute systems.
- Programming software should support various programming languages like ST, FBD, Ladder..etc.,
- Ethernet cable should be supplied with the length of 2mtr for connecting PLC to PC for programming and other communications

Scope of supply

1.	PLC programming cable for connecting to PC	10 Nos.
2.	Relevant PLC Programming software applicable to the PLC hardware	10 Users

C. TOOL KIT

Tool kits used during the assembly.

a) 5 - 5.5 spanner - 1 No
b) Tube cutter - 1 No
c) Spanner set (12 pc. Set) - 1 No
d) Mini electronic screw driver set - 1 No
e) Line tester - 1 No
f) Allen key set (9 pc. Set) - 1 No
g) 5 mm T allen key - 1 No
h) 6 mm T allen key - 1 No
i) Wire cutter - 1 No
j) Nose plier - 1 No
k) Cutting plier - 1 No
l) Steel rule - 1 No
m) 41bit socket and screw driver set (41 pc. Box) - 1 No

n) Digital vernier - 1 No
o) Teflon Tape - 1 No
p) Multimeter - 1 No

D. TECHNICAL DOCUMENTS

The complete electrical circuit diagram, assembly procedure, Mechanical layout and details about the components should be provided as different documents.

E. COMPRESSOR

- Motor power – 2 HP
- Tank - 50 litre
- Output – 125 litre / Minute
- Noise - 55 dB
- Power supply - 230V, 50Hz

F. HORIZONTAL WORKBENCH

- profile – 40 x 160 mm
- Grid spacing(From slot to slot) – 40 mm
- Profile groove width – 8.3 mm
- Minimum duty cycle of 60%

6.2.MODULAR AUTOMATED SYSTEM – 7 STATION

GENERAL SPECIFICATIONS:

- The mechatronics system shall be possible for interconnecting with different upstream and downstream stations through IO communication / Profinet
- As part of the technical evaluation the bidder should be able to demonstrate the system online or physically.
- Operation & maintenance manual to be supplied – 1 set hard copy with the equipment.
- Vendor to provide the learning resources –Pneumatics, electro pneumatics, programmable logic controllers

SCOPE OF SUPPLY:

A. Feeder Station - 1no
B. Inspection Station - 1no
C. Buffer Station - 1no
D. Process Station - 1no
E. Robot Station - 1no
F. Assembly Station - 1no
G. Sorting Station - 1no
H. PLC Software and Accessories - 1 Set

I. Assembly Templates - 1 Set

J. Technical Documents - 1 Set

K. Work Piece set - 1 Set

Function

The Modular Manufacturing System should comprise of 4 different stations such as

1. Feeder
    - Should feed the work pieces to Inspection station
2. Inspection
    - Measures the height of the work piece and only approved work pieces are to be further allowed to the buffer station.
    - Rejected piece should be collected separately.
3. Buffer
    - Maintain a buffer stock of up to 5 work pieces.
    - Should allow one by one to process station based on the demands arises from the process station.
4. Process
    - Should perform drilling operation and further transfers the work pieces to Robotics Station
5. Robotics station
    - Robot station with the combination of assembly station should assemble the work piece with spring and digital sensor assembly.
6. Assembly station
    - Assembly station should dispenses the digital sensor and spring required for assembly.
7. Sorting
    - Should segregate the work pieces based on the material type and colour and make them available for Logistics.

A. FEEDER STATION

The Station should consistof the following major parts

S. No	Item with description	Qty
1.	Horizontal Aluminium profile table: a. Aluminium profile: Tabletop profile – 40 x 160 mm b. Grid spacing (From slot to slot) – 40 mm c. Profile groove width – 8.3 mm d. Leveling casters for quick setting and smooth movement	1
2.	I/O Interface module	1

3.	Valve Manifold:
	• Grid spacing Between 19 – 20 mm
	• Should be provided with Conical silencers for reducing the dB level of exhausted air
	• 5/2 Double solenoid pilot operated valve:
	  • Size – 1/8”
	  • Design – Spool type
	  • Pressure range – 2 – 10 bar
	  • Flow rate – Min. 450 l / min
	  • Manual override- Resetting
	  • Fitted with 1/8’’ flow control valve for varying the flow
		1

4.	Filter Regulator Combination with Lubricator (FRL Unit) with pressure gauge and start up valve: • Port size -1/4 inch • Flow rate – Atleast 500 l/min • Maximum supply pressure – 10 bar • Operating pressure – Atleast 6 bar • Filtering element grade – Atleast 40 µm	1

5.	Stack Magazine module:
	a. Comprising of Miniature cylinder of dia 25 and stroke 80 mm Height: 516 mm, Width: 125 mm and Length: 390 mm
	b. Magnetic sensor for position sensing
	c. Light barrier Module:
	  • Type: Infra -red
	  • Sensing range: 2m
		1

6.	Transfer Module: f) Cylinder rotation angle (rotary cylinder fitted with shock absorbers), 180degrees (freely selectable) g) Compact guided cylinder dia 40 mm, Stroke - 50 mm h) Height: 325.5 mm, Width: 127 mm, Length: 223 mm i) Vacuum gripper module capable of handling 100gm j) Magnetic sensor for position sensing	1
7.	Vacuum Ejector Module: a) Integrated energy saving function. b) Brightly-lit display screen or LED bar display c) Automatic blow off function d) Vacuum Ejector module shall be capable of handling 100gm	1
8.	Control console: e) Cycle start push button –Green with illuminated.	1

	f) Auto /Manual selector switch -Black g) Home position push button –Red with illuminated h) Emergency button -Red	
9.	Cable duct and accessories:	1
10.	PLC control panel with Siemens S7 1200 or Allen Bradley Logix or similar PLC: d) Digital inputs-14,Digital outputs 10, Analog inputs 2Ethernet interface 1 x TCP/IP, 10 Mbit/s e) Terminal blocks f) 25pin D-sub I/O data cable length 1.5 m, wire used 0.25 mm^2 g) Cable ducts h) Power Connection cable:3pin plug	1

B. INSPECTION STATION

The Station should consist of the following major parts,

S. No	Item with description	Qty
1.	Horizontal Aluminium profile table: a. Aluminium profile: Tabletop profile – 40 x 160 mm b. Grid spacing (From slot to slot) – 40 mm c. Profile groove width – 8.3 mm Leveling casters for quick setting and smooth movement	1
2.	I/O Interface module:	1
3.	Valve Manifold: a. Grid spacing – 19 mm b. Provided with Conical silencers for reducing the dB level of exhausted air c. 5/2 Double solenoid pilot operated valve: • Size – 1/8 '' • Design – Spool type • Pressure range – 2 – 10 bar • Flow rate – 450 l / min • Manual override- Resetting • Fitted with 1/8" flow control valve for varying the flow	1
4.	Filter Regulator Combination with Lubricator (FRL Unit) with pressure gauge and start up valve: a. Port size -1/4 inch b. Flow rate – Atleast 500 l/min c. Maximum supply pressure – 10 bar d. Operating pressure – Atleast 6 bar e. Filtering element grade – Atleast 40 µm	1
5.	Measuring module: a) Pneumatic Linear Drive of dia 25mm and Stroke 100 mm b) LVDT with signal conditioner: • Maximum permissible applied voltage - 42V • Output: 4 – 20 mA • Overall length – 94.4 mm c) Diffuse Sensor: • Type: Infrared • Sensing range: 15mm	1

6.	Approve and rejection Slide Module	1
7.	Control console: a) Cycle start push button –Green with illuminated b) Auto /Manual selector switch -Black c) Home position push button –Red with illuminated d) Emergency button -Red	1
8.	Cable duct and accessories:	1
9.	PLC control panel with Siemens S7 1200 or Allen Bradley Logix or similar PLC: a. Digital inputs-14,Digital outputs 10, Analog inputs 2Ethernet interface 1 x TCP/IP, 10 Mbit/s b. Analogue module: Analogue input(4-20mA) c. Terminal blocks d. 25pin D-sub I/O data cable length 1.5 m, wire used 0.25 mm^2 e. Cable ducts f. Power Connection cable:3pin plug	1

C. BUFFER STATION

The Station should consists of the following:

S. No	Item with description	Qty
1.	Horizontal Aluminium profile table: a. Aluminium profile: Tabletop profile – 40 x 160 mm b. Grid spacing (From slot to slot) – 40 mm c. Profile groove width – 8.3 mm d. Leveling casters for quick setting and smooth movement	1
2.	I/O Interface module:	1
3.	Valve Manifold: a. Grid spacing – 19 mm b. Provided with Conical silencers for reducing the dB level of exhausted air c. 5/2 Double solenoid pilot operated valve: • Size – 1/8 '' • Design – Spool type • Pressure range – 2 – 10 bar • Flow rate – 450 l / min • Manual override- Resetting • Fitted with 1/8'' flow control valve for varying the flow	1
4.	Filter Regulator Combination with Lubricator (FRL Unit) with pressure gauge and start up valve: a. Port size -1/4 inch b. Flow rate – Atleast 500 l/min c. Maximum supply pressure – 10 bar d. Operating pressure – Atleast 6 bar e. Filtering element grade – Atleast 40 µm	1
5.	Conveyor Module: a) Flat belt conveyor with overall length of 500mm b) Conveyor to be driven by 24V DC motor of reputed make c) Conveyor to be provided with electronic drive unit for regulating the speed, reversing the direction and other function d) Separator Module: Comprising of 2 pneumatic cylinders of dia 25 mm and stroke 25mm	1

	e) Retro reflective -Photo electric sensor(Upstream): • Type: Infra red • Sensing range: 2m f) Thru beam -Photo electric sensor (Downstream): • Type: Infrared • Sensing range: 2m g) Diffuse Sensor - Photo electric: • Type: Infra red • Sensing range: 15mm	
6.	Control console: a) Cycle start push button –Green with illuminated b) Auto /Manual selector switch -Black c) Home position push button –Red with illuminated d) Emergency button -Red	1
7.	a. Cable duct and accessories:	1
8.	PLC control panel with Siemens S7 1200 or Allen Bradley Logix or similar PLC: a. Digital inputs-14,Digital outputs 10, Analog inputs 2Ethernet interface 1 x TCP/IP, 10 Mbit/s b. Terminal blocks c. 25pin D-sub I/O data cable length 1.5 m, wire used 0.25 mm^2 d. Cable ducts e. Power Connection cable:3pin plug	1

D. PROCESS STATION

The Process Station should consist of the following:

Scope of Supply

S. No	Item with description	Qty
1.	Horizontal Aluminium profile table: a. Aluminium profile: Tabletop profile – 40 x 160 mm b. Grid spacing (From slot to slot) – 40 mm c. Profile groove width – 8.3 mm d. Leveling casters for quick setting and smooth movement	1
2.	I/O Interface module	1
3.	Valve Manifold: a. Grid spacing – 19 mm b. Provided with Conical silencers for reducing the dB level of exhausted air c. 5/2 Double solenoid pilot operated valve: • Size – 1/8 ’’ • Design – Spool type • Pressure range – 2 – 10 bar • Flow rate – 450 l / min • Manual override- Resetting • Fitted with 1/8” flow control valve for varying the flow	1
4.	Filter Regulator Combination with Lubricator (FRL Unit) with pressure gauge and start up valve: a. Port size -1/4 inch b. Flow rate – Atleast 500 l/min	1

	c. Maximum supply pressure – 10 bar d. Operating pressure – Atleast 6 bar e. Filtering element grade – Atleast 40 μm	
5.	Rotary indexing table module: a) Pneumatically driven rotary indexing table capable of handling load upto 50 kg b) Indexing table to be driven by cylinder of Ø 40 x 75 mm c) Indexing angle 60 degrees d) Indexing plate diameter-320 mm e) Diffuse Sensor: • Type: Infrared • Sensing range: 15mm	1
6.	Drilling Module: a) Drilling machine to be mounted on pneumatic linear drive of stroke of 100mm b) Pneumatic drilling machine: No-load Speed: 3000 rpm, Weight: 1.4 Kg	1`
7.	Pick and Place module a) Rod less cylinder – dia 25 mm x 250 mm stroke b) Aluminium profile pillar – 80 x 80 mm c) Rod less cylinder mounting profile- 40 x 40 mm d) Twin rod cylinder- 15 mm stroke length e) Vacuum gripper with suction pad	1
8.	Control console: a) Cycle start push button –Green with illuminated b) Auto /Manual selector switch -Black c) Home position push button –Red with illuminated d) Emergency button -Red	1
9.	a. Cable duct and accessories:	1
10.	PLC control panel with Siemens S7 1200 or Allen Bradley Logix or similar PLC: a. Digital inputs-14,Digital outputs 10, Analog inputs 2Ethernet interface 1 x TCP/IP, 10 Mbit/s b. Terminal blocks c. 25pin D-sub I/O data cable length 1.5 m, wire used 0.25 mm^2 d. Cable ducts e. Power Connection cable:3pin plug	1

E. Robot Station

The Robot Station should consist of the following

S. No	Item with description	Qty
1.	Robot module: a. Axes : 6 b. Drive motor : All-axis servo motor c. Maximum motion area : 505 mm d. Maximum payload : 2 kg e. Cycle time : 0.35 sec f. Position repeatability : ±0.02 mm g. Signal line : 10 (for proximity sensor signals, etc.) h. Air pipe solenoid valve : 2 solenoid valves i. Maximum air pressure : 5 bar max j. Controller operating voltage : Single phase, 230VAC	1
2.	Horizontal Aluminium profile table: a. Aluminium profile: Table top profile – 40 x 160 mm b. Grid spacing(From slot to slot) – 40 mm c. Profile groove width – 8.3 mm d. Leveling casters for quick setting and smooth movement	1
3.	Filter Regulator Combination with Lubricator (FRL Unit) with pressure gauge and start up valve: a. Port size -1/4 inch b. Flow rate – Atleast 500 l/min c. Maximum supply pressure – 10 bar d. Operating pressure – Atleast 6 bar e. Filtering element grade – Atleast 40 µm	1
4.	Storage module:Comprising of a storage block with 3 Assembly bins and sensors	1
5.	Inward slide module:Comprising of a slide module with sensors.	1
6.	Orientation module:Comprising of an orientation block with orientation sensors	1
7.	Control console: a. Cycle start push button –Green with illuminated b. Auto /Manual selector switch -Black c. Home position push button –Red with illuminated d. Emergency button -Red	1
8.	Controller module:Consists of Robot controller with I/O cables assembled on the aluminium profile assembly	1
9.	I/O interface module: a. Input voltage :24V b. Output current: Maximum 3A c. Miniature circuit breaker DC voltage with max.5A current rating d. Terminal blocks e. 25pin D-sub I/O data cable length 1.5 m, wire used 0.25 mm2 f. Cable ducts g. Power Connection cable:3pin plug with length of 1.3m	1
10.	Cable duct and accessories	1

F. Assembly STATION

The Assembly Station should consist of the following

S. No	Item with description	Qty
1.	Horizontal Aluminium profile table: a. Aluminium profile: Tabletop profile – 40 x 160 mm b. Grid spacing(From slot to slot) – 40 mm c. Profile groove width – 8.3 mm d. Leveling casters for quick setting and smooth movement	1
2.	Filter Regulator Combination with Lubricator (FRL Unit) with pressure gauge and start up valve: a. Port size -1/4 inch b. Flow rate – Atleast 500 l/min c. Maximum supply pressure – 10 bar d. Operating pressure – Atleast 6 bar e. Filtering element grade – Atleast 40 µm	1
3.	Assembly and Testing module: Assembly and Testing block with electrical assembly and sensor.	
4.	Cap dispenser module: Consists of Machined dispenser module with sensors and Linear Motion rail and guide.	1
5.	Spring dispenser module: Consists of Machined dispenser module with sensors and Linear Motion rail and guide.	1
6.	Outward slide module: Comprising of a slide module with sensors.	1
7.	Rejection module: Comprising of a rejection block with a bin and sensor.	1
8.	Control console: a. Cycle start push button –Green with illuminated b. Auto /Manual selector switch -Black c. Home position push button –Red with illuminated d. Emergency button -Red	1
9.	PLC control panel with Siemens S7 1200 or Allen Bradley Logix or similar PLC: a. Digital inputs-14,Digital outputs 10, Analog inputs 2Ethernet interface 1 x TCP/IP, 10 Mbit/s b. Terminal blocks c. 25pin D-sub I/O data cable length 1.5 m, wire used 0.25 mm^2 d. Cable ducts e. Power Connection cable:3pin plug	1
10.	I/O Interface module	1
11.	Valve Manifold: a. Grid spacing – 19 mm b. Provided with Conical silencers for reducing the dB level of exhausted air c. 5/2 Double solenoid pilot operated valve: • Size – 1/8” • Design – Spool type • Pressure range – 2 – 10 bar • Flow rate – 450 l / min • Manual override- Resetting • Fitted with 1/8” flow control valve for varying the flow	1
12.	Cable duct and accessories	1

G. SORTING STATION

The Sorting Station should consist of the following

S. No	Item with description	Qty
1.	Horizontal Aluminium profile table: a. Aluminium profile: Tabletop profile – 40 x 160 mm b. Grid spacing (From slot to slot) – 40 mm c. Profile groove width – 8.3 mm d. Leveling casters for quick setting and smooth movement	1
2.	I/O Interface module:	1
3.	Valve Manifold: a. Grid spacing – 19 mm b. Provided with Conical silencers for reducing the dB level of exhausted air c. 5/2 Double solenoid pilot operated valve: • Size – 1/8” • Design – Spool type • Pressure range – 2 – 10 bar • Flow rate – 450 l / min • Manual override- Resetting • Fitted with 1/8” flow control valve for varying the flow	1
4.	Filter Regulator Combination with Lubricator (FRL Unit) with pressure gauge and start up valve: a. Port size -1/4 inch b. Flow rate – Atleast 500 l/min c. Maximum supply pressure – 10 bar d. Operating pressure – Atleast 6 bar e. Filtering element grade – Atleast 40 µm	1
5.	Sorting Conveyor Module: a. Flat belt conveyor with overall length of 500mm • Conveyor to be driven by 24V DC motor of reputed make • Conveyor to be provided with electronic drive unit for regulating the speed, reversing the direction and other functions b. Comprising of 2 pneumatic cylinders of dia 25 mm and stroke 40 mm. Sorting slides for collecting the work piece on appropriate slides c. Color Sensor: • Sensing range: 15mm • Supply Voltage and Current: 10 to 30V DC (10% max. ripple) • Switch output: PNP, normally open/normally closed contact • Output Protection: Protected against false pulse on power-up, short-circuit protected • Output rating: 100 mA d. Proximity sensor: • Type - Cylindrical inductive type • Supply voltage -12 – 24V DC • Sensing range – 8 mm e. Diffuse Sensor: • Type: Infra-red • Sensing range: 15mm	1
6.	Control console: a. Cycle start push button –Green with illuminated	1

	b. Auto /Manual selector switch -Black c. Home position push button –Red with illuminated d. Emergency button -Red	
7.	Cable duct and accessories:	1
8.	PLC control panel with Siemens S7 1200 or Allen Bradley Logix or similar PLC: a. Digital inputs-14,Digital outputs 10, Analog inputs 2Ethernet interface 1 x TCP/IP, 10 Mbit/s b. Terminal blocks c. 25pin D-sub I/O data cable length 1.5 m, wire used 0.25 mm^2 d. Cable ducts e. Power Connection cable:3pin plug	1

H. PLC SOFTWARE AND ACCESSORIES

- PLC software should be supplied with perpetual and floating license for minimum 10 users.
- PLC program should be open and editable. No password lock should be there.
- PLC Software and Programming cable should be compatible with PLC used in the above stations for programming and real time communication.
- PLC Software must be genuine, legal and transferrable to the institute systems.
- Programming software should support various programming languages like ST, FBD, Ladder. etc.,
- Ethernet cable should be supplied with the length of 5mtr for connecting PLC to PC for programming and other communications

Scope of supply

1.	PLC programming cable for connecting to PC	10 Nos.
2.	Relevant PLC Programming software applicable to the PLC hardware	10 Users

I. ASSEMBLY TEMPLATES

Should contain assembly templates required for the assembly of respective station and combination. It should be made up of plain anodized Aluminium sheet with handle

J. TECHNICAL DOCUMENT

Main technical document shall contain the details for the assembly of all the five stations in different combination functions. It shall include positional sketches and installation procedure etc.

K. WORK PIECE SET

Work piece shall contain 18 approved work pieces, diameter of 39.5 mm and 25mm height in each material made up of Aluminium, Delrin and Hylum respectively

Technical Specifications

Aluminium Work Piece - Approved	1set (6nos)
Delrin Work Piece - Approved	1set (6nos)
Hylum Work Piece - Approved	1set (6nos)

6.3.AUTOMATED MANUFACTURING SYSTEM INTEGRATED WITH INDUSTRY 4.0 TECHNOLOGIES

This Automated Manufacturing setup should be a miniature factory with Industry 4.0 technologies integrated which shall include the industry standard processes such as Feeder and Sorting. The system can MIMIC an industrial process like the feeder station feed the work piece to the Sorting station. The sorting station should segregate the work pieces based on the RFID tag.

Scope of supply should have the below items:

S.no	Products description	Qty
A.	Control Unit	1no
B.	Feeder Station	1no
C.	Sorting Station with RFID	1no
D.	PLC Software and cable	1set
E.	Work Piece set with RFID Tag	1set
F.	Smart Manufacturing Execution System Application with minimum 3 years subscription	1no
G.	Augmented Reality Application, with minimum 3 years subscription	1no
H.	Compressor – 30 L	1 no

A. Control Cabinet:

S.No.	Items with description	Qty
1	**Power supply Module:** • Power supply: Input voltage:230/115VAC (47–63Hz), Outputvoltage:24 VDC, short-circuit-proof Output current: Maximum 3A • Miniature circuit breaker DC voltage with max.5A current rating • Terminal blocks • Power Connection cable:3-pinplug with length of 1.3mtr.	1
2	**Gate Way module**: • Operatingvoltage:24VDC • Communication: Ethernet • SD Card reader: Yes • Programmable:JAVA2, standard edition • Cellular:3G with Antenna connector • Wi-Fi communication	1
3	**Ethernet Switch**: • No of Ports:8(Min.) • Operating voltage:24VDC/AC • Communication: Ethernet • Connector: RJ45, female • Transmission Speed: 10/100Mbps	2

4	**Energy Module:** **a) Energy Meter:** • InputVoltage:110-415V, programmable • InputFrequency:45-65Hz. • **Communication:** RS485serialchannelcommunication **b) Current Transformer:** • Operatingfrequency:50Hz/60 Hz • RatedPrimaryrating:1A– 7500A • RatedSecondaryOutput:5A(Min.) **c)** PowerConnectioncable:3-pinplug withlengthof1.3mtr.	1
5	**Air Monitoring Module:** **a) Flow Sensor** • Flowrange:0 – 500 LPM • OperatingVoltage:24VDC • AnalogueOutput:4 – 20mA **b) Pressure Sensor** • OperatingVoltage:24VDC • PressureRange:0 – 10 Bar • Analogueoutput:1 – 5 V • DigitalOutputs:2 **c) Filter Regulator Combination with Lubricator (FRL Unit) with pressure gauge and start-up valve:** • Portsize-1/4inch • Flow rate– 500 – 600 l/min • Maximumsupplypressure–10 bar • Operatingpressure-6bar • Filteringelementgrade–40 µm • Minimum operating flow– 12 – 15 l/min • FilterBowlcapacity–9 – 10 ml • LubricatorBowlcapacity–20ml • Connectionfortube8mmdia.inputand8 mm dia. output • Mounting–SocketheadcapscrewwithM6hammerheadnut	1 Set
6	**PLC control panel with PLC from brands like Siemens, Allen Bradley, OMRON, or similar globally reputed brands:** • DigitalInputs-8 • DigitalOutputs–6 • 1 xTCP/IP • EthernetCommunicationport;2xAI • 4ChannelAnalogInputmodule • Power supply: Input voltage: 230/115VAC (47–63 Hz), Output voltage: 24VDC • Short-circuit-proof Output current: Maximum 3A	1 Set

B. FEEDER STATION WITH HMI

- Should separate the jobs stacked in magazine tube with the help of pneumatic cylinder
- Rotary Pick and Place module with a rotary actuator arm and suction cup to pick up work pieces and relocate them to positions from '0 degree to 180 degrees' on horizontal plane.

It should have the following components

S.No	Item with description	Qty
1.	**Horizontal Aluminium profile table:** a. (L x W x H) - Max. 540 x 640 x 790 mm b. Grid spacing (From slot to slot) – Max. 40 mm c. Profile groove width – Max. 8.3 mm • Leveling casters for quick setting and smooth movement	1
2.	**I/O Interface module:** • 25-PinD-Subconnector interface board for interfacing valves and actuators • 25-PinD-Subcable for transferring the I/O to the terminals which in turn are to be connected to PLC	1 Set
3.	**Valve Manifold:** • Grid spacing– Minimum 19mm • Mountable valve port size equivalent to 1/8'' • Provided with Conical silencers for reducing the dB level of exhausted air **5/2 Double solenoid pilot operated valve:** • Material-Extruded aluminium with anodized finish. • Size– Minimum 1/8'' • Design– Spool type • Pressurerange:2 –10bar • Flowrate– Minimum 450 – 500 l/min.	1 Set
4.	**Filter Regulator Combination with Lubricator (FRL Unit) with pressure gauge and start-up valve:** • Port size equivalent to 1/4 inch • Flowrate– Minimum 500 – 600 l/min • Maximum supply pressure–10 bar • Operating pressure- Minimum 6 bar • Filteringelementgrade–40µm(Min.) • Minimum operating flow– 12 – 12l/min • Filter Bowl capacity–9 – 10 ml	1 Set
5.	**Stack Magazine module:** **a)** Comprising Miniature cylinder • Dimension: Dia.25 – 32 mm and stroke 80 – 100 mm • Magnetic sensor for position sensing **b)** Light barrier Module: • Type: Infra-red • Sensingrange:2 – 3 m • Supply Voltage and Current:10 to 30VDC (10% max. ripple) @ 20mA max current • Switch output: PNP, normally open/normally closed contact. • Output Protection: Protected against false pulse on closed contact power-up, short-circuit protected	1 Set
6.	**Rotary Pick & Place Module:** • Cylinder rotation angle (rotary cylinder fitted with shock absorbers), 180 degrees (freely selectable) • Compact guided cylinder dia. 40 – 50 mm, Stroke-50 – 75 mm • Magnetic sensor for position sensing	1 Set

7.	**Vacuum Ejector Module:** • Integrated energy saving function • Brightly-lit display screen or LED bar display • Automatic blowoff function • Vacuum Ejector module shall be capable of handling minimum 100 gm	1 Set
8.	**HMI:** • 7" HMI screen with control buttons in addition to the physical control console **Control Console** • Cycle start push button –Green with illuminated • Auto / Manual selector switch -Black • Home position push button –Red with illuminated • Emergency button -Red	1 Set
9.	**Cable duct and accessories:** • Wire duct size at least 45x25 inch. • Fastening screws	1 Set
10.	**PLC control panel with PLC from brands like Siemens, Allen Bradley, OMRON, or equivalent Globally Reputed brands:** • Digital inputs – 14, Digital outputs10, Analog – 2, Ethernetinterface1xTCP/IP,10 Mbit/s minimum • Terminal blocks • 25-PinD-subI/Odatacablelength1.5 m, wireused0.25squaremm. • Power Connection cable:3pin plug with length of 1.3m	1 Set

C. SORTING STATION WITH HMI

Should have 3 slides to sort the different materials and color of jobs that are arriving at this station. Should sense the presence of jobs at the start of the conveyor and also to detect features of the jobs in order to start the conveyor and control the diversion of material in the appropriate slide.

It should have the following components

S. No	Item with description	Qty.
1	**Horizontal Aluminium profile table:** • (L x W x H) - Max. 540 x 640 x 790 mm • Grid spacing (From slot to slot) – Max. 40 mm • Profile groove width – Max. 8.3 mm • Leveling casters for quick setting and smooth movement	1
2	**I/O Interface module:** • 25-PinD-Sub connect or interface board for interfacing valves and actuators • 25-PinD-Sub cable for transferring the I/O to the terminals which in turn are to be connected to PLC	1 Set
3	**Valve Manifold:** • Grid spacing– Minimum 19mm • Mountable valve port size equivalent to 1/8'' • Provided with Conical silencers for reducing the dB level of exhausted air **5/2 Double solenoid pilot operated valve:** • Material-Extruded aluminium with anodized finish. • Size– Minimum 1/8'' • Design– Spool type • Pressurerange:2 –10bar • Flowrate– Minimum 450 – 500 l/min.	1 Set
4	**Filter Regulator Combination with Lubricator (FRL Unit) with pressure gauge and start-up valve:** • Port size equivalent to 1/4 inch • Flowrate– Minimum 500 – 600 l/min • Maximumsupplypressure–10 bar • Operating pressure- Minimum 6 bar • Filtering element grade–40µm(Min.) • Minimum operating flow– 12 – 12l/min • Filter Bowl capacity–9 – 10 ml	1 Set
5	**Sorting Conveyor Module:** a. Flat belt conveyor with overall length of minimum 500 – 600 mm • Conveyor to be driven by 24VDC motor of reputed make • Conveyor to be provided with electronic drive unit for regulating the speed, reversing the direction and other functions b. Comprising of two pneumatic cylinders of dia.25 – 32 mm and stroke 40 – 50 mm. c. 3 Sorting slides for collecting the work piece on appropriates lides **RFID Sensor** • Read/write distance: 15mm(min) • Supply Voltage: 10 to 30V DC • M8 Communicational/ power cable • Output protection: Protected against false pulse on power up, short-circuit	1 Set

	protected. **Diffuse Sensor:** • Type: Infra-red • Sensingrange:15 – 20 mm • Supply Voltage and Current:10to 30VDC (10% max. ripple) @20mA max current • Switch output: PNP, normally open/normally closed contact • Output Protection: Protected against false pulse on power-up, short-circuit protected	
6	**HMI** • 7" HMI screen with control buttons in addition to the physical control console **Control Console** • Cycle start push button – Green with illuminated • Auto / Manual selector switch - Black • Home position push button – Red with illuminated • Emergency button - Red	1 Set
7	**PLC control panel with PLC from brands like Siemens, Allen Bradley, OMRON, or equivalent Globally Reputed brands:** • Digital inputs – 14, Digital outputs 10, Analog – 2, Ethernet interface 1xTCP/IP,10 Mbit/s minimum • Terminal blocks • 25-PinD-subI/Odatacablelength1.5 m, wireused0.25squaremm. • Power Connection cable:3pin plug with length of 1.3m	1Set

D. PLC SOFTWARE AND CABLE:

- PLC software should be an educational perpetual floating licenses for the respective PLC brands shall be supplied.
- Programming software should support various programming languages like STL, FBD, Ladder. etc.
- Ethernet cable should be supplied with the length of min.5mtr. for connecting PLC to PC for programming and other communications

E. WORK PIECE SET WITH RFID TAG

Should be provided with different types of work pieces with Inbuild RFID Tag. There should be a separate RFID Reader placed in the appropriate location for identification.

F. SMART MANUFACTURING EXECUTION SYSTEM (MES)

Pre-developed web application must be provided for the system supplied, which shall include the following features-

- Web application should be able to display the following real time machine status–
- Web application software must be provided for the hardware system with login credentials.
- Web application should be possible to deploy using premises cloud infrastructure.
- Machine data should be stored in cloud for Predictive analysis and AI.
- Web application should be able to display the following real time machine status:
  - Machine Location Tracking

  - MES–Order management & Delivery
  - Production OEE (Overall Equipment Effectiveness)
- Maintenance–Condition monitoring, Preventive & Predictive Analytics
- Error Failure indication
- And on system
- Management Information System
- **Energy Management**
  - Air consumption (Pressure & Flow)
  - Energy consumption (Power, Voltage & current etc.)

G. AUGMENTED REALITY APPLICATION

- AR application must be available for the automated Manufacturing system.
- It should be compatible with mobile gadgets (preferably iOS) & wearable gadget.
- It should be possible to download the app from Apple store.
- AR application should be possible to detect machine without any identification marks like QR code.
- AR application should be able to display the real time machine status and error notification for machine monitoring and diagnostics.
- AR applications should be included with machine data.
- Student should be able to self-create the error notifications for learning purpose.
- There shall be a separate IoT controller to be used in the physical system to publish the AR data to the cloud
- The machine data shall be augmented on the physical machine by scanning the three- dimensional view of the physical system through AR app. There is no identifications mark to be used for scanning the physical system
- AR application shall be possible to monitor the periodic machine downtime based on the Error occurred in the machine
- AR application shall be possible to position the Dynamic values by user.
- The vendor shall provide suitable AR applications developed for the hardware supplied. It shall be compatible for iPad with Bionic Engine.

H. COMPRESSOR

- Motor power – 0.75 HP
- Tank - 30 litre
- Output – 45 litre / Minute
- Noise - 55 dB
- Power supply - 230V, 50Hz
- Minimum duty cycle of 60%

6.4.CNC MILLING SYSTEM SIMULATOR

The CNC simulator should enable Trainees to gain first-hand experience of programming and operating cutting-edge CNC Technology.

Should contain	Original Fanuc Milling controller 3 axes motors and 1 spindle motor Power supply Cable Technical documents
Display device	10.4”LCD
Operation section	MDI (QWERTY key) unit, Machine operator‘s panel, Emergency stop button, Override switch, Manual pulse generator
Input and output media	USB memory, CF card
Communication I/F	Ethernet
System (switching possible)	Machining cente rsystem (number control axis 3-axis, spindle1axis)
Power Supply	3Ph, 415V AC, 50Hz
Features	Inch / metric switchable M-code & G-code Support-Full Fanuc dialects CAD/CAM Integration-Import from Fusion 360, SolidWorks CAM, Mastercam, etc. 10.4” Color LCD Full QWERTY keyboard USB, Flash ATA and Ethernet connectivity Part programming training for Milling PLC & Parameter settings CNC maintenance training Interface training (Hardwiring & PLC) Special screen developments in FANUC picture and macro executors Upgradable to VMC Machine Simulator

7. DIGITAL LEARNING SOLUTION

7.1.VR BASED LEARNING APPLICATION FOR AUTOMATION ASSEMBLY

A Prebuilt application that can help the students to learn about how to Build an automation system in a virtual world.

Package should contain

- VR Gadget: 1no
- Virtual mechatronics lab software – 1 license

Features

- Guided mode for self-paced learning
- Non guided mode for assessment
- Should include different components and allow the users to build an automated system.

8. SOFTWARE

8.1.SIMULATION SOFTWARE FOR MULTI TECHNOLOGIES

Create and simulate the circuits allied with technologies like	- Hydraulics & Proportional Hydraulics - Pneumatics & Proportional Pneumatics - Electrical Control - A.C., D.C., Motor Control - One-Line Electrotechnical Diagram - PLC, Allen Bradley™ - PLC, Siemens™ - PLC, IEC 1131-3 - PLC, LSIS - HMI 2D/3D & Control Panel - Robotics - Digital Electronics
Other Features like	- Component Sizing Module - Mechanical links - SFC Grafcet IEC 61131 - Diagnostics & Trouble shooting - Embedded View and Sequence Diagram - Bill of Materials (BOM) & Report Module - Block Diagram (Math) Workshop - Measuring instruments such as multimeter, clamp-meter, oscilloscope, hydraulic tester, thermometer - Creating digital twins of your hardware equipment - Virtual Systems: conveyor, traffic lights, elevator, car wash, pick & place, etc. - Connecting to real devices such as PLCs, Arduino™, CAN devices - Connecting to Trainer kits and Mechatronics systems through OPC
Simulation	• All technologies should be linked together & component interactions should be possible during simulation to create complete system which reinforce students' understanding of system interactions. It should be a separate software. • Easily reproduce any lab equipment or complete system to simulate, analyze and troubleshoot them before the hands-on experience.
Analysis Features	Simulation parameters such as performance curves, external loads, leaks, viscosity, and thermal characteristics should be possible to configure as needed.
Library inclusion	• Digital electronics library should include standard devices like inverters, logic gates, flip-flops, counters, shift registers, comparators, switches, LEDs, 7-bar display, decoders, multiplexers, etc. • Electro technical Library should include AC and DC components, Motor soft starters and variable frequency drives. • HMI module should provide mechanism to easily create The 2D / 3D animated shapes and control panels that reproduce the behaviour of the equipment they represent. • Component sizing module should provide calculation worksheets specific to each category of pneumatic, hydraulic and electrical components for component sizing. • Should include Mechanism Manager, which will have mechanical bodies that can be linked to Fluid Power actuators to simulate and animate their effects.
AMC	Software must be supplied with perpetual license for minimum 10 users and that should include any upgradation and support during this period.

8.2.3D SIMULATION SOFTWARE

Software should be able to create an interactive 3D emulation of automated systems by reusing and leveraging 3D CAD models.

- Import 3D geometries
- Connect 3D emulators with external controllers such as PLCs or with embedded virtual controllers.
- Should contain more than 60 Preset Objects
- Possible use of robot libraries & gateways
- Create and simulate HMI.
- VR Compatability

8.3.SCADA SOFTWARE

- It should provide a comprehensive environment for developing HMI screens, configuring data acquisition, managing alarms, logging process data, and integrating with multiple PLC platforms.
- Should be Used for plant monitoring, machine control, and process visualization.

TECHNICAL SPECIFICATIONS

Should support wide range of communication protocols for interoperability with third-party PLCs and devices:

Standard Protocols:

- OPC, OPC UA
- Modbus TCP/IP
- PROFIBUS DP
- TCP/IP

Siemens-Specific Protocols:

- S7 Protocol Suite (S7-1200, S7-1500, S7-300, S7-400)
- SIMATIC 505 TCP/IP
- SIMATIC S5 Ethernet Layer 4, AS511
- SIMOTION

Third-Party PLCs Supported:

- Mitsubishi
- Allen-Bradley (AB)
- OMRON
- Any other globally reputed brand PLC

Other features to be included is

- Tags 2048 process tags
- Screens Unlimited
- License Type USB Dongle
- Alarms 150,000 (256 alarm with 17 Classes)
- Trends 500/512 archive tags: Max. 80,000/Server
- Recipes Recipe: 500/1,000,000
- fields Records per archive: 10,000
- Web Navigator WebUX Max.50 clients

8.4.INDUSTRIAL INTERNET OF THINGS DEVELOPER PLATFORM

PTC Thing Worx or Siemens Mindsphere or equivalent software must be provided for the hardware system supplied, with the following features:

- Access to the full version of the software. Software shall connect to all of the online components, providing as implified, seamless approach for developers to create comprehensive IoT solutions.
- Access to the Market place and the possibility to download and install extensions.
- Access to Analytics Server with 8cores, Utilities and Gold Support (online and phone support)
- Min.20nos.of educational licenses to be supplied.
- Licenses shall be perpetual license, that should include any upgradation and support.
- Maximum connected assets:2500nos.
- Access PTC University to help your students understand key concepts of IoT and apply them immediately to specific use cases.
- Access to Utilities and Analytics included.
- Bidder should provide the Authorization certificate from OEM.
- Web application should be possible to deploy in on premises cloud.
- Should be provided with the necessary gateway to establish the connection between hardware and the SaaS module.
- Students should be able to self-create web applications using coding for learning purposes.

9. Desktop System with latest configuration

SL No.	Parameter	Specifications
1	Processor	intel Core i7 13th Generation or higher
2	RAM	Minimum 16GB DDR4 or latest, with support of suitable slots to expand memory upto 64GB (Min. 2 DIMM) or Higher
3	Memory Size	Minimum 1TB SSD (Nvme)
4	Operating System	Factory pre-loaded Windows 11 Professional
5	Additional OS Supported	Linux
6	Speed (Min Base Frequency)	1.6 GHz or Higher
7	Turbo Frequency	4.9 GHz or Higher
8	Chipset	Compatible chipsets as per processors make
9	Cores	Min. 8
10	Threads	Min. 16
11	Cache	16 MB or Higher
12	DVD	Optional
13	Display Size	19.5” or more TCO 08 Certified
14	Display Technology	Active Matrix TFT LCD (Backlit LED)
15	Resolution	1600X900 or Higher
16	Graphics Memory	Minimum 2GB, with suitable capacity for uploading the offered software’s
17	Keyboard	Standard USB OEM Make
18	Mouse	Optical/Laser USB OEM Make
19	Cabinet	MT/SFF
20	SMPS	180-250W
21	Speaker	1 Internal Speaker
22	Ports	Minimum 6 USB, VGA/HDMI/DP, LAN
23	**Certifications**	
23.1	Safety Standards	Safety of Electronics Products against Electrical Hazards IS 13252 (Part1):2010/IEC 60950 Part1:2005/UL Certification BIS, BEE, EPR, RoHS or any other relevant Indian Certificates.
23.2	Certification for Electro Magnetic Interference/ Radiation under control	FCC/Equivalent certification from NABL approved Lab
23.3	Restriction of Hazardous Substances in manufacturing	Indian WEE & India RoHS/International RoHS
23.4	Energy Efficiency Standards	Energy Star 7.0 of higher/ equivalent BEE Star rating
23.5	Environmental Protection Standards	EPEAT /Equivalent Indian Standard
23.6	ISO Standard	ISO 9001
24	Warranty	Minimum 5 Years OEM onsite comprehensive warranty.

7. Deliverable and Payment Schedule:

The selected company will have the following deliverables: -

SL No	Deliverable	Time Line	Amount Payable
1	**Milestone 1**: i) Pre-Delivery inspection of sample equipment. ii) Delivery of the material, equipment, PPE and Tools &Tackles in good condition at the CoEs. iii) Visual inspection of equipment and certify by the Principal of the CoEs.	Within 4 months of signing the Contract Agreement (MoA)	40% of the 'Total Order Value (Base Price)' with 18% GST on the Total Base Order Value, within 30 days of receipt of the invoices.
2	**Milestone 2**: i) Complete setup of CoEs including Civil and Electrical works (interior design, electrical cabling and infrastructure work etc.) ii) Installation & Commissioning to be completed of all equipment. iii) Inspection and testing of equipment forthe Centre of Excellences and stock entry. iv) Submission of safety certificates (if any) from competent authorities, supply of Machine Consumables, safety equipment etc. Complete setup of the CoEs.	Within 5 month of signing the Contract Agreement (MoA)	40% of the 'Total Order Value' within 30 days of complete setup of the CoEs.
3	**Milestone 3:** **i)** Completion of the Handholding period (three years) **ii)** Placement opportunities given to the 50% trainees who successfully trained and certified.	**Completion of hand-holding training & placement** : **1st Year**: Within 18 months of signing the Contract Agreement (MoA). **2nd Year**: Within 30 months of signing the Contract Agreement (MoA). **3rd Year**: Within 42 months of signing the Contract Agreement (MoA).	20% of the 'Total Order Value' will be released in equal 03 (three) installments. 1/3rd of 20% of the 'Total Order Value' after completion of every Year's hand-holding training, certification and placement opportunities provided.
4	**Milestone 4**: Comprehensive Annual Maintenance Cost (CAMC) (if any) for 3 (three) years immediately after the date of expiry of comprehensive warranty for 60 months for the equipment/machines supplied at CoE.	Payment shall be released annually on completion of CAMC subject to satisfactory performance and due recommendation from concerned principal/Head of institute.	100% of the annual awarded value within 30 days of submission of Tax invoice along with certification from the Principal of consignee institute.

Other Conditions:

a) No Advanced Payment will be given to the selected bidder.
b) Payment for 'Milestone 1' & 'Milestone 2' will be done after inspection from nominated technical experts or 3rd Party Agency/consultants/advisors appointed by DTE&T and satisfactory reports from them.

8. SECTION IV: Technical Bid Submission Forms (Cover-1)

TECH -1

COVERING LETTER

(ON BIDDERS LETTER HEAD)

[Location, Date]

To

The Director
Directorate of Technical Educational and Training, Odisha
Killa Maidan, Buxi Bazar, Cuttack– 753001

Sub: "RFP for establishment of CoE in Advanced Mechatronics at Govt. ITI Balugaon".
[TECHNICAL BID]

Dear Sir,

I/We …….. (Name of the Bidder) hereby submit our Proposal in response to notice inviting RFP date ……. and RFP document no…….and confirm that:

1. With reference to your RFP document dated ……., I/we, having examined the Bidding Documents and understood their contents, hereby submit my/our Bid. The Bid is unconditional and unqualified.

2. I/We acknowledge that the DTE&T will be relying on the information provided in the Bid and the documents accompanying the Bid for selection of the Bidder for the aforesaid project(s), and we certify that all information provided therein is true and correct; nothing has been omitted which renders such information misleading; and all documents accompanying the Bid are true copies of their respective originals.

3. This statement is made for the express purpose of qualifying as a Bidder for the aforesaid Project.

4. I/ We shall make available to the DTE&T any additional information it may find necessary or require to supplement or authenticate the Bid.

5. I/ We acknowledge the right of the DTE&T to reject our Bid without assigning any reason or otherwise and hereby waive, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.

6. I/ We certify that in the last three years, we have neither failed to perform on any contract, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award, nor been expelled from any project or contract by any public authority nor have had any contract terminated by any public authority for breach on our part.

7. I/ We declare that:

   - I/ We have examined and have no reservations to the Bidding Documents, including any Addendum issued by the DTE&T;
   - I/We do not have any Conflict of Interest in accordance with Clause 12 of the RFP document;
   - I/We have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as defined in the RFP document, in respect of any tender or request for proposal issued by or any agreement entered into with the DTE&T or any other public sector enterprise or any government,

Central or State; and

- I/ We hereby certify that we have taken steps to ensure that in conformity with the provisions of Section 14 of the RFP, no person acting for us or on our behalf has engaged or will engage in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.

8. I/We understand that the DTE&T may cancel the Bidding Process at any time and that the DTE&T is neither bound to accept any Bid that you may receive nor to invite the Bidders to Bid for the Project, without incurring any liability to the Bidders.

9. I/ We agree and undertake to abide by all the terms and conditions of the RFP document.

10. I/ We offer a Bid Security/EMD to the DTE&T in accordance with the RFP document.

11. I/ We agree and understand that the Bid is subject to the provisions of the Bidding Documents. In no case, I/we shall have any claim or right of whatsoever nature if the Project is not awarded to me/us or our Bid is not opened or rejected.

12. I/ We certified that the period of validity of Proposal is till the end of the Contract Agreement period and I/We are quoting for all the services mentioned in the Scope of Work of the RFP.

13. DTE&T, Odisha, may contact the following person for further information regarding this Proposal:

Name and full address of office, Contact No., Email ID, Company Name

In witness thereof, I/we submit this Bid under and in accordance with the terms of the RFP document

Yours sincerely,

Authorized *Signatory with Date and Seal*:

Name and Designation: _____

Address of the Bidder: _____

TECH -2

Bidder's Organisation (General Details)

SL No	Description	Full Details
1	**Name of the Bidder**	
2	**Address for communication:** Tel: E-mail ID:	
3	**Name of the authorized person signing & submitting the bid on behalf of the Bidder:** Mobile No.: Email id:	
4	**Registration / Incorporation Details** Registration No: Date & Year. :	
5	**Local office in Bhubaneswar** **If Yes, please furnish contact details**	Yes / No
6	**Bid Processing Fee Details** Amount:	
7	**EMD Details** Amount:	
8	PAN Number	
9	Goods and Services Tax Identification Number (GSTIN)	
10	Willing to carry out the assignment as per the scope of work of RFP	**YES**
11	Accept all the terms and conditions as specified in the RFP	**YES**

Authorized *Signatory with Date and Seal*:

Name and Designation: _____

Address of the Bidder: _____

TECH -3

Bidder Organisation (Financial Details)

Financial Information in INR			
Details	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**
Annual Turnover in INR			

Supporting Documents:

Audited certified financial statements for the last three (Submission of copies of Income & Expenditure Statement and Balance Sheet for the respective financial years is mandatory along with this form). Provisional Audit report for any of the FYs is not acceptable.

Filled in information in this format must have to be jointly certified and sealed by the CA and the authorized representative of the bidder and to be furnished in original along with the technical Bid failing which the Bid will be out rightly rejected.

_____

Signature and Seal of the Chartered Accountant with Date in original.

Authorized *Signatory with Date and Seal*:

Name and Designation: _____

Address of the Bidder: _____

TECH - 4

FORMAT FOR POWER OF ATTORNEY

(Notarized copy on Rs. 100 Non-Judicial Stamp Paper)

(Required only if the Signatory is not directly authorized by the Company Board/Governing Body, or Partners. Otherwise, the Board Resolution/Partners Resolution would suffice)

Known all men by these presents, we……. (name of the firm and address of the registered office) do hereby irrevocably constitute, nominate, appoint and authorize Mr./ Ms. (name), …… son/daughter/wife of …… and presently residing at ……., who is presently employed with us and holding the position of …… , as our true and lawful attorney (hereinafter referred to as the "Attorney") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our tender against the Bid document no. [•] dated [•] published by DTET for the "Procurement of Goods – [•]", including but not limited to signing and submission of all applications, bids and other documents and writings,

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

IN WITNESS WHEREOF WE……., THE ABOVE-NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS …… DAY OF ……. 20[•].

For
Witnesses
……..
(Signature, name, designation and address)

1.

2.

Accepted

(Signature)
(Name, Title and Address of the Attorney)

Encl: Board resolution for Authorized signatory

TECH - 5

(BIDDER'S PAST EXPERIENCE DETAILS)

(List of orders/assignments only of similar nature)

Sl. No.	Name of Buyer/Client, Address with Telephone No, e-mail, Contact Person, Mobile No.	Name of Project	Nature of Project/Goods/ Services and Brief of Project	Project Start Date and End Date	Project Cost/ Contract Value (In Rs.)	Status (Complete/ In Progress/ Delay)	No of students trained and placed, if any
A	B	C	D	E	F	G	
1							
2							
3							
4							
5							

Note: Information not conforming to the above format will be treated as non-responsive. The bidder must enlist their relevant experience for technical marking purpose. Copies of the Work order / Contract Document / Completion Certificate from the previous Clients need to be furnished along with the above information.

Authorized *Signatory with Date and Seal*:

Name and Designation: _____

Address of the Bidder: _____

TECH - 6

Affidavit for not being blacklisted

<< An affidavit on a non-judicial stamp paper of INR 100/- by Company Secretary/ Authorized Representative and Signatory of the Applicant with his/her dated Sign and duly notarized >>

AFFIDAVIT

(to be executed on INR 100 non-judicial stamp paper and to be duly notarized)

Date: _____

Sub: Tender No. _____

In response to the Tender Document above stated, I/We hereby declare and solemnly swear that our Company/ firm _____ is not banned/blacklisted as on date by any competent court of Law, forum or any State Government or Central Government or their agencies or by any statutory entities or any PSUs.

AND, if at any stage the declaration/statement on oath is found to be false in part or otherwise, then without prejudice to any other action that may be taken, I/We, hereby agree to be treated as a disqualified Bidder for the ongoing Contract.

In addition to the disqualification our concern/entity may be banned/blacklisted.

AND, that I/We, shall have no right whatsoever, to claim for consideration of my/our bid at any stage and the money deposited in the form of EMD shall be liable for forfeiture in full, and the tender, if any to the extent accepted, may be cancelled.

Signature of the Deponent

(Authorized signatory of the Bidder with Seal)

Date:

Place:

TECH –7

To be executed on non-judicial stamp paper of requisite value & to be notarized.

Consortium Agreement

This Consortium Agreement is executed on this_____day of _____at between; M/s_____, a company incorporated under (indicate the Company's Act.) and having its registered/principal office at_____ (herein after referred to as "Leader of the Consortium" which expression shall include its legal successors, executors and permitted assigns) on the first part,

and

M/s_____, a company incorporated under_____(indicate the Company's Act) and having its registered/principal office at_____

(herein after referred to as "First Consortium Partner" which expression shall include its successors, executors and permitted assigns) on the second part,

Each of the above entities shall individually be referred to as "Consortium partner" and collectively as "Consortium".

Whereas, Directorate of Technical Education and Training (DTE&T), Odisha, (under the administrative control of Skill Development & Technical Education Department, Government of Odisha) having its registered office at Killa Maidan, Buxi Bazaar, Cuttack-753001, Odisha, India (herein after referred to as the "Purchaser") has floated a tender no._____dtd._____ for_____.

As per the above mentioned tender conditions, Consortium formed among individual entities are allowed to qualify and participate as a bidder as per the Qualification Requirements stipulated in the tender. Towards this purpose, the consortium partners mentioned above hereby joined together to form a consortium. This consortium agreement is entered into by the above mentioned consortium partners for the purpose of submitting the bid against the above mentioned tender to the Purchaser jointly as a bidder to meet the qualifying requirements of the tender, towards execution of contract in case of award of the contract by the Purchaser and furnish performance towards equipment/system as per the conditions of the contract.

NOW, THEREFORE, the above mentioned entities hereby agrees as follows:

1. We, the consortium partners learned and understood the terms and conditions of the tender no. for issued by the Purchaser meeting the qualifying requirement indicated therein.
2. The financial percentage participation by each consortium partners shall be as indicated below.
   a) M/s_____: _____%
   b) M/s_____: _____%
3. We, the consortium partners hereby agree that M/s. _____shall act as the Leader of the consortium who shall have authority to bind each of the consortium partner(s). The Leader of the consortium shall be responsible towards:
   (a) preparation and submission of bid on behalf of the consortium
   (b) to negotiate with the Purchaser (if selected by the Purchaser for negotiation)
   (c) acceptance of the contract on behalf of consortium,
   (d) correspondence with the parties, co-ordination between the Purchaser, Consortium Partners

and other agencies concerned,

(e) submission of the Performance Securities and other documents,

(f) to submit invoice and other documents and receive the payment,

(g) to ensure performance of the equipment/system as the case may be.

(h) to respond promptly in settlement of disputes arising during any stage from submission of bid till closure of contract

(i) to participate in the process of arbitration.

4. In case award of contract by the Purchaser, we to this the consortium partners Consortium Agreement do hereby agree that we shall furnish the contract performance guarantee in favor of the Purchaser from a Bank as per the said tender/contract conditions for a value stipulated in the Contract awarded and such guarantee shall be in the name of the Leader of the Consortium.

5. Each of the consortium partners shall be jointly and severally responsible for performance of the contract. Further, the consortium partners shall be jointly and severally responsible for discharging all the obligation of the contract.

6. Any correspondence exchanged with the leader of the consortium shall be binding on consortium partner(s).

7. The leader of the consortium shall ensure performance of the equipment/system on behalf of the Consortium.

8. The consortium partners shall bear the pre-tender expenses incurred by them.

9. It is agreed that Consortium Partner(s) of this agreement will not assign or transfer any of their rights or obligations under this agreement without the written consent of the Purchaser as well as the other consortium partner(s).

10. We, the consortium partners hereby undertake and confirm that none of the consortium partner is blacklisted / debarred for business by any of the Government Organisations /Public Sector Units.

11. In case of breach of the said contract by any of the partners of the Consortium, the other consortium partner(s) hereby agree to be fully responsible for the successful execution/performance of the Contract in accordance with the terms and conditions of the contract.

12. Further, if the Purchaser suffered any loss or damage on account of any breach of the Contract or any shortfall in the completed equipment/plant, meeting the guaranteed performance parameters as per the technical specifications/contract documents, the Leader of Consortium, Consortium Partners for the present contract shall undertake promptly to make good such loss or damage caused to the Purchaser, on the Purchaser's demand without any demur. The Purchaser shall have the right to proceed against anyone of the consortium partners and it shall neither be necessary or obligatory on the part of the Purchaser to proceed against the Leader of the Consortium to the present contract before proceeding against the first or the second consortium partner.

13. Each Consortium Partners hereby covenants that it will perform its obligations in full compliance with the conditions of the contract/purchase order (if and when issued by the Purchaser), Consortium Agreement as per the regulations and statutory laws of India. In case of conflict between Contract/Purchaser Order issued by the Purchaser and Consortium Agreement, Contract/Purchase Order shall take precedence over the Consortium Agreement.

14. The responsibilities for performing execution of the said contract by each consortium partner is as indicated in the Annexure-I. It is further agreed by the consortium partners that the above sharing of responsibilities and obligations shall not in any way be a limitation of joint and several responsibilities of the members under this agreement.

15. We, the consortium partners hereby agree that this consortium agreement remains unaffected due to any change in the Article of Association of any one or any number of consortium partners with

immediate or retrospective effect.

16. This Consortium Agreement shall be governed, construed and interpreted in accordance with Laws of India. Courts of Mumbai shall have exclusive jurisdiction in all matters arising there under.
17. The consortium partners shall maintain confidentiality of the information pertaining to this agreement and the information related to execution of the contract.
18. It is further agreed that this Consortium Agreement shall be irrevocable and shall form an integral part of the Contract and shall continue to be enforceable till the Purchaser discharges the same. It shall be effective on the date first above mentioned for all purposes and intents.

1. Common Seal of M/s_____ has been affixed in my/our presence Pursuant to Board Resolution dated_____. Signature…….. Designation……..	For M/s_____ ……. (Signature of authorized representative) Name:…… Designation……
2. Common Seal of M/s_____ has been affixed in my/our presence Pursuant to Board Resolution dated_____. Signature…….. Designation……..	For M/s_____ ……. (Signature of authorized representative) Name:…… Designation……

WITNESSES:

1.

2.

ANNEXURE-I TO CONSORTIUM AGREEMENT

DIVISION OF WORK AMONG CONSORTIUM PARTNERS BASED ON THEIR RESPONSIBILITIES AND WORKING ARRANGEMENT

SL No	**Description of work to be carried out by Consortium (Indicative)**	**Division of Responsibilities**	
		Leader of Consortium	First Consortium Partner
1	Coordination of the Tender/Contract		
2	Design of the CoEs		
3	Manufacture & Supply of equipment 1. 2. 3. 4. 5. 6.		
4	Installation & Commissioning 1. 2. 3. 4. 5. 6.		
6	Comprehensive Maintenance during warranty period of 60 months 1. 2. 3. 4. 5. 6.		
5	Hand-Holding Training for 36 months		
6	Placement of certified trainees		

7	Any other additional responsibilities		

NOTE:

i) The above format of consortium agreement is prepared for two consortium partners. In case the number of consortium partner allowed as per the tender is more than two, the format has to be modified accordingly.

ii) Consortium shall include/modify activities to be carried out by them based on the scope of the tender.

TECH –8

Technical Compliance Sheet

(To be submitted on Bidder's Letterhead)

Sl. No.	Product Name (As mentioned in ToR)	Technical Specifications (As per ToR)	Compliance (Yes/No)	If No, Reasons of deviations	Remarks (Additional features, if any)

Note:

The Technical compliance sheet shall provide a detailed list of identified requirements and specifications as mentioned in the ToR (Section-III). The bidder should indicate against the requirement in the compliance column to indicate the extent to which their proposals comply with the requirements. Bidder should also fill the details of proposed hardware and provide the necessary information.

The offered product within the scope of this RFP may have some features not contained in the ToR. Bidder may provide these details separately. These will not be part of above evaluation criteria.

Authorized *Signatory with Date and Seal*:

Name and Designation: _____

Address of the Bidder: _____

TECH –9

Manufacturer's Authorization Form

(To be submitted on OEM Letterhead**)**

To,

The Director,
Technical Education and Training, Odisha, Cuttack
Killa Maidan, Buxi Bazar, Cuttack – 753001.

Dear Sir,

We M/s. _____ who are established and reputable manufacturers of

_____

do hereby authorize M/s._____ (Name and address of Agent / Dealer) to participate in the above tender.

We hereby extend our technical assistance to the bidder during installation and inspection of the product.

We hereby certify that, the equipment being sold would not be declared End of Support (EoS) or become obsolete in the next 5 years. Also, we certify that the products being sold would be covered under Warranty / Support and OEM support will be available for 05 years (as specified in the RFP/ NIT No.) from the date of installation, even in the case, the bidder becomes "Out of service".

We have studied the requirements of the product and confirm that we will adhere to the specifications of the tender and quality plan and extend all support during the inspection and provide documentary evidence at the time of inspection for the verification by the Client/Client's representative.

Date: _____

Yours faithfully,
(Name)

Signature and
Seal of the OEM

For and on behalf of M/s._____

(Name of the manufacturer)

TECH –10

Declaration regarding "Restrictions on procurement from a Bidder of a country which shares a land border with India"

(To be submitted on Bidder's Letter Head)

To,

The Director
Directorate of Technical Education and Training, Odisha
Killa Maidan, Buxi Bazaar, Cuttack- 753001
Phone No-0671 (2301061); Email: dtetorissa@gmail.com

Dear Sir,

In reference to bid submitted by M/s _____ against DTE&T Odisha's Tender NIT Number: _____, I/We have read the Order No: 27945 /F; dated: 16-10-2020 from Finance Department, Government of Odisha regarding **restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries.**

I/We certify that M/s_____ (name of Bidder) is not from such a country and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I also certify that M/s. _____will not offer any products/services of entity from such countries unless such entity is registered with the Competent Authority.

I/We certify that we/our Collaborator/Tie-Up Partners are/is not from such a country or, if from such a country, have/has been registered with the Competent Authority and we will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority.

We hereby certify that we fulfill all requirements in this regard and are eligible to be considered.

Authorized *Signatory with Date and Seal*:

Name and Designation: _____

Address of the Bidder: _____

TECH –11

"Bidder's Affidavit for Micro and Small Manufacturing Enterprises to get an exemption as per the Odisha Procurement Preference Policy"

<< An affidavit on a non-judicial stamp paper of INR 10/- by Company Secretary/ Authorized Representative and Signatory of the Applicant with his/her dated Sign and Seal >>

AFFIDAVIT

(Applicable to Bidders who fall under the definition of Odisha Small Manufacturing Enterprises)

I, Shri/ Smt/ Ms……..……(Designation)…… of (name of the Bidder Enterprise) ……. solemnly state the following.

1. That annual turn-over of my enterprise is less than Rs. 50 Cr.
2. That my enterprise has a valid Udyam Registration bearing No……. within the jurisdiction of the State of Odisha.
3. That manufacturing plant/unit of my enterprise is located in Odisha in Village/Town/City_____, Block/ULB_____Dist._____.
4. That the goods for which I am submitting this bid are manufactured in the above-mentioned manufacturing plant/unit of my enterprise.
5. That the goods to be supplied by my enterprise shall be its own manufactured goods.
6. That my enterprise shall not supply goods which are not manufactured by my enterprise.
7. That my enterprise has not been blacklisted/debarred by any Government Organization from participating in current procurement process.
8. That my enterprise comes under the definition of Odisha Small Manufacturing Enterprise (OSME), as defined in the Policy, and is, therefore, eligible for preferences and relaxations provided in the Policy for OSMEs.
9. That I am submitting this affidavit in response to the tender No_____ dated_____ invited by (Organisation Name) _____ for supply of (item name) _____.

I certify that all information furnished by me as above are true and correct. If any information is found to be incorrect, I and my enterprise shall be liable for any punitive action as deemed appropriate by competent authority.

Date: _____ Signature of Bidder _____

Name of the Bidder_____

Address_____

Mobile No.

Email:

9. SECTION V: Financial Bid (Cover-2)

Price Bid to be submitted in BoQ Ms-Excel format. The following supporting documents to be attached (in PDF format) with the seal & signature of the signing authority along with the Price Bid (BoQ Ms-Excel format) within the Cover-2.

FIN-1

COVERING LETTER
(In Bidders Letter Head)

To *[Location, Date]*

The Director
Directorate of Technical Educational and Training, Odisha
Killa Maidan, Buxi Bazar, Cuttack– 753001
Phone No-0671(2301061), Fax-0671(2301961)
Email-dtetorissa@gmail.com

Sub: "RFP for establishment of CoE in Advanced Mechatronics at Govt. ITI Balugaon" [FINANCIAL BID]

Sir,

I, the undersigned, offer to provide the Goods/Services for [*Insert title of assignment*] in accordance with your RFP No._____, Dated: _____. Our Financial Bid is for the sum of **[*Insert amount(s) in words and figures**].** This amount is inclusive of all the applicable taxes as per GST Act.

I do hereby undertake that, in the event of acceptance of our bid, the supply/services shall be provided with respect to the terms and conditions as stipulated in the RFP document. Equipment wise cost as per format (Annexure) given in the RFP documents are mentioned below:

SL No	Particulars	Total Cost (Rs) (Without Tax)	Total Cost (Rs) (With Applicable Taxes)
1	***Total Cost of the Project** [supply of equipment, machinery and software (if any) with their perpetual licenses, tools & tackles, consumables, comprehensive warranty for 60 months and cost of freight, insurance, unloading charges, installation & commissioning charges, civil, electrical and other works (if any) and hand-holding for 36 months (if applicable) etc.] ****The bidder must provide equipment wise cost breakup (In Annexure) with this section.**		
2	**CAMC Charges for 6th year**		
3	**CAMC Charges for 7th year**		
4	**CAMC Charges for 8th year**		
	GRAND TOTAL		
	****Grand Total (Total Cost without tax) in words (_____)**		

***If any discrepancy is found in between total figure and words, then the value mentioned in word shall be final.**

** **Both Price of Goods and CAMC charges (without tax) in the BoQ will be considered for Financial Bid Evaluation.**

Equipment wise cost breakup along with rate of GST in Annexure must be submitted along with this price bid format. The total price of this breakup should match the price at serial -01 of above BOQ.

Yours faithfully,

Authorized Signatory [In full and initials]:

Name and Designation of Signatory with Date and Seal:

Annexure

Bill of Quantity (BoQ)

(on Bidders Letterhead)

Name of the Bidder: _____

Sub: RFP for establishment of Centre of Excellence in Industrial Automation & Robotics at Govt. ITIs of Odisha [FINANCIAL BID]

SI No	Item description	HSN Code	Price without GST	Rate of GST (%)	Price with GST
1	**Cost of Goods**				
1.1					
1.2					
1.3					
1.4					
1.5					
	*Bidder may add rows here for submission of item wise rate				
A	**Total of Cost of Goods**				
2	**Cost of Works**				
2.1	Required civil, electrical and other works (if any) for installation and commissioning of equipment/machines				
B	**Total of Cost of Works**				
3	**Cost of Services**				
3.1	Hand-Holding Charges for 36 months				
C	**Total of Cost of Services**				
	GRAND TOTAL (A+B+C) (in figure)				

The bidder can add rows below as required.

Notes:

i. Price must be quoted in INR only. Quoted Price must be fixed for the entire contract period.

ii. The quoted price should be inclusive of freight, insurance, comprehensive warranty, unloading charges, installation & commissioning charges, civil, electrical and other works, if any etc.

Our Financial Proposal shall be binding upon us subject to the modifications resulting from contract negotiations, up to expiration of the validity period of the Proposal.

We solemnly affirm that we will strictly adhere to the laws against fraud, corruption and unethical practices, including but not limited to "Prevention of Corruption Act, 1988", during the Request for Proposal (RFP) process and execution of the Contract, in case we are awarded the work. We understand you are not bound to accept any Proposal you receive.

Yours faithfully,

Authorized Signatory [In full and initials]:

Name and Designation of Signatory with Date and Seal:

10. Section VI: Annexures

Annexure I: Bid Submission Checklist

Sl No	Description	Submitted (Yes/No)	Page No.
Technical Proposal (PART – A)			
1	Filled in Bid Submission Check List **(ANNEXURE I)**		
2	Covering Letter **(TECH -1)**		
3	Bid Processing Fee of **Rs. 11,800**/- (Scan copy with date and DD number)		
4	EMD **amount of equal to 2% of the total quoted price without tax** (Scan copy of BG with date and BG number)		
5	Copy of Certificate of Incorporation / Registration of the Bidder		
6	Copy of PAN & Goods and Services Tax Identification Number (GSTIN)		
7	Copies of IT Returns for the last 3 FYs (2021-22, 2022-23 and 2023-24) latest GST Return (in GSTR-3B)		
8	General Details of the Bidder **(TECH - 2)**		
9	Financial details (Turnover) of the bidder **(TECH – 3)** along with all the supportive documents such as copies of Income-Expenditure Statement and Balance Sheet for the concerned period		
10	Power of Attorney **(TECH - 4)** in favour of the person signing the bid on behalf of the bidder		
11	List of completed assignments of similar nature (Past Experience Details) **(TECH – 5)** along with the copies of work orders for the respective assignments		
12	Undertaking for not have been black listed by any Central / State Govt./any Autonomous bodies as on date of bid submission. **(Tech-6)**		
13	Consortium/JV Agreement (if applicable) **(Tech-7)**		
14	Technical Compliance Sheet (Requirements and specifications as per the ToR) **(Tech-8)**		
15	Manufacturing License or the Manufacturer's Authorization Form **(TECH - 9)**		
16	Declaration regarding "Restrictions on procurement from a Bidder of a country which shares a land border with India" **(TECH - 10)**		
17	Affidavit for Micro and Small Manufacturing Enterprises (**TECH - 11**)		
18	Net Worth Certificate duly sealed & signed by a Chartered Accountant		
19	Valid ISO/ISI certificates along with Machinery Test Certificate as applicable.		
20	Product wise brochure & catalogues and relevant information on products to be supplied		
21	Certification in its Cover Letter regarding non-failure of performance on any contract		
Financial Proposal (PART -B)			
1	Covering Letter **(FIN-1)**		
2	Bill of Quantity (BoQ) **(Annexure)**		

Undertaking:

All the information has been submitted as per the prescribed format and procedure.

Authorized Signatory [*In full and initials*]: _____

Name and Designation with Date and Seal: _____

Signature: _____

Annexure II: Performance Bank Guarantee Format

To

Directorate of Technical Education and Training, Odisha,
Killa Maidan, Buxi Bazaar, Cuttack – 753001.

WHEREAS <<Name and address of the supplier>> (hereinafter called "the supplier") has undertaken, in pursuance of contract no……dated……to supply……(description of goods and services) (herein after called "the contract").

AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;

AND WHEREAS we have agreed to give the supplier such a bank guarantee;

NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of ……(amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show ground or reasons for your demand or the sum specified therein.
We hereby waive the necessity of your demanding the said debt from the supplier before presenting us with the demand.
We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.
This guarantee shall be valid until the…….day of……..,20…...
Our …… branch at ……* (Name & Address of the ……..* branch) is liable to pay the guaranteed amount depending on the filing of claim and any part thereof under this Bank Guarantee only and only if you serve upon us at our ……..* branch a written claim or demand and received by us at our ……* branch on or before Dt…… otherwise bank shall be discharged of all liabilities under this guarantee thereafter.

……
(Signature of the authorized officer of the Bank)
……
Name and designation of the officer
……
……..…
Seal, name & address of the Bank and address of the Branch

* Preferably at the headquarters of the authority competent to sanction the expenditure for purchase of goods or at the concerned district headquarters or the State headquarters.

Annexure III: Proforma of the "Comprehensive Annual Maintenance Contract (CAMC) to be Signed between DTE&T, Odisha and the Agency"

This Agreement (hereinafter called the "Agreement") is made on this [•] day of the month of [month], [year].

BETWEEN

Directorate of Technical Education and Training, Odisha having its office at Killa maidan, Buxi Bazar, Cuttack – 753001 (hereinafter referred to as "DTET", which expression shall, unless repugnant to or inconsistent with the context, mean and include its successors and assigns) of the first part.

AND

M/s. [•], a company incorporated under the provisions of the Companies Act, 1956/2013 or a registered partnership firm under the provisions of the Indian Partnership Act, 1932 or a LLP firm registered under LLP Act, 2008 and having its registered office at [•] (hereinafter referred to as the "Service Provider" which expression shall unless repugnant to or inconsistent with the context, mean and include its successors and assigns) of the other part.

WHEREAS

i) the Service Provider, in the ordinary course of its business, is engaged in providing [•] services to its clients, and have represented to DTET through their bid(s), against Bid document No. [•] dated [•] (hereinafter called the "Tender") for the Procurement of Goods and provide Annual Comprehensive Maintenance Services (CAMC) for the equipment/machines supplied at CoE in Mining with Drone Survey at GP Deogarh, after completion of warranty period - [•] (through e-procurement tender process);

ii) on the basis of the said Tender, DTET has adjudged the Service Provider as a successful Bidder and issued Letter of Award (LoA) No. [•] dated [•] for the same;

iii) the Service Provider has agreed through their letter of acknowledgement vide letter No. [•] dated [•] to perform and undertake the scope of work as described in the Tender;

iv) the Service Provider is being engaged to provide the required services on the terms and conditions set forth in this Agreement;

NOW THEREFORE THE PARTIES hereby agree as follows:

1. The mutual rights and obligations of the Service Provider and DTET shall be as set forth in this Agreement, in particular:

   - The Service Provider shall provide the services in accordance with the provisions of this Agreement; and

   - DTET shall make payments to the Service Provider in accordance with the provisions of this Agreement.

2. **Conditions of Contract**
   (a) Contract Period: Annual Comprehensive Maintenance Contract (CAMC) initially valid for fifteen months and may be extended further if necessary.

   (b) Payment Terms: 100% of the annual awarded value (final quoted /negotiated prices) within 30 days of submission of Tax invoice along with certification from the Principal of consignee institute.

Payment shall be released annually on completion of CAMC subject to satisfactory performance and due recommendation from concerned Principal/Head of institute.

(c) Other Terms and Conditions:

i. Maintenance services shall consist of Preventive and Corrective maintenance of equipment specified above & will include supply and replacement of parts free of cost.

ii. Preventive maintenance, half-yearly once to be done, should include:

a. Check-up to ensure that device connection is proper; cabling is at proper condition etc.

b. Cleaning of the above equipment & checking the system performance.

iii. The Supplier is to furnish the tentative schedule of the preventive maintenance for the equipment mentioned above of Comprehensive Annual Maintenance Contract (CAMC) to be carried out.

iv. The parts replaced must be new parts or equivalent in performance to new parts.

v. All software updates should be provided free of cost during CAMC period

vi. The Supplier will also provide the same maintenance service in case of the movement of equipment from the place of original installation to a different place or lab within the consignee institute's premises.

vii. Any complaint informed through telephone/e-mail must be acknowledged with a Complaint No. by the Supplier which will be noted by Consignee. All further contact with the Supplier on such complaint will be initiated through that Complaint No. Once rectification is done, that No. will be cancelled by both parties. A register is to be maintained by the Supplier where complaints are to be noted along with Complaint No.

viii. The maintenance shall normally be done during working hours of the customer i.e. from 10 AM to 5 PM. However, in case of emergency, maintenance may have to be done beyond office hours and even on holidays. Prior arrangement through proper communication should be worked out in all such cases by the Supplier and the Consignee.

ix. The Service Engineer of the Supplier will be allowed to handle the respective equipment only in presence of the officer in charge at the Consignee site.

x. The Supplier should ensure that maintenance job is not hampered / delayed due to paucity of spares/ inadequate manpower, etc.

xi. The Supplier should submit the service call report to the Consignee for each and every service call without fail.

xii. In case of delay / lack of communication, penalty will be calculated as mentioned below in CAMC Clause.

COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT CLAUSE

Category of Maintenance	Response Time	Penalty/Delay Charges
Minor faults	Immediately with telephonic or email support or maximum within 48hrs from the actual time of reporting of the problem to the Supplier.	0.5% (Half Percent) of the total contract value (without tax) shall be deducted for every week's delay. The delay charges will be deducted from the pending payment or Performance Security submitted by the Supplier. In no context the total delay charges will exceeds 5% of the total Contract Value (excluding taxes).

Minor repair which requires visit to the Consignee Institute	Within 7 days of complaint registered.	
Major breakdown or replacement of parts	Within 15 days from the complaint registered to supplier.	

xiii. A logbook shall be maintained in which the vendor shall record all the complaints made and parts taken out of branches/office for repair. The vendor shall submit copy of consolidated complaint reports furnishing the details of institute-wise breakdown calls lodged/attended and its status on quarterly basis to Purchaser's office at Cuttack.

xiv. Repair and servicing of equipment shall be carried out at consignee institute sites, in case the equipment is required to be transported to the Supplier's/manufacture's service workshop for repairs, the same shall be undertaken at the risk and cost of the Supplier. Moreover, the Supplier may furnish Security Amount in form of Demand Draft (equal to the cost of the equipment/machine) to the Principal of the Consignee Institute before the equipment taken out from the consignee institute.

xv. After completion of the work/repair/maintenance, the Principal of the consignee institute shall issue a certificate of completion to the supplier.

(d) The Agreement shall be governed by the laws of India and the courts of Bhubaneswar/Cuttack shall have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with this Agreement

(e) This Agreement has been executed in English, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Agreement

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective authorized representatives on the day and year first before written.

For and on behalf of Directorate of Technical Education and Training, Odisha
(Authorized Representative)
Name:
Designation: Director
DTE&T Odisha
Killa Maidan, Buxi Bazaar, Cuttack-751001, Odisha

For and on behalf of M/s.

(Authorized Signatory)
Name:
Designation:
Name of the Service Provider:
Address:

In presence of the following witnesses

Name:
Designation:
DTE&T Odisha
Killa Maidan, Buxi Bazaar, Cuttack-751001, Odisha

Name:
Designation:
Name of the Service Provider:
Address:

******* End of the Document*******