

बिड दस्तावेज़ / Bid Document

बिड विवरण / Bid Details	
बिड बंद होने की तारीख/समय / Bid End Date/Time	16-02-2026 12:00:00
बिड खुलने की तारीख/समय / Bid Opening Date/Time	16-02-2026 12:30:00
बिड पेशकश वैधता (बंद होने की तारीख से) / Bid Offer Validity (From End Date)	90 (Days)
मंत्रालय/राज्य का नाम / Ministry/State Name	Chandigarh
विभाग का नाम / Department Name	Education Department Chandigarh
संगठन का नाम / Organisation Name	Chandigarh College Of Engineering And Technology
कार्यालय का नाम / Office Name	Principal Office
कुल मात्रा / Total Quantity	1
वस्तु श्रेणी / Item Category	Multi Cylinder Engine Diesel & Petrol
GeMARPTS में खोजी गई स्ट्रिंग्स / Searched Strings used in GeMARPTS	Multi Cylinder Engine Diesel & Petrol
GeMARPTS में खोजा गया परिणाम / Searched Result generated in GeMARPTS	Jerrycans as per IS 8996, Hand Held Brush Cutter (V2), Diesel Engine as per IS 10001, High Pressure Portable Pump for large fire fighting as per IS 12717, High Pressure Breathing Air Compressor Petrol Engine Driven, Vehicle Mounted Dry and Wet Garbage Suction Machine, Liquefied Petroleum Gas (Lpg) Cylinder For Bhel-IS 6044, Two Wheeler - Motorcycle, Scooter and Moped (V2), Internal Combustion Engine Crankcase Oils for Automotive Application (V2) Conforming to IS 13656, Centrifugal Pump With Diesel Engine For Fire Water Service as per IOCL Specifications
अधिसूचना के लिए चयनित प्रासंगिक श्रेणियाँ / Relevant Categories selected for notification	<ul style="list-style-type: none"> Diesel Engine as per IS 10001
बिडर का न्यूनतम औसत वार्षिक टर्नओवर (3 वर्षों का) / Minimum Average Annual Turnover of the bidder (For 3 Years)	20 Lakh (s)
उन्हीं/समान सेवा के लिए अपेक्षित विगत अनुभव के वर्ष / Years of Past Experience Required for same/similar service	3 Year (s)
एमएसएमई के लिए अनुभव के वर्षों और टर्नओवर से छूट प्रदान की गई है / MSE Relaxation for Years of Experience and Turnover	No

बिड विवरण/Bid Details	
स्टार्टअप के लिए अनुभव के वर्षों और टर्नओवर से छूट प्रदान की गई है / Startup Relaxation for Years of Experience and Turnover	No
विक्रेता से मांगे गए दस्तावेज़/ Document required from seller	Experience Criteria,Past Performance,Bidder Turnover,Certificate (Requested in ATC),OEM Authorization Certificate,OEM Annual Turnover,Additional Doc 1 (Requested in ATC) *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
क्या आप निविदाकारों द्वारा अपलोड किए गए दस्तावेज़ों को निविदा में भाग लेने वाले सभी निविदाकारों को दिखाना चाहते हैं? संदर्भ में है/ Do you want to show documents uploaded by bidders to all bidders participated in bid?	No
बिड लगाने की समय सीमा स्वतः नहीं बढ़ाने के लिए आवश्यक बिड की संख्या। / Minimum number of bids required to disable automatic bid extension	3
दिनों की संख्या, जिनके लिए बिड लगाने की समय-सीमा बढ़ाई जाएगी। / Number of days for which Bid would be auto-extended	3
ऑटो एक्सटेंशन अधिकतम कितनी बार किया जाना है। / Number of Auto Extension count	1
विगत प्रदर्शन / Past Performance	50 %
बिड से रिवर्स नीलामी सक्रिय किया/ Bid to RA enabled	Yes
रिवर्स नीलामी योग्यता नियम/ RA Qualification Rule	50% Lowest Priced Technically Qualified Bidders
बिड का प्रकार/ Type of Bid	Two Packet Bid
तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय / Time allowed for Technical Clarifications during technical evaluation	2 Days
निरीक्षण आवश्यक (सूचीबद्ध निरीक्षण प्राधिकरण /जेम के साथ पूर्व पंजीकृत एजेंसियों द्वारा)/ Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
Payment Timelines	Payments shall be made to the Seller within 45 days of issue of consignee receipt-cum-acceptance certificate (CRAC) and on-line submission of bills (This is in supersession of 10 days time as provided in clause 12 of GeM GTC)
मूल्यांकन पद्धति/ Evaluation Method	Total value wise evaluation
मध्यस्थता खंड/ Arbitration Clause	No
सुलह खंड/ Mediation Clause	No

ईएमडी विवरण/EMD Detail

एडवाइजरी बैंक/Advisory Bank	State Bank of India
ईएमडी राशि/EMD Amount	100000

ईपीबीजी विवरण /ePBG Detail

एडवाइजरी बैंक/Advisory Bank	State Bank of India
ईपीबीजी प्रतिशत (%) /ePBG Percentage(%)	5.00
ईपीबीजी की आवश्यक अवधि (माह) /Duration of ePBG required (Months).	38

(a). जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित कटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज प्रस्तुत करने है। एमएसई कटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के दायरे से बाहर रखा गया है।/EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy.

(b). ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए। / EMD & Performance security should be in favour of Beneficiary, wherever it is applicable.

लाभार्थी /Beneficiary :

Principal

Principal Office, Education Department Chandigarh, Chandigarh College of Engineering and Technology, Sector 26 Chandigarh (Principal)

बोली विभाजन लागू नहीं किया गया/ Bid splitting not applied.

एमएसई खरीद वरीयता/MSE Purchase Preference

एमएसई खरीद वरीयता/MSE Purchase Preference	No
---	----

एमआईआई खरीद वरीयता / MII Purchase Preference

एमआईआई खरीद वरीयता / MII Purchase Preference	Yes
मेक इन इंडिया विक्रेताओं को खरीद में प्राथमिकता, यदि उनका मूल्य L1+X% तक की सीमा में है / Purchase Preference to MII sellers available upto price within L1+X%	20
मेक इन इंडिया खरीद में प्राथमिकता के लिए बिड की मात्रा का अधिकतम प्रतिशत / Maximum Percentage of Bid quantity for MII purchase preference	50

<p>सार्वजनिक खरीद (मेक-इन-इंडिया को प्राथमिकता) आदेश 2017 के अनुसार केवल क्लास 1/क्लास 2 के स्थानीय आपूर्तिकर्ताओं को ही भागीदारी की अनुमति है दिनांक 16.09.2020 (समय-समय पर संशोधित एवं लागू) / Allow participation only from Class 1/Class 2 local suppliers as per the Public procurement(Preference to Make-in-india) order 2017 date 16.09.2020(as amended and applicable time to time)</p>	<p>Yes, in compliance with the MII ORDER : DPIIT Order(as amended and applicable time to time)</p>
--	--

1. The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of the previous financial year, should be as indicated above in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the bidder is less than 3-year-old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.

2. Experience Criteria: In respect of the filter applied for experience criteria, the Bidder or its OEM of the product offered in the bid {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt Organization / PSU for number of Financial years as indicated above in the bid document before the bid opening date. Copies of relevant contracts and delivery acceptance certificates like CRAC to be submitted along with bid in support of having supplied some quantity during each of the Financial year. In case of bunch bids, the category of primary product having highest value should meet this criterion.

3. Preference to Make In India products (For bids < 200 Crore):Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Only Class-I and Class-II Local suppliers as per MII order dated 4.6.2020 will be eligible to bid. Non - Local suppliers as per MII order dated 04.06.2020 are not eligible to participate. However, eligible micro and small enterprises will be allowed to participate .The buyers are advised to refer the OM No.F.1/4/2021-PPD dated 18.05.2023.

[OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.

4. Past Performance: The Bidder or its OEM {themselves or through re-seller(s)} should have supplied same or similar Category Products for 50% of bid quantity, in at least one of the last three Financial years before the bid opening date to any Central / State Govt Organization / PSU. Copies of relevant contracts (proving supply of cumulative order quantity in any one financial year) to be submitted along with bid in support of quantity supplied in the relevant Financial year. In case of bunch bids, the category related to primary product having highest bid value should meet this criterion.

5. Reverse Auction would be conducted amongst first 50% of the technically qualified bidders arranged in the order of prices from lowest to highest. Number of sellers eligible for participating in RA would be rounded off to next higher integer value if number of technically qualified bidders is odd (e.g. if 7 bids are technically qualified, then RA will be conducted amongst L-1 to L-4). In case number of technically qualified bidders are 2 or 3, RA will be between all without any elimination. If Buyer has chosen to split the bid amongst N sellers, then minimum N sellers would be taken to RA round. In case Primary products of only one OEM are left in contention for participation in RA based on lowest 50% bidders qualifying for RA, the number of sellers qualifying for RA would be increased to get at least products of one more OEM (directly participated or through its reseller) if available. Further, if bid(s) of any seller(s) eligible for MSE preference is / are coming within price band of 15% of Non MSE L-1 or if bid of any seller(s) eligible for Make in India preference is / are coming within price band of 20% of non MII L-1, then such MSE / Make in India seller shall also be allowed to participate in the RA process.

Multi Cylinder Engine Diesel & Petrol (1 set)

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

तकनीकी विशिष्टियाँ /Technical Specifications

क्रेता विशिष्टि दस्तावेज़ /Buyer Specification Document	Download
---	--------------------------

प्रेषिती/रिपोर्टिंग अधिकारी तथा मात्रा/Consignees/Reporting Officer and Quantity

क्र.सं./S.N o.	प्रेषिती/रिपोर्टिंग अधिकारी /Consignee Reporting/Officer	पता/Address	मात्रा /Quantity	डिलीवरी के दिन/Delivery Days
1	Vikas	160026,Chandigarh College of Engineering & Technology (Degree Wing), Sector-26	1	60

क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें/Buyer Added Bid Specific Terms and Conditions

1. Generic

OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity up to 25% of the contracted quantity during the currency of the contract at the contracted rates. The delivery period of quantity shall commence from the last date of original delivery order and in cases where option clause is exercised during the extended delivery period the additional time shall commence from the last date of extended delivery period. The additional delivery time shall be $(\text{Increased quantity} \div \text{Original quantity}) \times \text{Original delivery period (in days)}$, subject to minimum of 30 days. If the original delivery period is less than 30 days, the additional time equals the original delivery period. The Purchaser may extend this calculated delivery duration up to the original delivery period while exercising the option clause. Bidders must comply with these terms.

2. Generic

Actual delivery (and Installation & Commissioning (if covered in scope of supply)) is to be done at following address

CCET
Sector 26
Chandigarh
Chandigarh
Chandigarh

3. Generic

Bidder financial standing: The bidder should not be under liquidation, court receivership or similar proceedings, should not be bankrupt. Bidder to upload undertaking to this effect with bid.

4. Certificates

Bidder's offer is liable to be rejected if they don't upload any of the certificates / documents sought in the

Bid document, ATC and Corrigendum if any.

5. **Buyer Added Bid Specific ATC**

Buyer Added text based ATC clauses

1. Status of the Bidder

The bidder shall certify that it is not:

- Under liquidation, insolvency, bankruptcy, or court receivership.
- Bidder should either OEM or Authorised dealers of OEM
- Subject to any similar proceedings under applicable laws.
- Declared insolvent or bankrupt at any time during the last five (5) years.

A self-certification on the bidder's official letterhead, duly signed and stamped, must be submitted confirming compliance with the above.

2. Non-Blacklisting / Non-Prosecution

The bidder shall confirm that it has not been blacklisted, debarred, suspended, or prosecuted by:

- Any Central Government Department
- Any State/UT Government
- Any Public Sector Undertaking (PSU)
- Any Statutory or Autonomous Body
- Any Educational or Research Institution
- Any other Government-funded organization

The bidder must submit a valid affidavit on Non-Judicial Stamp Paper, duly attested by an Executive Magistrate/Notary Public, affirming that:

- The bidder is not blacklisted or debarred.
 - The bidder has not been prosecuted.
 - No case is pending that may adversely affect the execution of the contract
-

3. Acceptance of Additional Terms & Conditions (ATC)

The bidder shall submit a signed and stamped undertaking confirming:

- Unconditional acceptance of all General ATC and Special ATC as specified in the tender/bid document.
 - Compliance with delivery timelines, warranty obligations, training, installation, and service conditions, as applicable.
-

4. Acceptance of Technical Specifications

The bidder must submit:

- A point-wise compliance statement against all technical specifications mentioned in the tender.
- An undertaking confirming that the quoted make and model fully comply with the prescribed technical specifications.
- A declaration that no deviation from the submitted technical specifications shall be permitted after bid submission.

The bidder must clearly indicate the Make, Model, Country of Origin, and submit the OEM Technical Datasheet along with a valid OEM Authorization Certificate.

Equipment's to be provided on turnkey basis by providing all accessories, tools, electrical connections etc.

Specifications

Multi cylinder Engine Petrol and Diesel Test Rig

1. Requirement Specification - Multi Cylinder CRDi VGT Turbo Diesel Engine Test Rig Set-up with Open ECU and Eddy current Dynamometer, (Diesel/Biodiesel + CNG/LPG/H2/Methanol/Ethanol/Gasoline)

Engine	Type: Automotive, No. of Cylinders: 02 or more, Torque: 75 Nm@2000 or better, Motorized EGR with Cooler, VGT Turbocharger, 900 cc or more, CR: 16.5:1 or more, Power: 35 hp@3600 rpm or better
Fuel System	CRDi System - High Pressure Pump - 1400 bar or more , Rail with Pressure Control Valve, Injector: Solenoid, Multi-hole, Peak & Hold, Low Pressure Fuel Pump, Sensors - Engine Temp (Accuracy: 0.1 degC), Camshaft Position Sensor - Hall Effect, Crankshaft Position Sensor - Inductive, Fuel Line Pressure Sensor (Accuracy: 0.1 MPa), Driver Demand Sensor (Accuracy: 0.1 %), Inlet Air Temp (Accuracy: 0.1 degC), Air Flow (Accuracy: 0.01 Kg/hr), Boost Pressure Sensor

Open ECU

Hardware: Injector Drivers: 8 or more, Number on Pins: 190 or more, H-Bridges: 04 or more, Environmental Protection: IP67 or better. Industry Standard ECU, 12V, Suitable Wiring Harness, Table Top Control box for easy access to Starter, Ignition, Communication, Emergency Stop. Reverse Polarity Protection.

Software Functions: Online change of parameters (while engine is running): Injection Quantity, Injection Pressure – 1000 bar (Closed Loop), Injection Timing (Range: 0-720 deg, Accuracy: 0.1 deg), Multiple Injections (Min.3, Quantity & Separation Control), EGR Control – Motorized,

Injector Configuration: Following parameters should be configurable through PC based software – Boost Voltage, Boost Time, Boost Current, Pull Time, Pull Current, Hold Current, Boost to Pull Switch Time, Pull to Hold switch time, Off Time. Boost Voltage: 60 v or more, configurable ET Map, Fuel Pressure Control, Fan Control, Main Relay Control, Crank & Cam pattern: Configurable through PC based software, compatible patterns – 60-1 lost, 59-1 lost upto 16-1 lost, 60-2 lost, 59-2 lost upto 16-2 lost, Error Diagnosis.

PC based Software: PC Based Software having following functions / features:

1. Online / Offline Mode, Online change of parameters (Maps, variables, switches), Online Monitoring of Data. Option to save different screens (Set of parameters) for different functions. Different view of parameters – Graphs, bar, number with min & max logs, option to add more parameters based on the requirements.
2. Data logging feature, option to create different set of variables for logging, option to select the speed of logging, simultaneous modification of maps. Logs should be simultaneously displayed while recording in the form of graphs.
3. Offline Analysis: Software for offline analysis, export of report as jpg file & matlab file format for further analysis, Option to select between basic mode (limited variables visible for student training/ basic research) & advanced mode (all variables available for advanced research), Full version, should be easy to use in different laptops / computers. Should not involve any installation or license-based use.

Secondary Fuel Control (Study of RCCI Mode)	From the same ECU Hardware as Diesel, Secondary Fuel Control (Injection Timing & Pulse width control) based on load and speed with automatic proportional reduction in diesel quantity, compatible with different fuels like CNG, H2, LPG, and Gasoline. Gaseous Fuel Flow Measurement: ECU should have the provision for estimation of injected quantity based on Gas Equation. Liquid Fuel Measurement: Electronic Fuel measurement in the ECU.
Dynamometer	Type: Eddy Current, water cooled, Cardan Shaft, Cardan shaft cover, water pressure control valve, water pressure gauge, filter/strainer. Speed Control Mode (based on 0-5V signal, All speed PID governor), Throttle pedal for variable speed engine test.
Closed Loop All Speed Control Mode	There should be potentiometer or pedal or equivalent to set the speed of the engine, and another potentiometer to apply the load. The engine speed should remain constant irrespective of the load (No load to full load).
Coolant Temp. Control	Engine Temperature regulated as per the set temperature. The coolant temperature control system should be supplied, integrated with the Engine Setup.
CNG System	Pressure Regulator with output pressure upto 3 bar, High Resistance multi hole solenoid Injector, Necessary Pipes, Fuel Rail, Integration with Engine. Provision for connection of standard gas cylinder.
H2 System	Regulator with output upto 3 bar, Flame arrestor, High Res. multi hole solenoid Injector, Necessary Pipes, Fuel Rail, Integration with Engine. Provision for connection of standard gas cylinder. EC79 certification mandatory for H2 parts.
LPG System	Pressure Regulator with output pressure upto 3 bar, High Resistance multi hole solenoid Injector, Necessary Pipes, Fuel Rail. Provision for connection of standard gas cylinder.
Gasoline/Methanol/ Ethanol System	SS Fuel Tank (Qty.01) with capacity 10 L with breather and drain system, Inline Electrical Fuel Pump, Pressure Regulator, Fuel Filter, Fuel Injector - Solenoid, Multihole, Saturated, Fuel Rail, Integration with Engine
Combustion Analysis System	Combustion Pressure Sensor, DAC, Combustion Analysis Software, Data Logging facility, Fuel Flow Measurement System, Load Indication, RPM Indication

Warranty, Others	<ol style="list-style-type: none"> 1. Warranty for 3 Year 2. Supplier should have supplied similar equipment to at least five reputed organizations - IITs , NITs. Installation / Performance report to be attached along with concerned Professor contact numbers.
------------------	---

2. Requirement Specification - Multi Cylinder Petrol MPFi Engine Test Rig with Open ECU, Closed Loop all Speed Control Mode

Engine	Torque: 65 Nm@3400 or better, Power: 50 hp@5500 rpm or better, Camshaft: 4 valves per cylinder, DOHC, Compression Ratio: 10.0:1 or better
Fuel System	<p>MPFi System, Mechanical pressure control - ~2.5 bar, Saturated Injector, Low pressure fuel pump, ETM</p> <p>Sensors: Crank - 60-2 pattern, Cam, Engine Temp, Driver Demand, Throttle Position,</p>
Open ECU	<p><u>Open ECU System</u></p> <p>-</p> <p><u>Hardware:</u></p> <ol style="list-style-type: none"> 1. Number on Pins: 100 or more, 2. MPFi Injector (Saturated) Drivers: 6 or more, Spark Outputs: 6 or more 3. H-Bridges: 02 or more. 4. Cam Sensor: VR & Hall Effect Both, Extra Channel for additional Hall Effect Sensor 5. Fuel Rail Pressure, Manifold Air Pressure & Boost Pressure both. 6. Crank Sensor: VR & Hall Effect Both or more. 7. Provision for CNG Tank Pressure 8. Wide Band Lambda Sensors: 2 Channels or more 9. Air Flow Sensor: Provision for Analog & Frequency both or more. 10. Auxiliary Outputs: Fan Control Relay, Fuel Pump Control or more

11. Provision for EGR Control

12. Provision for Turbo Control – Closed Loop

13. Environmental Protection: IP67, Completely Potted from Inside, Chassis / Engine Mounted or better specifications, Reverse Polarity Protection,

14. Communication: CAN Channels: 02 Nos. or more, LIN: 01 or more.

ECU Software Functions:

-

1. Online change of parameters (while engine is running).

2. Parameters: Injection Angle Control: Range - 0-720 deg, Accuracy - 0.1 deg, Ignition Angle Control: Range - 0-720 deg, Accuracy - 0.1 deg, Fuel Quantity Control: Lambda Based – Open Loop & Closed Loop both (Selectable through software switch in PC based software), Boost Control: Closed Loop or Open Loop (Selectable through software switch in PC based software), ETM Control: Closed Loop, Range: 0-100%, Accuracy: 0.1%, auto calibration request through software, Idle Speed Control: Closed Loop, Output: Air Control, Ignition Angle (Selectable through software switch in PC based software), Electrical Fuel Pump Control, Fan Control, Main Relay Control, Spark Control: Selectable through a software switch in PC based software to switch off individual cylinders, Crank & Cam pattern: Configurable through PC based software, compatible patterns – 60-1 lost, 59-1 lost upto 16-1 lost, 60-2 lost, 59-2 lost upto 16-2 lost, Error Diagnosis.

PC based Software:

-

PC Based Software having following functions / features:

1. Online / Offline Mode, Online change of parameters (Maps, variables, switches), Online Monitoring of Data. Option to save different screens (Set of parameters) for different functions. Different view of parameters – Graphs, bar, number with min & max logs, option to add more parameters based on the requirements.

2. Data logging feature, option to create different set of variables for logging, option to select the speed of logging, simultaneous modification of maps. Logs should be simultaneously displayed while recording in the form of graphs.

3. Offline Analysis: Software for offline analysis, export of report as jpg file & matlab file format for further analysis, Option to select between basic mode (limited variables visible for student training/ basic research) & advanced mode (all variables available for advanced research), Full version, should be easy to use in different laptops / computers. Should not involve any installation or license-based use.

Communication Cable:

-

Communication cable to connect ECU CAN with PC having following specifications:

- 8000 messages per second, each time-stamped with 100 microsecond accuracy
- Supports both 11-bit (CAN 2.0A) and 29-bit (CAN 2.0B active) identifiers
- High-speed CAN connection (compliant with ISO 11898-2), up to 1 Mbit/s.
- Galvanic isolation, Low current consumption (70 mA) or better.

Table Top Box:

Table Top Box for easy access to Ignition, Starter Motor, and Throttle Request. Supplier should provide OEM authorization certificate for ECU & provide make and model of each component.

Dynamometer	Type: Eddy Current, water cooled, Cardan Shaft, Cardan shaft cover, water pressure control valve, water pressure gauge, filter/strainer. Speed Control Mode (based on 0-5V signal, All speed PID governor), Throttle pedal for variable speed engine test.
Closed Loop all Speed Control Mode	There should be potentiometer or pedal or equivalent to set the speed of the engine, and another potentiometer to apply the load. The engine speed should remain constant irrespective of the load (No load to full load).
Combustion Analysis System	Combustion Pressure Sensor, DAC, Combustion Analysis Software, Data Logging facility, Fuel Flow Measurement System, Load Indication, RPM Indication

Warranty, Others

1. Warranty for 3 Year

2. Supplier should have supplied similar equipment to at least five reputed organizations - IITs, NITs. Installation / Performance report to be attached along with concerned Professor contact numbers.

अस्वीकरण/Disclaimer

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for [attached categories](#), trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.
15. Buyer added ATC Clauses which are in contravention of clauses defined by buyer in system generated bid template as indicated above in the Bid Details section, EMD Detail, ePBG Detail and MII and MSE Purchase Preference sections of the bid, unless otherwise allowed by GeM GTC.
16. In a category based bid, adding additional items, through buyer added additional scope of work/ additional terms and conditions/or any other document. If buyer needs more items along with the main item, the same must be added through bunching category based items or by bunching custom catalogs or bunching a BoQ with the main category based item, the same must not be done through ATC or Scope of Work.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to

such representations.

All GeM Sellers/Service Providers shall ensure full compliance with all applicable labour laws, including the provisions, rules, schemes and guidelines under the four Labour Codes i.e. the Code on Wages, 2019; the Industrial Relations Code, 2020; the Occupational Safety, Health and Working Conditions Code, 2020; and the Code on Social Security, 2020 as and when notified and brought into force by the Government of India.

For all provisions of the Labour Codes that are pending operationalisation through rules, schemes or notifications, the corresponding provisions of the pre-existing labour enactments (such as The Minimum Wages Act, 1948, The Payment of Wages Act, 1936, The Payment of Bonus Act, 1965, The Equal Remuneration Act, 1976, The Payment of Gratuity Act, 1972, etc. and relevant State Rules) shall continue to remain applicable.

The Seller/ Service Providers shall, therefore, be responsible for ensuring compliance under:

- **All notified and enforceable provisions of the new Labour Codes as mentioned hereinabove; and**
- **All operative provisions of the erstwhile Labour Laws until their complete substitution.**

All obligations relating to wages, social security, safety, working conditions, industrial relations etc. and any other statutory requirements shall be strictly met by the Seller/ Service Provider. Any non-compliance shall constitute a breach of the contract and shall entitle the Buyer to take appropriate action in accordance with the contract and applicable law.

[यह बिड सामान्य शर्तों के अंतर्गत भी शासित है /This Bid is also governed by the General Terms and Conditions](#)

जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्रवाई का आधार होगा।/In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws.

---धन्यवाद/Thank You---