



NAHEP

INSTITUTIONAL DEVELOPMENT PLAN, NAHEP
ODISHA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
BHUBANESWAR-751003



No. 1298/ IDP-OUAT

Dt. 27.10.2020

QUOTATION CALL NOTICE

Quotations are invited from original equipment manufacturer/ authorised dealer/ supplier for supply of laboratory equipments and other items for the IDP, NAHEP project of OUAT as per the specifications mentioned in the document. The cost of each individual item must be specified along with packing, forwarding, GST and installation charges, if any, separately. The quotation should accompany a valid GST registration certificate and TIN number and PAN as well as up to date income tax clearance certificate. The sealed quotation must reach the undersigned **on or before 10.11.2020 (4.00 PM)** by Post/ Courier service only.

Sd/-

Dean, CAET & Chairman
Procurement Committee IDP, NAHEP
OUAT, Bhubaneswar

Copy forwarded to PI, IDP-NAHEP for uploading in the website.

**INVITATION FOR QUOTATIONS FOR SUPPLY OF
GOODS UNDER NATIONAL SHOPPING PROCEDURES**

To

Dear Sirs,

Sub: INVITATION FOR QUOTATIONS FOR SUPPLY OF EQUIPMENTS

1. You are invited to submit your most competitive quotation for the following goods.

Sl. No.	Brief Description of the Goods	Specifications*	Qty.	Delivery Period from the date of supply order	Place of Delivery	Installation Requirement if any
A.	Renovation of Instrumentation Lab and Purchase of Instruments			30 days	OUAT, Bhubaneswar	Installation to be done at site by the vendor
	1. LVDT Trainer	Consisting of LVDT with Micro Meter and cantilever JIG fitted on the base plate to give displacement to the core of LVDT. Built-in Power Supply and Digital 3½ Digit Indicator to read the displacement in mm. LVDT Range :- +/- 10mm Micrometer: - 0-25mm. Resolution:-0.1mm	2			
	2. Thermocouple Trainer	Comprising of J type thermocouple, to measure temperature upto 100°C, small heating source upto 100°C and digital temperature indicator Temperature Range: 0-100°C Thermocouple: J type Temperature Source: Electric Kettle. Source Measurement: Glass bead Mercury Thermometer Indicator: 3½ Digit display to read temperature/Voltage. Built-in Power Supply	2			
	3. Strain Gauge Trainer	Comprising a strain gauge to plot the curve between strains applied to a beam and the output voltage, Trainer comprising of cantilever beam bonded strain gauges, pan and weights upto 1 kg. Digital 3½ digit indicator module to read the micro strain.	2			

Sl. No.	Brief Description of the Goods	Specifications*	Qty.	Delivery Period from the date of supply order	Place of Delivery	Installation Requirement if any
		Cantilever Beam Capacity : 1 kg. Bridge Selection: Half & Full. Strain Gauge Resistance: 350 Ohms. (approx.) Gauge Factor: - 2 to 2.1 or higher Dead Weights : 100Gms.(approx.)* 10 Nos. Indicator: 3 ½ Digit to read upto +/- 1,999 micro strain.				
4.	Thermistor study unit	Comprising of Thermistor -10K, to measure temperature upto 100°C, small heating source upto 100°C and digital temperature indicator to read the temperature. Temperature Range: 0-100°C Thermistor: 10K (approx.) Temperature Source: Electric Kettle. Source Measurement: Glass bead mercury thermometer Indicator: 3 ½ Digit Display to read temperature/ Voltage	2			
5.	Stroboscope Module	Measurement Range : 150~20000FPM (approx.) Display : 5 - 10mm LED Flashes per minute : 150-20000 Accuracy : ± (0.05%n+1d) Resolution : 0.1 FPM (Less 1000 FPM) 1 FPM (Over 1000 FPM) Sampling time : 0.3 second (approx.) Humidity : Less than 80%RH (approx.)	2			
6.	1-Phase VARIAC,	Input: 0 ~ 230 V, Output: 0 ~ 270 Volts, 10A Air cool, enclosed model	3			
7.	Variable Rheostats	200 Ω X 5A (2 nos.) 100 Ω X 2A (2 nos.) 750 Ω X 1.2A (2 nos.)				
8.	3-Phase VARIAC	15A, Input: 0~415, Output: 0~470 Volts Air cooled, (Inbuilt Terminals, Educational module with caster wheel and Accessories)	1			
9.	Digital Tachometer	Multi-functions, one instrument combine Photo Tachometer and Contact Tachometer (RPM, m/min., ft/min.). Wide measuring range : 0.5 to 100,000 RPM, 5 digits, 10 mm (0.4") LCD	1			
10.	Digital Multimeter	Accuracy- ±(0.09% + 2) Max. resolution-0.1 Mv	2			
11.	AC Voltmeter	Range: 0/150/300Volts	2			
12.	AC Voltmeter	Range: 0/300/600Volts	2			
13.	AC Ammeter	Range: 0/5/10A	2			

Sl. No.	Brief Description of the Goods	Specifications*	Qty.	Delivery Period from the date of supply order	Place of Delivery	Installation Requirement if any
	14. AC Ammeter	Range: 0/1/2A	2			
	15. Watt meter	5/10A, 150/300/600V (UPF Type)	3			
	16. 1-phase power measurement Module	Fitted with one digital Voltmeter, digital ammeter, wattmeter and a variac. Range: 0/150/300Volts Range: 0/5/10A Range: 150/300/600V (UPF Type)	1			
	17. Maxwell's Inductance bridge kit	For Measurement of the unknown inductance, experimental unit	1			
	18. Wheatstone Bridge kit	For Measurement of the unknown resistance, experimental unit	1			
	19. Schering bridge kit	For Measurement of the unknown capacitance, experimental unit	1			
	20. Energy meter experimental control panel	AC Volt meter (0-500V), AC Ammeter (0-10A), Rotary Switch, HRC-Fuse, Special nylon based insulated terminals, indication lamp assembled and wired in on a Hylem Sheet of suitable size 600mm X 600mm (approx.), thickness: 6-mm (approx.) and fitted to an MS angle frame of suitable size, 1-Phase energy meter	1			
	21. Potentiometric Displacement Sensor Trainer	Sensor Type: Potentiometric; Linear displacement: 0 to 15 mm Measurement Range Micrometer Scale: 25 mm Micrometer Least count: 0.01 mm Angular displacement: 0 to 360° Measurement Range Input: 5 V DC Linear output: 0 - 3V DC Angular output: 0- 5V DC Test Points: 6 nos. Mains Supply: 110-260 V AC; 50/60 Hz Operating Conditions: 0-40° C, 85% RH (approx.) Product Tutorials: Online (Theory, procedure, reference results, etc.) Included Accessories: Mains cord -1no	1			
	22. 50 MHz Bandwidth, 2 Channel Digital Storage Oscilloscope	Compact Size & TFT Color Display : 7 " (approx.) Real Time Sampling Rate : 500 MSa/s (approx.) Equivalent Time Sampling Rate: 25 GSa/s(approx.) Memory Depth : 32Kpts approx.. External Storage	2			

Sl. No.	Brief Description of the Goods	Specifications*	Qty.	Delivery Period from the date of supply order	Place of Delivery	Installation Requirement if any
		through USB 32 Measurement Functions On Screen FFT & Math Functions				
	23. Single/Three Phase Resistive Load	Tuning Option : 0-1 A Vernier control of resistance values in 5 steps per phase. Phase Voltage 230 V at 50 Hz Range of Phase Current 1 – 5 A (per phase) 15 Amp for 3 phase and 5 Amp Each Phase (approx.)	2			
	24. Sensor Trainer Lab	IoT enabled Android based 7” (approx.) Graphical touch LCD with inbuilt cortex processor & DAQ for acquiring analog data and software for viewing the output waveforms with USB storage and HDMI output. Ethernet port to connect real world. Inverting, Non – Inverting, Power, Current, Instrumentation and Differential Amplifier, F to V, V to F, I to V, V to I Converter, High Pass and Low Pass Filter, Buffer, LED, Buzzer, LED Bar Graph, Touch Switch Included Sensors : RTD, NTC Thermistor, LM35, Photovoltaic, Air humidity and Temperature, Gas (Smoke), Air Quality, Atmospheric Pressure, Limit switch, Capacitive displacement LM 35 : 10mV/ °C Platinum RTD : 100Ω at 0°C (Temp. coefficient 0.385 Ω /°C) approx. K Type Thermocouple : -200°C to 1250°C approx.. NTC Thermistor : 4.7KΩ approx. BPX65 Photo Diode : 500nm – 1100nm approx.. L14G1 Photo Transistor : 500nm – 1100nm approx.. Photovoltaic Cell : 500mV – 580mV 2 mm interconnection : Min 80 nos	1			
	25. Internet of Things Explorer software module	Processor: 64bit ARMv7 with 1GB RAM Memory: 32GB, OS: Open source Linux Connectivity: Wireless LAN, Bluetooth, Zigbee, USB & Ethernet, HDMI interface, 1.77” Color TFT LCD, Driver for Stepper and DC Motor, six 16 bit Analog Input, RTC and 4-20mA input. Zigbee: 2.4GHZ,	1			

Sl. No.	Brief Description of the Goods	Specifications*	Qty.	Delivery Period from the date of supply order	Place of Delivery	Installation Requirement if any
		<p>Sensors: Temperature and Humidity, Air Quality, Soil Moisture, Ambient Light, Soil/Water temperature, PIR Sensor. GSM IoT Gateway - Quad-Band 850/900/1800/1900 MHz - GPRS multi-slot class, Control via AT commands. Explore physical and application layer protocols like RS232, RS485, GSM, Ethernet and MQTT, CoAP, HTTP, FTP. Cloud/server configuration includes HTML, Java, php and MySQL. IoT Node: Wireless 2.4GHz Zigbee, 5 Analog Inputs and at least 3 Digital Outputs, At least one I2C Channel, support OTA. Online Cloud/Server Services for 2 years. Battery 3.7V/4400mAH with Solar Panel, USB interface.</p>				
	<p>26. Sensors for Green House Applications (All sensors should be compatible with Sensor Training Platform & IOT Explorer mentioned above. Sensors should provided with Industrial Cable and connectors grade</p>	<p>i. Air Temperature & Humidity Sensor (1 no.) Temperature Range: 0 -100 Degree Humidity Range : 0-95% RH approx.. Response time : 1 Sec. Expected Life Time: at least 3 Year</p> <p>ii. Atmospheric Pressure Sensor (1 no.) Detection Range : 15- 115 kPa Response time : 5 Sec. Operating Temperature : 0~50 Degree Operating Humidity : 15~90%RH Expected Life Time: at least 1 Year Storage Life at least 6 Months</p> <p>iii. Soil Moisture Sensor (1 no.) Power consumption: < 13mA Supply Voltage: 3.5V to 20 VDC. Output Impedance: 10K ohms Operational Temperature: -400C to 850C Accuracy at 25°C: 2% Output: 0 to 3V related to moisture content</p> <p>iv. Soil Temperature Sensor (1 no.) Temperature Range: 00C -1000C Response time: 1 Sec Expected Life Time: at least 1 Year</p>				
	<p>27. Load Cell study unit for educational purpose</p>		1			

Sl. No.	Brief Description of the Goods	Specifications*	Qty.	Delivery Period from the date of supply order	Place of Delivery	Installation Requirement if any
	28. Temperature transducer Trainer	N. T. C. Thermistor, Platinum R. T. D., Type K Thermocouple and IC Temperature Sensor) Study of Transducer controlled switching / alarm system, On board signal conditioning circuitry, Built-in DC power supply, Functional blocks indicated on-board Mimics Fully documented student Workbook and Operating Manual with each				
	29. Domestic House Wiring Control Trainer Power Supply	<ul style="list-style-type: none"> • Operated on Mains power 230V, 50Hz \pm10% Components are mounted on the panels are: • Single Phase Energy Meter • Single Phase Switch • Cartridge Fuses (2 Nos.) • Stair Case Switch (2 Way Switch) • Distribution Line Through Single Phase Isolator • Power Switch and Socket Pair • Emergency Stop House Wiring Control Box: Each Includes – • Electronics Blast 1No. • 5 Pin Socket 1Nos. • Switches 3 Nos. • Fan Regulator 1No. • Ceiling Rose 1No. • Indicator 1No. • Lamp Holder 1No. Salient Features – • Front panel built with high class insulated Bakelite sheet with Sticker well printed circuits and symbols. • Patch Cords 4mm (Heavy Duty) 1Meter Length. • High voltage test points are provided with 4mm safety sockets • The trainer is housed in Metal cabinet. • Protection with Emergency Stop. • Short Circuit protection with the MCB. • Size of the trainer set 36" x 24" Operated 				
	30. DC Machine Speed Control Trainer (Series, shunt and compound motor)	<p>Power Supplies:</p> <ul style="list-style-type: none"> • DC Power Supply 0-230V AT 4A • Operated on Mains power 230V, 50Hz \pm10% <p>Digital / Analog Meters:</p> <ul style="list-style-type: none"> • Voltmeter. 	01			

Sl. No.	Brief Description of the Goods	Specifications*	Qty.	Delivery Period from the date of supply order	Place of Delivery	Installation Requirement if any
		<ul style="list-style-type: none"> • Ammeter. • RPM Meter with Proximity Sensor. <p>Components are mounted on the panels are:</p> <ul style="list-style-type: none"> • DC 3 Point Starter. • 2 Nos. Wire Wound Rheostat for Speed and Armature Control. <p>Salient Features: -</p> <ul style="list-style-type: none"> • Front panel built with high class insulated Bakelite sheet with Sticker well printed circuits and symbols. • The trainer is housed in Metal cabinet. • Patch Cords 4mm (Heavy Duty) • High voltage test points are provided with 4mm safety sockets • The trainer is housed in Metal cabinet. • Protection with Emergency Stop. • Short Circuit protection with the MCB. • Size of the trainer set 30" x 24" <p>Motor Specification:</p> <ul style="list-style-type: none"> • DC Shunt Motor 2HP, 230V, AC & 1440 RPM. • DC Series Motor 2HP, 230V, AC & 1440 RPM. • DC Compound Motor 2HP, 230V, AC & 1440 RPM. <p>Packing List:</p> <ul style="list-style-type: none"> • DC Shunt Motor 2HP, 230V, AC & 1440 RPM. • DC Series Motor 2HP, 230V, AC & 1440 RPM. • DC Compound Motor 2HP, 230V, AC & 1440 RPM • Control Panel Trainer • Rheostat 100 Ohm, 2A and 450hm, 5A) • Connecting Cords Heavy Duty 1Mtr. Length 				
	31. 3-Phase induction motor Load Test Unit (1 no.)	<p>Power Supplies:</p> <ul style="list-style-type: none"> • DC Power Supply 0-230V AT 4A (Optional) • Operated on Mains power 230V,50Hz ±10% <p>Digital / Analog Meters:</p> <ul style="list-style-type: none"> • Voltmeter (1 No.) • Ammeter (1 No.) 	01			

Sl. No.	Brief Description of the Goods	Specifications*	Qty.	Delivery Period from the date of supply order	Place of Delivery	Installation Requirement if any
		<ul style="list-style-type: none"> • Wattmeter (2 Nos.) Components are mounted on the panels are: • Color Indication for Each Phase • DOL Starter (Manual) • Motor is mounted on Loading arrangement consist of 2 dial type balance and a belt pulley arrangement. Salient Features: - • Front panel built with high class insulated Bakelite sheet with Sticker well printed circuits and symbols. • The trainer is housed in Metal cabinet. • Patch Cords 4mm (Heavy Duty) • High voltage test points are provided with 4mm Safety Sockets • The trainer is housed in Metal cabinet. • Protection with Emergency Stop. • Short Circuit protection with the MCB. • Size of the trainer set 24" x 24" Motor Rating: • Induction motor 2HP, 415V, AC & 1440 RPM. Motor Specification: • 3 Phase Induction Motor 2HP, • Operating Voltage:415V • Type: DC, • RPM: 1440 RPM., • Wattage: 1.5KW • Terminations: 3 BTI 15 Terminals, • Shaft: Single, • Frame :132, •B3, • SPDP • 1P23, • 1C01, • Solid Yoke Extension, • Fitted on Metal Base • Motor is mounted on Loading arrangement consist of 2 dial type balance and a belt pulley arrangement 				
	32. Heat Pump Test Rig	<p>Compressor - Hermetically sealed, having capacity of 1/3 ton of refrigeration (approx). using R-12 refrigerant.</p> <p>Condenser & Evaporator - Continuous flow water circulated coils with glass wool insulation outside. Thermostatic</p>	01			

Sl. No.	Brief Description of the Goods	Specifications*	Qty.	Delivery Period from the date of supply order	Place of Delivery	Installation Requirement if any
		expansion valves of suitable capacity. Rotameter for liquid refrigerant flow measurement. Rotameters for water flow measurements -2 nos. Wattmeter for compressor input measurement. Thermometers for measurements of temperature at 4 nos. points in the cycle. Pressure gauges for condensing & evaporating pressure (i.e. high & low pressure) Ammeter for compressor current Controls and safety – Pressostat (i.e. High/ low pressure cut out) Overload protector for compressor Filter cum drier for refrigerant. Fan for compressor cooling. Along with technical manual and on-site Training				
	33. Water Cooler Test Rig	Water Cooler: ISI make, Water Storage: 30 Liters, approx. Refrigerant: R-134 A Outer Body: Stainless Steel Inner Tank: Stainless Steel Compressor: Hermetically Sealed Condenser: Forced Convection Air Cooled Condenser Fan Motor: 1/20 Hp X 1400 Rpm; Induction Type Along with technical manual and on-site Training	01			

**Where BIS certification marked goods are available in market, procurement should generally be limited to goods with those or equivalent marking only*

2. Government of India has received a financing from the International Bank for Reconstruction and Development (IBRD) in various currencies towards the cost of the National Agricultural Higher Education Project (NAHEP) and intends to apply part of the proceeds of this Loan to eligible payments under the contract for which this invitation for quotations is issued.

3. Bid Price

- a. The contract shall be for the full quantity as described above. Corrections, if any, shall be made by crossing out, initialling, dating and re writing.
- b. All duties, taxes and other levies payable on the raw materials and components shall be included in the total price.
- c. The cost of packing, forwarding, insurance etc. must be mentioned separately in exact figure (it should not be mentioned “as applicable”)
- d. The costs of each individual item must be specified along with the transportation and installation charges (including the cost of civil work for foundation), if any, separately.
- e. GST and other taxes in connection with the sale shall be shown separately.
- f. GST and other government taxes shall be paid as per government rule and need to be mentioned separately.

- g. Odisha University of Agriculture and Technology is a non-profit, non-commercial premier institute engaged in teaching, research at undergraduate, post graduate and Ph.D. level and we do not have any commercial license. Accordingly, the GST calculation may be made on the concessional rate. As such the university availing price discount for purchase of equipments/instruments, etc. The maximum rate of discount on each item may also be indicated in the quotation specifically.
- h. Odisha University of Agriculture and Technology, Bhubaneswar is registered with the Department of Scientific and Industrial Research (DSIR regd no. TU/V/RG-CDE (421)/2013, dated 21st February, 2017 valid up to 31st August 2021) for purposes of availing Custom Duty exemption and IGST-SGST exemption. The applicable amount of Custom Duty/GST for our University against DSIR certificate should be mentioned in the quotation.
- i. The exact figure of percentage of discount offered as applicable to non-profit, non-commercial government educational institute.
- j. There may be very minor changes in specifications, however it should not compromise the functionality, quality and accuracy of the system.
- k. The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- l. It should contain a letter conforming 3 years' onsite warranty from manufacturers. If the warranty is less than 3 years, then the additional cost of Annual Maintenance Contract with zero financial liability to the University must be included for calculating 3 years' warranty, else bid will not be accepted.
- m. AMC for at least for 5 years should be mentioned (year wise) beyond the standard warranty period of three years.
- n. The Prices shall be quoted in India Rupees only even if the item is imported.
- o. Printed literature indicating photographs and detail technical specification, working CD, manual and their function must be attached.
- p. The specific brand, make, model etc. shall be clearly mentioned in the quotation.
- q. If the quotation is submitted by an authorized dealer, then, the dealer must submit an authorization letter.
- r. Separate list indicating recent users, name of users, address along with contact telephone number and email of users of the equipment (same make and model for which quotation has been submitted) must be submitted along with the quotation for each item separately.
- s. Letter from manufacturer indicating that the manufacturer shall provide after sales service during Warranty/Comprehensive Annual Maintenance Contract/AMC period if the authorized dealer/bidder fails to provide same.

4. Each bidder shall submit only one quotation.

5. Validity of Quotation

Quotation shall remain valid for a period not less than 90 days after the deadline date specified for submission.

6. Evaluation of Quotations

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

- (a) are properly signed; and
- (b) Conform to the terms and conditions, and specifications.
 - (i) The Quotation would be evaluated for the complete list of items.
 - (ii) GST/other taxes in connection with sale of goods shall not be taken into account in evaluation.
 - (iii) Each quotation should accompany a valid GST registration certificate and TIN number and PAN as well as up to date income tax clearance certificate.

7. Award of contract

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who offered the lowest evaluated quotation price.

- a. Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.
- b. The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. Number of items may marginally increase or decrease on the basis of quoted price and availability of funds. The terms of the accepted offer shall be incorporated in the purchase order.
8. Payment shall be made immediately after delivery and successful installation and working of the goods/equipments.
9. If the cost of the item is equal to or more than Rs.2.50 lakh, then 2% GST will be deducted at source.
10. We look forward to receiving your quotations and thank you for your interest in this project.
11. **The quotation call notice No. 905/IDP-OUAT dtd.18.06.2020 for the same item has been cancelled. Hence, the bidders, who had submitted bid earlier in response to the above notification need to apply again. The bids submitted earlier will not be considered.**

The quotation and supporting documents should be sent in sealed envelope and the Sl. No. and Name of the item should be written on top of envelope as:

“Quotation for Item No. _____, Name of the Item: _____”.

Quotation along with a cover-letter and supporting documents must be delivered in a sealed envelope to the address given below latest by **4.00 PM on 10.11.2020** only by **Post/ Courier or by hand**.

**Chairman
Procurement Committee, IDP, NAHEP
IDP Cell, Adjacent to Internet Cell
2nd Floor, University Main Building
OUAT, Bhubaneswar – 751 003
Odisha**

The quotations will be opened in the office of the Dean, CAET and Chairman, Procurement Committee, IDP, OUAT, Bhubaneswar - 3 on **11.11.2020 at 10.30 AM**. However, in view of Covid guidelines, only a maximum of three representatives of all the bidders will be allowed during the opening of quotations.

Sd/-
Chairman
Procurement Committee,
IDP, NAHEP
OUAT, Bhubaneswar

FORMAT OF QUOTATION*

Sl. No.	Description Goods	Specifications	Qty.	Unit	Quoted Unit Rate in Rs.	Total Amount	
						In Figures	In words
	TOTAL						
	GST						
	Any other charges like packing, forwarding, insurance, extended warranty, installation etc.(if any) should be shown separately						

Gross Total Cost: Rs.

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs..... (Amount in figures) (Rs..... amount in words) with in the period specified in the Invitation for Quotations.

We also confirm that the warrantee/ guarantee of months shall apply to the offered goods.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of supplier

***Price should be shown separately for each item and GST separately. However, the evaluation will be made on the total price for the complete set of items.**