



No.GCOEARA/Store/2019/ *h466*

Date :
19 DEC 2019

QUOTATION

Sub: Quotation for purchase of equipment.(for Mechanical Engineering)
(Due Date 31.12.2019)

Sealed Quotations are invited from eligible and interested manufacturers/ dealers/distributors/ for the following items on the terms and conditions mentioned below.

Sr. No.	Name of the item with specification	Quantity required	Estimated cost
1	Inductive Pickup transducer (proximity switch) trainer Motor : bi-directional, permanent magnet armature controlled DC motor. Power : 4-6W. Speed : 3000-3500 R.P.M Max. Voltage : 12V DC. Torque : 0- 0.3 Kg. cm ² . Parameter Measured : Speed in R.P.M. Speed Control : solid state speed controller voltage based. System Range : 5000 RPM Max. Instrumentation : Pulse generator, counter, decoder, driver. Readout : 4 digit digital readout Controls : Speed control. Mains ON / OFF. Input Supply : 230V, $\pm 10\%$ AC, 50Hz 1 phase.	1	15000
2	Opto.transducer (proximity switch) trainer Motor : bi-directional, permanent magnet armature controlled DC motor. Power : 4-6W. Speed : 3000-3500 R.P.M Max. Voltage : 12V DC. Torque : 0- 0.3 Kg. cm ² . Parameter Measured : Speed in R.P.M. Speed Control : solid state speed controller voltage based. System Range : 5000 RPM Max. Counter, decoder, driver. Readout : 4 digit digital readout Controls : Speed control. Mains ON / OFF. Input Supply : 230V, $\pm 10\%$ AC, 50Hz 1 phase.	1	14000
3	DAC Trainer using IC808 Demonstrates the principle and working of a Digital to Analog Converter using a dedicated IC DAC 0808. Digital to Analog conversion using R-2R ladder network and current source. Facility of applying 8 bit Digital input with the help of Patch Cords. Output of DAC is converted to voltage using I/V converter. Output voltage to be monitored on a Digital Multimeter. Supply required 230V, With Regulated power supply, suitable digital readout, A set of required number of Patch Cords. Supported by a comprehensive instruction manual complete with theory and operating details.	1	5000
4	DAC Trainer using IC741 Digital to Analog Converter using IC741. Digital to Analog conversion using R-2R ladder network and current source. Facility of applying 8 bit Digital input. o/p on Digital Multimeter. Supply required 230V, 50Hz AC.	1	5000
5	Bode plot trainer Demonstrates the principle and working of various control system for bode plot characteristics. Study of frequency response, gain calculation transfer function logarithmic plot consisting of two graphs viz, logarithmic of magnitude and phase angle (combined plots are called Bode plot) for various control systems (Type 0, 1, 2). Test points at various stages in the circuit to observe and record the waveforms and voltages. With Regulated power supply supported by a comprehensive instruction manual complete with theory and operating details.	1	15000

6	<p>LVDT transducer (displacement measurement) kit</p> <p>Spring loaded core type LVDT, : Axial type displacement of core, LVDT Full Stroke + 10 mm range, Actual Displacement by Micrometer arrangement, Pitch 1 mm, Circuit -AC Excitations Source, Phase detector & digital display. Excitation Source-Sine wave of 2 KHz to 5 KHz variable frequency and 0 to 3V variable amplitude. Readout-3.5digit digital display to measure 0 to 200 mV DC, indicating displacement in mV with core in / out indicated by + sign. Operating Voltage: 230V, Test Points multicoloured test points are provided at various stages in the circuit to observe the waveforms and voltages. With Regulated power supply Supported by a comprehensive instruction manual complete with theory and operating details.</p>	1	20000
7	<p>STRAIN GUAGE TRAINER (STRAIN/FORCE/ MEASURMENT)</p> <p>Weights & Transducer with electronic instrumentation. Temperature compensated strain gauge:Cu-Ni foil with polyamide carrier base... Configuration: Bridge with two arms as strain gauges (Wheatstones Bridge principle). Range:0 - 5 Kilograms. Excitation Source: DC Regulated source. Tare Adjustment :Zero adjustment by a ten turn potentiometer. Readout : 3.5 digit or suitable digital display to indicate strain in kilograms. Test Points: Multicoloured test points are provided at various stages in the circuit to observe waveforms and voltages. Power Requirements : 230V. With Regulated power supply Supported by a comprehensive instruction manual complete with theory and operating details.</p>	1	30000
8	<p>Servo motor trainer</p> <p>Displacement: Angular (00 to 2700). Input Transducer Command or master potentiometer with calibrated dial (00 to 2700). Motor : two phase AC Servo motor. Coupling:: Suitable coupling of motor to output rebalance potentiometer into voltage signal. Amplifier: Summing amplifier of adjustable gain & power amplifiers for driving AC motor on basis of error signal. Amplifier Gain: Controlled by the voltage signal derived by the conversion of the output position of the rebalance potentiometer into voltage signal. Output Slave dial coupled to the servo mechanism & mounted with calibrated dial (00 to 2700). With Regulated power supply. Test Points: Provided at various stages in the circuit to observe waveforms & voltages. Supported by a comprehensive instruction manual complete with theory and operating details</p>	1	30000
9	<p>Capacitive Pickup tranducer (proximity switch) trainer</p> <p>Parameter Measured: Angular Physical Displacement. Measurement System: Gang with a calibrated dial mounted on its shaft. Transducer with electronic instrumentation. Transducer: Capacitive.:Dielectric Gang type, With Zero adjust potentiometer. Span adjust potentiometer. Displacement Range:00 to 900.Readout: 3.5 Digit Digital Display or suitable to indicate the angular displacement in degrees. Operating Voltage: 230V, Test Points :Multicoloured test points are provided at various stages in the circuit to observe the waveforms and voltages. With Regulated power supply Supported by a comprehensive instruction manual complete with theory and operating details.</p>	1	15000
10	<p>Current Aplifier trainer</p>	1	5000
11	<p>Voltage aplifier trainer</p> <p>Trainer board for each Amplifier circuit. Construction and study of the operation of Common Base Amplifier (CB) Common Emitter Amplifier (CE). Common Collector Amplifier (CC). Study and determine the voltage and current gain, saturation, frequency response, input and output impedance's etc of each type of amplifier. Test points are provided at various stages in the circuit to observe the waveforms and voltages .A Set of patch cords. Suitable LED indicators, ON OFF indicators. 230V AC supply. With regulated power supply Strongly supported by a comprehensive instruction manual complete with theory and operating details.</p>	1	5000

12	8 bit R to R ladder convertor DAC Digital to Analog Converter using a dedicated IC 741. Digital to Analog conversion using 8 bit R-2R ladder network and current source. Facility of applying 8 bit Digital input with the help of Patch Cords. Output of DAC is converted to voltage using I/V converter. Output voltage to be monitored on a Digital Multimeter. Supply required 230V, 50Hz AC. With set of required number of Patch Cords. With Regulated power supply Supported by a comprehensive instruction manual complete with theory and operating details.	1	5000
13	8 bit successive approximation type ADC trainer Demonstrates the principle and working of an Analog to Digital Converter using a dedicated IC ADC 0804. 8 Bit Successive Approximation method used for Analog to Digital converter. Supply required 230V, 50Hz AC. Input: 0 to 5V variable input voltage provided as input signal. 8 bit output available on LED's. Built – in clock generator. With a Set of required number of Patch Cords. Supply by a comprehensive instruction manual complete with theory and operation details.	1	5000
14	Cut section models of Vane pump, Gear Pump, Radial piston pump, Axial piston pump, screw pump. Facility to see rotation and action of parts	1	20000
15	Cut section models of hydraulic actuators and cylinders. Simple DAC, Simple SAC, DAC With cushion, Srew type rotary actuator, Vane type limited rotation rotary actuator.	1	10000
16	Cut section models of Accumulators- subtypes Bladder dead weight, diaphragm. Intensifiers	1	40000
17	Pneumatic valves: Time delay valve Part number 540694 Festo or equivalent. Normally closed type. Poppet valve with return spring. Pressure range 2 to 6 bar. Switch-on pressure more than @1.6 bar. Standard nominal flow rate : 1...2 50 l/min. Delay time 0.2 to 3 s (adjustable) . Connection : QSM-M5-4-1 or equivalent . Fittings for plastic tubing PUN 4 x 0.75 or equivalent	1	25000

TERMS AND CONDITIONS

- The bid/quotation should be submitted in two bid format.
- The first envelope will contain Technical specifications of the product, technical literature/ leaflet and other documents mentioned below.
 1. Covering Letter for tender on the company letter head mentioning official address, Contact No, e Mail address and website (if available) address
 2. Registration certificate.
 3. GST registration certificate/ Number
 4. GST Clearance Certificate/ GST Challan (Up to 31.07.2019)
 5. Specification of Equipment. Technical literature / leaflet of the make and model no of equipment quoted .
 6. After delivery quality conformance undertaking of equipment/machinery
 7. Authorization/ Distributorship certificate from manufacturer. Proof of permission to manufacture the equipment/ item mentioned in the quotation from competent authorities (to be submitted if the bidder is not a manufacturer).

Additional document may also be asked by undersigned for confirming the details.

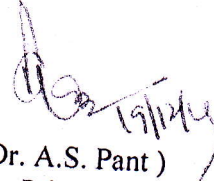
- The second envelope will contain the financial bid in which the all inclusive rates F.O.R. Destination will be written and signed with the stamp of the establishment in the following format.

Sr. No.	Name of the item with specification	Quantity required	All inclusive cost per unit	All inclusive cost for quantity mentioned.
1.				

Date -
Place -

(Signature)
Rubber Stamp of organisation

- The two envelopes should be sealed with a mention of the type of envelope (technical/ Financial), Reference no., Date of opening the quotation on the front side of the envelope. These two envelopes should be sealed in a third envelope by giving heading "Quotation for supply of _____" and writing complete address of the undersigned.
- The quotations should reach the undersigned on or before **dt. 31.12.2019**.
- The material will be checked at this institute.
- No extra charges will be paid for cartage, packing etc. for the material rejected and replaced
- Quotations will be opened at 11 AM on date **02.01.2020**
- Rates should be valid for 6 months from the date of confirmation letter.
- Materials should be quoted for standard makes and minimum pkgs.
- Delivery to the consignee has to be effected within 4 weeks from the date of issue of purchase order.
- The undersigned reserves the right to accept or reject any offer or all offers without assigning any reason thereof.


(Dr. A.S. Pant)

Principal
Govt. College of Engineering & Research,
Awasari khurd

Copy to-

- 1) Director Technical Education- Request to publish enquiry on website
- 2) Joint Director Technical Education, Pune- Request to publish enquiry on website
- 3) HOD- Computer Engineering for display on College Website
- 4) Notice Board.