



Government College of Engineering

Station Road, Osmanpura, Aurangabad – 431 005

Phone : (0240) 2366101, 110, 111
E-Mail – principalgeca@yahoo.com

Fax : (0240) 2332835
Web – http://www.geca.ac.in

No. GECA/MECH/2019/ 3794

Date 28 NOV 2019

- 01) Office Notice Board.
- 02) Institute web site.
- 03) Office Copy

Subject :- Quotation for supply of PID Control with various controllers.

Dear Sir,

You are requested to send your competitive quotations for the supply of the following items subject to the following conditions.

CONDITIONS:

1. Rates quoted should be FOR AURANGABAD or free delivery at the Institute inclusive of all lead and Lift.
2. Detailed specifications of the articles you intend to supply should be given. If not according to the specification, laid down here under.
3. The material should be supplied within (01) Week from the date of order. List of material is given below.
4. The earliest delivery period should be quoted if you cannot supply within the period mentioned above.
5. Quotation should be in sealed cover and superscripted as "Quotations" for PID Control with various controller " Due on : 05/12/19 , at 3 P.M.
6. Quotation should be valid for six month.
7. Right to reject any or all quotations rights are with the under signed.
8. Rates quoted must be inclusive of All applicable Taxes.
9. Installation & Demonstration of the machines/equipments will be carried out free of cost at our institute by the supplier
10. No advance shall be paid and No part payment shall be made.
11. Quotation not complying with the above conditions and incomplete once will not be considered.
12. The supplier has to provide a warranty certificate for 3days without charge , against manufacturing Defects.
13. Supplier has to undertake repair replacement if any

Sr. No.	Descriptions	Qty.																								
01	<p>PID Control various controllers :- This should be a pilot plant design for students to familiarize with various control schemes used in industry. Following different parameters should be measured,</p> <p>01. Flow 02. level 03. Temperature 04. Pressure 05. The pilot plant can be operated using PC & its interface</p> <p>Experimental capabilities :- 01. On Off control of level 02. Feedback control (PID) of flow, level, temperature, pressure 03. Ratio control of two different flow 04. Feed forward Feedback control of flow & level 05. Alarm annunciation</p> <table border="1"> <thead> <tr> <th>Sr No.</th> <th>Particular</th> <th>Parameters</th> </tr> </thead> <tbody> <tr> <td>01</td> <td>Cold Water Tank</td> <td>80 Lit. capacity, Rectangular, MOC: FRP</td> </tr> <tr> <td>02</td> <td>Level Tank</td> <td>15 Lit. capacity, cylindrical, Transport, MOC: acrylic</td> </tr> <tr> <td>03</td> <td>Electrical Furnace</td> <td>Capable of developing room temperature to 200 degree C in 10 Minutes.</td> </tr> <tr> <td>04</td> <td>Pump</td> <td>Centrifugal pump capable of delivering 1000 l ph flow at 3 bar pressure, 230 V AC operated</td> </tr> <tr> <td>05</td> <td>Pneumatic control valve</td> <td>1/2", equal percentage characteristic. Input 3 to 15 psi. Flanged connection. Air to open type, Body material cast iron or better, mounting : flange type : diaphragm (Note: actuator & body assembly should detachable type not single mould or miniature) Seating : double seated with upper & bottom bonnets, Make samson controls, Dembla or equivalent</td> </tr> <tr> <td>06</td> <td>Flow sensor</td> <td>Suitable to sense clean water flow rate of up to 1000 LPH. Turbine type, supply 24 V DC output: 4 - 20 MA, for wild flow</td> </tr> <tr> <td>07</td> <td>Level Sensor transmitter</td> <td>Differential pressure transmitter. Range : 40 cms, supply 24 V DC. Output: 4 - 20 MA</td> </tr> </tbody> </table>	Sr No.	Particular	Parameters	01	Cold Water Tank	80 Lit. capacity, Rectangular, MOC: FRP	02	Level Tank	15 Lit. capacity, cylindrical, Transport, MOC: acrylic	03	Electrical Furnace	Capable of developing room temperature to 200 degree C in 10 Minutes.	04	Pump	Centrifugal pump capable of delivering 1000 l ph flow at 3 bar pressure, 230 V AC operated	05	Pneumatic control valve	1/2", equal percentage characteristic. Input 3 to 15 psi. Flanged connection. Air to open type, Body material cast iron or better, mounting : flange type : diaphragm (Note: actuator & body assembly should detachable type not single mould or miniature) Seating : double seated with upper & bottom bonnets, Make samson controls, Dembla or equivalent	06	Flow sensor	Suitable to sense clean water flow rate of up to 1000 LPH. Turbine type, supply 24 V DC output: 4 - 20 MA, for wild flow	07	Level Sensor transmitter	Differential pressure transmitter. Range : 40 cms, supply 24 V DC. Output: 4 - 20 MA	
Sr No.	Particular	Parameters																								
01	Cold Water Tank	80 Lit. capacity, Rectangular, MOC: FRP																								
02	Level Tank	15 Lit. capacity, cylindrical, Transport, MOC: acrylic																								
03	Electrical Furnace	Capable of developing room temperature to 200 degree C in 10 Minutes.																								
04	Pump	Centrifugal pump capable of delivering 1000 l ph flow at 3 bar pressure, 230 V AC operated																								
05	Pneumatic control valve	1/2", equal percentage characteristic. Input 3 to 15 psi. Flanged connection. Air to open type, Body material cast iron or better, mounting : flange type : diaphragm (Note: actuator & body assembly should detachable type not single mould or miniature) Seating : double seated with upper & bottom bonnets, Make samson controls, Dembla or equivalent																								
06	Flow sensor	Suitable to sense clean water flow rate of up to 1000 LPH. Turbine type, supply 24 V DC output: 4 - 20 MA, for wild flow																								
07	Level Sensor transmitter	Differential pressure transmitter. Range : 40 cms, supply 24 V DC. Output: 4 - 20 MA																								

08	Temperature sensor	P 100 Type
09	Pressure Sensor	2 wire type, range: 2.5 Kg/cm ² , supply 24 V DC output 4 - 2 MA.
10	Temperature Transmitter	IP 55 housing, field mounting type, input: pt 100, output 4 - 2 MA.
11	I/P Converter	Input 4 - 2 MA, output: 3-15 psi with Glycerin filled pressure gauge to measure output of E/P Converter pressure gauge dial size 100 mm.
12	Air filter regulator	1/4" connection size, transparent bulbs, with pressure gauge, Input: 0-10 Kg/cm ² , regulated supply: 0-8 Kg/cm ² , Filter: 25 micron.
13	Interface Unit	1) 8 channel analog input, 4 - 20 MA/0-20 MA 2) 8 channel analog output, 4 - 20 MA 3) Interface with PC through USB port
14	Control panel box	To house electrical as well as instrumentation MOC: MS
15	Software	Windows based software for controlling the flow, level, temperature & pressure parameters. Feedback, Feed forward, cascade, ratio & On- off control schemes should be available for selection. The software should have following facilities, Real time measured parameter versus Time graph <ul style="list-style-type: none"> • Display of measured parameter output & set-point in bar graph format • Liner scale for setting set point of PID • Circular knobs for setting values of P, I & D parameters • Facility to start/stop data logging & storing/retrieval of logged data in graphical format • In built PID (Feedback) feed forward, cascade, ratio & On-off routines to control various parameters • Alarm annunciate along with facility to set the high & lows
16	Maximum Size	Should not be bigger than 1000 X 500 X 1750 mm (W X B X H)

With Desktop & Color printer:

Color Printer :-

Printer type workgroup printer - laser - color power device, type power supply nominal voltage AC 120 V.

- Frequency required 60 HZ
- Power consumption operational 290 Watt
- Technology - laser

Print Speed :-

Up to 12 ppm - black normal - legal (8.5 inch X 14 inch)

Up to 12 ppm - black best - legal (8.5 inch X 14 inch)

Up to 12 ppm - color normal - legal (8.5 inch X 14 inch)

Up to 12 ppm - color best - legal (8.5 inch X 14 inch)

- Connectivity Technology - Wired
- Interface - USB

Image Enhancement Technology - HP Image REt 2400 Microsoft certifications

Desktop : Intel i7 3770 processor 3.4 ghz (high speed) 32 GB RAM, SATA 3.0 (6GBPS) DirectX 11 support, 4

RAM slots on motherboard, Intel rapid start Technology, All new design of Ultra Durable 4 classic, 240 GB

SSD, 1 TB HARD DISK, WIFI, BACK SIDE PORT Details :- 2- USB 3.0 & 4 USB 2.0

Yours faithfully


Principal

Govt. College of Engineering
Aurangabad


