

No.A2/353/2012/MPTC

04/01/2013

**MODEL POLYTECHNIC COLLEGE**  
**(Managed by IHRD)**  
**Mattakkara P. O, Kottayam (Dt.)- 686 564**

Phone 0481-2542022,8547005081

**TENDER NOTICE**

Sealed Competitive Tenders in the prescribed forms are invited for the following.

<b>Sl .No</b>	<b>Tender No</b>	<b>Items to be purchased</b>	<b>Cost of Tender form in Rs.</b>
1.	1/P5/2012	Computer peripherals	600/- +Vat 5%
2	2/P6/2012	2 ton Air conditioners	700/-+Vat 5%
3	3/P7/2012	Power Electronic equipments(SMPS, soldering station, Drilling machine, Isolatrion transformer etc)	700/-+Vat 5%
4	4/P8/2012	Power supply	800/-+Vat 5%
5	5/P9/2012	Power supply	800/-+Vat 5%
6	6/P10/2012	Power supply	600/-+Vat 5%
7	7/P12/2012	Electronic equipments(Digital multimeter, Ammeter, Voltmeter etc)	600/-+Vat 5%
8	8/P13/2012	Electronic equipments(Digital trainer kits,micro processor &micro controller kits )	900/-+Vat 5%
9	9/P14/2012	Function generator	800/-+Vat 5%
10	10/P15/2012	Function generator	700/-+Vat 5%
11	11/P20/2012	Oscilloscope	1500+Vat 5%

Last date for sale of Tender forms **04.02.2013 11AM**

Last date for receipt of Tenders **04.02.2013 3PM**

Date and time of opening **05. 02.2013 11 AM**

Tender forms can be had from the college office on payment of the cost as shown above.

Further details can be had from the office during working hours.

sd  
PRINCIPAL

## I. TENDER 1/P5/2012

## COMPUTER PERIPHERALS

Sl.No	Name of Items/ Specification	Qty Required
1	<b>24 Port Switch</b> Specifications:24 Port 10/100/1000BASE-T with 4 Combo SFP/mini-GBIC , 2 10-GB stackin port	2
2	<b>External DVD Writer</b> Specifications: DVD Write Min speed 8x , CD Write sMin peed 24x	2
3	<b>External HDD</b> Specifications: 1 TB Capacity, USB 3.0/2.0 support, Solid State storage	4
4	<b>USB Drive</b> Specifications: 8 GB Capacity, USB 3.0/2.0 support	4
5	<b>UTP Cable</b> Specifications: CAT 6e	600 mts
6	<b>RJ 45 Connector</b> Specifications: Gold plated RJ 45 Connector	500 Nos
7	<b>Ethernet Switch</b> Specifications: 24 port,10 / 100 / 1000 Mbps, 10 BASE-T, 100 BASE-TX & 1000 BASE-T Universal UTP Cable Recognition for Straight-Through or Crossover Cables (MDI/MDI-X)	4
8	<b>Wireless Network Card</b> Specifications: D-Link DWLG-510	35
9	<b>Wireless Router</b> Specifications: The D-Link DIR-615 Wireless N Router	2
10	<b>Laser Jet Printers</b> Specifications: Resolution (in dpi): Mono 600x600,Paper Size: A4,Print Speed in PPM (A4 Size): 26,Port: 1 USB,Memory (in MB): Network Card 10/100: Yes,Duplexing: Yes	2

11	<p><b>Laser Multifunction Printer</b></p> <p>Specifications:  Printer Type: Laser,B&amp;W, MPS (ppm) :20, Category: Duplex,  Networking: Yes, Fax: Yes, 600 x 600 DPI</p>	2
12	<p><b>LAN Trainer kit</b></p> <p>Specifications:  PC to PC : RJ 45 Connector  Star topology : RJ 45 Connector  Bus topology:end terminator  Ring topology:DB9 Connector  Data transmission speed: 10/100 Mbps  4 Nodes Star, Bus &amp; Ring selection  Protocols:CSMA/CD, CSMA/CA, Stop N Wait, Go back to N,  Selective repeat, Sliding  Window, Token Bus, Token Ring  Packet size:128, 256, 512, 1024, 2048, 4096, 8192, 16384  Inter Packet delay:1000 – 5000 ms  Error generation: Acknowledgment lost, bad packet, auto error  generation: Complete analysis of Network &amp; Protocols  Power Supply :220/110V, 50/60 Hz  Power consumption: 1.8VA  Dimensions (mm) :W 326 x D252 x H 52</p>	1
13	<p><b>Router with firewall</b></p> <p>Specifications:  Up to 450 Mbps File Transfer Speed,Wireless 802.11n Technology  ,Band: 2.4 GHz &amp; 5GHz,Six Internal Antennas,4 Gigabit Ethernet  Ports (10/100/1000 Mbps),1 Usb port for Printer or external hard  drives,Security: WPA/WPA2 encryption and SPI firewall</p>	1
14	<p><b>16 Port Switch</b></p> <p>Specifications:  24 Port 10/100/1000BASE-T with 4 Combo SFP/mini-GBIC , 2 10-  GB stackin port</p>	2
15	<p><b>Web Camera</b></p> <p>Specifications:  Video Capture: Upto 640 X 480 pixels,USB 3.0/USB 2.0  Support,manual focus</p>	5

sd

PRINCIPAL

II. TENDER 2/P6/2012

AIR CONDITIONERS

SI.No	Name of Items/ Specification	Qty Rqd
1	<b>2 Ton Air Conditioners</b>  Specifications:  2 TonSplit Air Conditioner with Auto cleaning,Selectable Auto Swing, E- Saving mode 230/50/1 Power,Rotary Compressor type,,LCD Remote Operation,1166 W Rated Input,3100 rated Cooling capacity	9

Sd

PRINCIPAL

III. TENDER 3/P7/2012

LAB INSTRUMENTS TO POWER ELECTRONICS AND BASIC ELECTRONICS LAB

SI.No	Name of Items/ Specification	Qty Rqd
1	<p><b>Isolation Transformer</b>            Specifications:            Isolation Transformer 230/55-0-55            Single Phase Isolation Transformer 1 KVA 230/230 V            assembled in MS box terminals bought out with tapings            at 50%, 86.6% on both sides</p>	20
2	<p><b>Differential Module</b>            Specifications:            Differential Module</p>	10
3	<p><b>Soldering Station</b>            Specifications:            Soldering Station            Accurate and advance temperature control with micro –            controller technology. Temperature control Accuracy +/-1 °C.            Temperature setting resolution +/-10 °C. Power Consumption            – 60W. Input Voltage -190 to 270V. Temperature range -180 -            480°C</p>	10
4	<p><b>Drilling Machine</b>            Specifications:            PCB Drilling Machine            Motor speed : up to 20,000 R.P.M            Range : 0.6 to 3.0 mm            Base : Metal            Working Area : 280mm x 170mm            Electrical Power : 230V/50Hz , 5A socket required</p>	2
5	<p><b>Bread Board</b>            Specifications:            Bread Board            Bread Board mounted type 840 tie points</p>	30
6	<p><b>SMPS</b>            Specifications:            Switched Mode Power Supply 12 V DC 5A</p>	10

Sd

PRINCIPAL

IV. Tender 4/P8/2012

**POWER SUPPLY TO POWER ELECTRONICS LAB**

SI.No	Name of Items/ Specification	Quantity Rqd
1	<p><b>Power Supply</b>                      Specifications:                      Power Supply + 15V/2A Dual Output fixed power supply.                      Regulation Line : 0.05% Load: 0.05% Ripple &amp; Noise : 1mV rms.                      Protection : Overload &amp; short circuit.</p>	5
2	<p><b>Power Supply</b>                      Specifications:                      Linear Power Supply (Dual) 60 V                      DC regulated Dual variable Power Supply with analog meter                      Protection: Against Over Load &amp; short CKT                      0 - 60V/2A</p>	8
3	<p><b>Power Supply</b>                      Specifications:                      Linear Power Supply                      0-32V/0-2A DC Dual Output PowerSupply                      Constant Voltage Mode Regulation: - Line: + 0.01% + 2mV for + 10% change in line output. Load: + 0.01% + 2mV for load change from zero to full load.                      Ripple and Noise : 1mV rms max.20Hz-20MHz.                      Constant Current Mode Regulation: -Line: + 0.1% + 250µA for + 10% line change . Load: + 0.1% + 250µA for change in output voltage from 0 Volts to maximum output voltage                      Ripple and Noise : 0.04 rms.                      Output Polarity: Floating w.r.t. ground.                      Over load protection : Automatic overload and short circuit protection</p>	16
4	<p>Power Supply                      Specifications:                      Fixed Power Supply(5V,2A)                      Protection against Over Load &amp; short CKT</p>	20

sd

**PRINCIPAL**

V. TENDER 5/P9/2012

POWER SUPPLY TO BASIC ELECTRONICS LAB

SI.No	Name of Items/ Specification	Quantity Rqd
1	<b>Power Supply</b> Specifications: Linear Power Supply (Dual) 60 V DC regulated Dual variable Power Supply with analog meter Protection: Against Over Load & short CKT 0 - 60V/2A	20
2	<b>Power Supply</b> Specifications: Variable Power Supply 0-12V/2A	5
3	<b>Power Supply</b> Specifications: Variable Power Supply 0-5V/2A	5
4	<b>Power Supply</b> Specifications: Power Supply + 15V/2A Dual Output fixed power supply. Regulation Line : 0.05% Load: 0.05% Ripple & Noise : 1mV rms. Protection : Overload & short circuit.	12
5	<b>Power supply 6V</b> Specifications: DC regulated Single fixed Power Supply Protection : Against Over Load & short CKT 6V/2A	5
6	<b>Power supply 12V</b> Specifications: DC regulated Single fixed Power Supply Protection : Against Over Load & short CKT 12V/2A	5
7	<b>Power supply 3V</b> Specifications: DC regulated Single fixed Power Supply Protection : Against Over Load & short CKT 3V/2A	5

sd

PRINCIPAL

VI. TENDER 6/P 10/2012

POWER SUPPLY TO ELECTRONICS CIRCUITS LAB

SI.No	Name of Items/ Specification	Quantity Rqd
1	<p><b>Power Supply</b>            Specifications:            Linear Power Supply            0-32V/0-2A DC Dual Output PowerSupply            Constant Voltage Mode Regulation: - Line: + 0.01% + 2mV for + 10% change in line output. Load: + 0.01% + 2mV for load change from zero to full load. Ripple and Noise : 1mV rms max.20Hz-20MHz.            Constant Current Mode Regulation: -Line: + 0.1% + 250µA for + 10% line change . Load: + 0.1% + 250µA for change in output voltage from 0 Volts to maximum output voltage Ripple and Noise : 0.04 rms. Output Polarity: Floating w.r.t. ground.            Over load protection : Automatic overload and short circuit protection</p>	20

sd

PRINCIPAL



7. TENDER 7/P 12/2012

LAB EQUIPMENTS TO VARIOUS LABS

SI.No	Name of Items/ Specification	Quantity Required
1	<p><b>Digital Multimeter</b>            Specifications:            Digital Multimeter            AUTO- RANGING MULTIMETER-3 ¾ DIGIT            DC Voltage-1000V,AC Voltage-750V DC            Current-10A,AC Current-10A            Resistance,Capacitance,Diode Test Transistor            Test Auto power off,Hand-held            Frequency measurement up to 30MHz Duty            Cycle measuring,Power-1.5V X 2 Battery            Relative value measurement</p>	30
2	<p>Digital Multimeter            Specifications:            Digital Multimeter            AUTO- RANGING MULTIMETER-3 ¾ DIGIT            DC Voltage-1000V,AC Voltage-750V DC            Current-10A,AC Current-10A            Resistance,Capacitance,Diode Test Transistor            Test Auto power off,Hand-held            Frequency measurement up to 30MHz Duty            Cycle measuring,Power-1.5V X 2 Battery            Relative value measurement</p>	12
3	<p><b>Digital Multimeter</b>            Specifications:            Digital Multimeter            AUTO- RANGING MULTIMETER-3 ¾ DIGIT            DC Voltage-1000V,AC Voltage-750V DC            Current-10A,AC Current-10A            Resistance,Capacitance,Diode Test Transistor            Test Auto power off,Hand-held            Frequency measurement up to 30MHz Duty            Cycle measuring,Power-1.5V X 2 Battery            Relative value measurement</p>	15

4	<b>Digital Multimeter</b> Specifications: Digital Multimeter AUTO- RANGING MULTIMETER-3 ¾ DIGIT DC Voltage-1000V,AC Voltage-750V DC Current-10A,AC Current-10A Resistance,Capacitance,Diode Test Transistor Test Auto power off,Hand-held Frequency measurement up to 30MHz Duty Cycle measuring,Power-1.5V X 2 Battery Relative value measurement	1
5	<b>Rheostat</b> Specifications: Rheostat 750 ,1 A	10
6	<b>Voltmeter</b> Specifications: Voltmeter 0 – 1V	15
7	<b>Ammeter</b> Specifications: Milli Ammeter 0 – 1mA	15
8	<b>Rheostat</b> Specifications: Rheostat(1K,300mA)	10
9	<b>Rheostat</b> Specifications: Rheostat(2.2K,100mA)	10
10	<b>Voltmeter</b> Specifications: Voltmeter 0 – 1V	12
11	<b>Ammeter</b> Specifications: Ammeter(0-100mA)	10
12	<b>Ammeter</b> Specifications: Ammeter(0-25mA)	12
13	<b>Ammeter</b> Specifications: Ammeter(0-50µA)	12
14	<b>Ammeter</b> Specifications: Ammeter(0-100µA)	12

15	<b>Bread Board</b> Specifications: Bread Board mounted type 840 tie points	12
16	<b>Multimeter</b> Specifications: Digital Multimeter with 3 1/2 Digits LCD Display	10
17	<b>Bread Board</b> Specifications: Bread board with 840 tie points mounted type	30
18	<b>Ammeter 0 to 5 A</b> Specifications: Ammeter 0 to 5 A	10
19	<b>Ammeter 0 to 100mA</b> Specifications: Ammeter 0 to 100mA	10
20	<b>Ammeter 0 to 500µA</b> Specifications: Ammeter 0 to 500µA	10
21	<b>Voltmeter 0 to 15</b> Specifications: Voltmeter 0 to 15	10
22	<b>Voltmeter 0 to 5</b> Specifications: Voltmeter 0 to 5	10

sd

PRINCIPAL

8. TENDER 8 /P 13/2012

TRAINER KITS TO VARIOUS LABS

SI.No	Name of Items/ Specification	Quantity Required
1	<p><b>Digital/Analog Trainer Kit</b>            Specifications:            Digital/Analog Trainer Kit            Indicators TTL/CMOS Logic Level Inputs with Dual Color LED indication for logic low and logic high- 10 LED for output indication.            Clock Generator- Fixed Clock generation of 1Hz, 10Hz, 100Hz, 1KHz, 10KHz, 100KHz &amp; 1MHz.            Pulse Generator- Logic Pulsar provides single pole double throw bounce less pulses of Low to High and High to Low transitions            Logic Probe- Logic Probe facility provided with LED indicators to indicate Logic High, Low &amp; Tri-state            Potentiometers- Variable potentiometers of 1K, 10K 100K provided on board            Bread Board Area- Four Distribution Strip of 100 tie points each totaling 400 tie points            Function Generator - Provides Sine, Square and Triangular output waveforms. - Frequency variable from 0-200 KHz in FIVE steps.            Display seven-segment LED display.            Power Supplies- Fixed DC Power Supply: +5V, ±12V.            - Variable DC Power supply of +1.2V to +15V &amp; -1.2V to -15V.- AC Power Supply of 15V-0-15V</p>	20

2	<p><b>8051 Microcontroller Kit</b>  Specifications:  8051 Microcontroller Kit with Power Supply  8051/89C52 CPU operating @ 11.0592 MHz.  32K user RAM using 62256 with Battery Backup using NICD Battery  16K bytes of powerful monitor EPROM using 27512.  One memory socket is provided for expansion up to 64k  48 I/O lines using 2 Nos. of 8255 brought at 26 Pins FRC Connector to interface with IC-XX Series. Three Channel Timer/Counter using 8253 brought out at 10 Pins FRC Connector. 20x2 Alphanumeric LCD Display with Backlite.  101 ASCII Keyboard interface using 89C2051 operating @ 12MHz.  Two External interrupts INT0 &amp; INT1 are available at 40 pin FRC connector.  RS-232C using RX/TX of 8051 terminated on 9 Pins D-Type Connector..  Onboard Single Line Assembler / Disassembler.  Two modes of operation:- ASCII Keyboard Mode.- Serial Mode.  Facility for Downloading/Uploading files from/to PC.  All Address, Data, Control &amp; Port lines are available on 40 Pins &amp; 10 Pins FRC Connector. All ICS are mounted on IC Sockets.  In-Built Power Supply of +5V/1.5A, ±12V/250mA  8bit ADC &amp; DAC interface, Stepper motor Interface, Seven segment display Interface, Temperature measurement Interface</p>	15
3	<p><b>8086 Microprocessor Kit</b>  8086 Microprocessor with Power Supply  8086/8088 CPU at 2.5MHz, 16Kb of RAM with battery backup, 16Kb of monitor EPROM, 3nos 8255, 8253, RS232 using 8251,8259, 28keys hexadecimal keyboard, 8 seven segment display using 8279, facility for downloading/uploading files from PC /to PC, all address, data and control lines are available for user.</p>	20

(s/d)

PRINCIPAL

9. TENDER 9/P 14/2012

FUNCTION GENERATOR TO POWER ELECTRONICS AND BASIC ELECTRONICS LAB

SI.No	Name of Items/ Specification	Quantity Rqd
1	<b>Function Generator</b> Specifications: Function Generator 3MHz with AM/FM 0.3Hz to 3MHz frequency output in 8 ranges Waveforms: sine, square, triangle, ramp, pulse and DC Outputs Standard AM, balance AM, FM, ASK, FSK, PWM modulation and Sweep mode. Internal/external modulation Amplitude Modulation Carrier Freq. B.W. Upto 1MHz. Int. Mod. Freq. 2Hz to 20 KHz	30

sd

PRINCIPAL

X. **TENDER 10/P 15/2012**  
**FUNCTION GENERATOR TO ELECTRONICS CIRCUITS LAB AND PHYSICS LAB**

<b>Sl.No</b>	<b>Name of Items/ Specification</b>	<b>Quantity Rqd</b>
1	<b>Function Generator</b> Specifications: Function Generator 3MHz with AM/FM 0.3Hz to 3MHz frequency output in 8 ranges Waveforms: sine, square, triangle, ramp, pulse and DC Outputs Standard AM, balance AM, FM, ASK, FSK, PWM modulation and Sweep mode. Internal/external modulation Amplitude Modulation Carrier Freq. B.W. Upto 1MHz. Int. Mod. Freq. 2Hz to 20 KHz	27

sd

PRINCIPAL

XI. TENDER 11/P 20/2012

Oscilloscope to Power Electronics and Basic Electronics Lab

SI.No	Name of Items/ Specification	Quantity Rqd
1	<b>Oscilloscope</b> Specifications: OSCILLOSCOPE 25MHz 2 CHANNEL 4 TRACE WITH COMPONENT TESTER 1mV/div Sensitivity on Both Channels CH1 & CH2 Independent Channels CH1 Signal Output Algebraic Addition and Subtraction X-Y Operation, Sweep speed-0.1µsec/div to 0.2sec/div 20ns/div to 0.2s/div Time Base, ALT MAG. Trace - Max. 4 Traces Scale Illumination, 1:10 High Impedance Probe Trigger Lock Internal: 2.0 div - 50Hz to 20MHz	50

Sd

PRINCIPAL