

**MODEL POLYTECHNIC COLLEGE, MATTAKKARA**  
**(Managed by IHRD)**  
**Mattakkara P.O, Koottayam- 686564.**  
**Phone: 0481-2542022**

**TENDER NOTICE**

Sealed competitive tenders in the prescribed forms are invited for the following.

SlNo	Tender No	Items to be Purchased	Cost of Tender Form in Rs
1.	1/39/2016	Equipments to Computer Lab	Rs. 900/ + 5% VAT
2.	2/40/2016	Equipments to Communication Lab	Rs.600/ + 5% VAT
3.	3/41/2016	Equipments to Various Labs( Mobile Phone Servicing tool, Wireless communication modules, tablet PCs, barcode reader and printer, LED TV, thumb scanner)	Rs. 700/ + 5% VAT
4.	4/42/2016	Mechanical & Physics Lab	Rs. 800/ + 5% VAT
5.	5/44/2016	Power Lab & Communication Lab	Rs. 500/ + 5% VAT

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

Those who are in need of tender forms by post may sent a request along with a demand draft for cost of tender form as per above schedule + VAT 5% + ( postage charges ) Rs. 50/- drawn in favour of the Principal, Model Polytechnic College payable at SBT Mattakkara .

**Terms and Conditions:**

- 1) Rate quoted must be inclusive of all taxes and charges.
- 2) Minimum 2 years onsite warranty for all items should be offered.
- 3) Items must be supplied at MPTC Mattakkara by the supplier at the address given above.
- 4) Offer for supply of items is acceptable only from manufacturer or their authorized service Providers/dealers. So a certificate issued by the manufacturer should be enclosed in case of Dealers/service providers.
- 5) Payment will be cleared only on verification of the items as per tender specification and acceptance.
- 6) **EMD : 1%** of the tendered cost may be furnished by D/D drawn in favour of Principal, Model Polytechnic college Mattakkara and payable at SBT Mattakkara.
- 7) Agreement: In Kerala stamp paper worth Rs.100/- may be furnished
- 8) Superscription : Tender No. And item may be specified.

Last date for sale of Tender forms **30.01.2017 11AM**

Last date for receipt of Tenders **30.01.2017 3PM**

Date and time of opening **31. 01.2017 11 AM**

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

P R I N C I P A L

**Tender No: 1/39/2016**

**Items with Specification:**

<b>No</b>	<b>Item with Specifications</b>	<b>Quantity Req.</b>
156	Hard Disk 500GB	10
159	Motherboard Support Intel core i3	10
160	Processor Intel core i3	10
161	Cabinet with SMPS for computer 650W	10
162	RAM 2GB DDR III	10
163	LED Monitor 18.5"	10
164	Crimping Tool (4p, 8p)	3
165	Network Cable- Connector Tester	5
168	Hand held vacuum cleaner	3
169	Vacuum Cleaner	3
170	External Hard disc 1TB USB	2
171	DVD Writer	10
172	Laser Printer	2
174	Camcoder	1
175	Headphone set	5

## Tender No: 2/40/2016

## Items with Specification

Sl.No	Item no. in vetted list	Item with Specifications	Quantity Req.
1	43	<b>FM Receiver:</b>	4
		DAB/DAB+/FM radio module	
		Microchip PIC18F14K50 USB Flash Microcontroller	
		12 Mhz crystal	
		standard ICSP programming port for programming the PIC18F14K50	
		EXT port logic signal for controlling external audio chip power and mute	
		status LED, RX (orange) and TX (green)	
		power LED (red)	
		Bootloader push button	
		1.2VDC, 1.8VDC, 3.3VDC LDO	
		3.5mm stereo jack	
		SMA antenna connector	
2	44	<b>FM Transmitter:</b>	4
		9 volt,	
		Voltage Supply: 88-108MHz	
		Transmitter Distance: 300m or more	
		FM Transmitter frequency user selectable	
Transmitter can be listened to on any FM radio			
3	45	<b>ZIGBEE Transceiver:</b>	6
		2.4 GHz IEEE 802.15.4 systems	
4	116	Amplitude Modulation Transmitter Kit	1
5	117	Amplitude Demodulation Receiver Kit	1
6	118	Frequency Modulation Transmitter Kit	1
7	119	Frequency Demodulation Receiver Kit	1
8	120	Noise Power Spectral Density Measurement Kit	1
9	121	<b>FDM Transmitter / Receiver Kit:</b>	1
		Carrier generator	
		Sub carrier: 1KHz ~ 20KHz and 1KHz ~ 30KHz With adjustable amplitude of 0~2 Vpp	
		Pilot carrier: 256 KHz Transmitter: High frequency transmission using DSB	
Multiplexing: Frequency division multiplexing			

		Channel: 02	
		Band pass filter	
		Pass band: Filter 1 and 3 frequency range 8 ~12 KHz with fc 10 KHz	
		: Filter 2 and 4 frequency range 18 ~ 22 KHz with fc 20 KHz	
		AM /DM modulator	
		Modulation: Amplitude modulation double side band	
		Receiver: Amplitude demodulation of DSB	
		De-multiplexing: Frequency division de-multiplexing	
		Low pass filter 4 order butter worth filter	
		Switch faults 8 switchfaults are provided on-board to study different effects on circuit	
		Interconnection 2mm banana socket	
		Test points 25 test points are provided on board to observe intermediate signals. Power supply GND, +5V, +12V, -12V	
10	124	<b>AM /FM Radio Receiver Kit:</b>	1
		Audio Amplifier Circuit	
		AM Detector Circuit	
		AM IF Circuit	
		AM Amplifier Circuit	
		AM Mixer and Oscillator Circuit	
		FM Detector Circuit	
		First FM IF AMPLIFIER Circuit	
		Second FM IF AMPLIFIER Circuit	
		FM Radio Frequency Stages.	
		AM Radio Section	
		Tuning Range 520 KHz - 1620 KHz	
		IF Frequency 455 KHZ	
		Tracking $\pm 3$ db from 700 KHz to 1400 KHz	
		10 db Signal to Noise at 200 microvolt typical	
		FM Radio Section	
		Tuning Range 588 MHz - 108 MHz	
		IF Frequency 10.7 MHZ	
		Tracking $\pm 5$ db from 90 MHz to 106 MHz	
		Detector Uses Ratio detector and full time auto frequency control	
		10 db Signal to Noise at 200 microvolt typical	

11	125	<b>Analog Signal Sampling and Reconstruction Kit:</b>	1
		On-board Analog signal with variable amplitude Four different frequency analog signal On Board 10 different frequency clock signal Sampling using switching IC Reconstruction using Low Pass Filter Amplifier using Op-Amp Internal Power Supply +5V , +12V/ 500 mA Number of test point to study the Sampling process User friendly front panel block diagram	
		Message Signal 1 : Frequency 250 Hz	
		: Amplitude 0 to 5V Message Signal 2 : Frequency 500 Hz	
		: Amplitude 0 to 5V Message Signal 3 : Frequency 1 KHz	
		: Amplitude 0 to 5V Message Signal 4 : Frequency 2 KHz	
		: Amplitude 0 to 5V Carrier Signal : 512K,256K,128K,64K,32K,16K,8K, 4K, 2K, 1K, Modulator Type : 74 HC 4053 Based (Switching) Sampling Output : Sample/Hold	
		: Natural Sampling	
: Flat Top Sampling Demodulator : 4th Order LPF Amplifier : Op-Amp Based Supply Voltage (Board) : +12V, +5V / DC Supply current : 100 mA (Minimum) Input Voltage : 230 V/ 50 Hz AC Interface connectors : 2mm socket			
12	126	<b>PAM Time Division Multiplexing / Demultiplexing Kit:</b>	1
		ON-BOARD SIGNALS:	
		Sine Wave:	
		Frequency : 250Hz, 500Hz, 1 KHz, 2KHz	
		Amplitude : 0 - 5 V D.C. Signal : 0 - 5 V	
		Input Channels : 4 nos. Multiplexing : Time Division Multiplexing.	
		Sampling Rate : 32KHz. Modulation : Pulse Amplitude Modulation	
		Receiver Clock : Phase Lock Loop generates receiver clock and channel info	
13	127	Pulse Code Modulation Kit	1
14	128	Pulse Code Demodulation Kit	1
15	138	DPCM / ADPCM Modulation / Demodulation Kit	1
16	139	CRC Encoder / Decoder And MSK Modulation /Demodulation Kit	1
17	145	<b>DSP Trainer Kit:</b> Specification DSP operating at 225 Mhz.	5

	Embedded USBJTAG controller with plug and play drivers, USB cable included	
	TLV320AIC codec	
	2M x 32 on board SDRAM	
	512K bytes of on board Flash ROM	
	3 Expansion connectors (Memory Interface, Peripheral Interface and Host Port Interface)	
	On board IEEE 1149.1 JTAG connection for optional emulator debug	
	Four 3.5 mm audio jacks (microphone, line-in, speaker and line out)	
	4 user definable LEDs	
	4 position dip switch, user definable	
	+5 Volt operation only, power supply included	

**Tender No: 3/41/2016**  
**Items with Specification**

Sl.No	Item no. in vetted list	Item with Specifications	Quantity Req.
1	3	<b>Mobile Phone Servicing Tool</b> :Timekeeper and Telecommunication Equipments Aluminum Alloy Handle 13pcs Assorted Bits: PH00, PH0, PH1 SL1.5mm, SL2.0mm HEX1.5, HEX2.0 Torx: T4, T6, T8, T10 Pentalobe 0.8 - 1.2 Guitar Pick (Cell Phone Back Cover Opening Tool) Suction Vacuum Opener (Cell Phone Back Cover Opening Tool) SIM Eject Tool Tweezers Plastic Box	6
2	26	<b>Wireless Comm. Modules:</b> 250 kbps RF data rate, 2.4 GHz, Sleep modes support.	10
3	30	<b>Tablet PC:</b> Wi-Fi + 3G (With Calling Facility) 7 inch Screen Android OS 32 GB Internal Storage	3
4	105	Barcode Reader	4
5	106	Barcode Printer	1
6	107	LED TV	1
7	109	Thumb Scanner	2

Tender No: 4/42/2016

Items with Specification

Sl.No	Item no. in vetted list	Item with Specifications	Quantity Req.
1	76	Power Hacksaw	1
2	79	Hand drilling machine	5
3	57	Optically plane glass plate	10
4	58	Convex lens 50cm	20
5	59	Convex lens 10cm	20
6	60	Convex lens 15cm	20
7	61	Sonometer	20
8	62	Resonance column	10
9	63	Spring Balance 0 to 200gms	2
10	64	Spring, Stand	20
11	65	Stopwatch	2
12	66	Stop clock	20
13	67	Hard Glass test tube	10
14	68	Thermometer 0 to 100	10
15	69	Thermometer 10 to 110	5
16	70	Common balance	10
17	110	concave mirror-10 cm	10
18	111	Concave mirror-15 cm	10



Tender No: 5/44/2016

## Items with Specification

Sl.No	Item no. in vetted list	Item with Specifications	Quantity Req.
1	146	<p><b>Antena Training system:</b> Specification :-  Waveforms : Sine  RF Generator : 750 MHz approximately  (output adjustable)  Tone Generator : 1 KHz approximately  (output adjustable)  Directional Coupler : Forward &amp; Reverse  (selectable)  Matching Stub : Slider type    Antenna Rotation : 0-360 deg. Resolution 1 deg.    Receiving Antenna : Folded dipole with reflector  Detector Display : Level adjustable meter  Interconnections : 2 mm Banana sockets  Power Supply : 230 V, <math>\pm 10\%</math> 50/60 Hz  Power Consumption : 3 VA approximately  Operating Conditions : 0-40 C, 80% RH  Weight : 3 Kg approximately  Dimensions (mm) : W 385 x D 75 x H 285  Learning material : Online (Theory, procedure,  reference results, etc),</p>	1
2	114	<p><b>PLC Trainer Kit:</b>  <b>Specification :-</b> Working power supply: AC single-phase 220V 50Hz  PLC host machine: CPU224XP AC/DC relay (14DI, 10DO, 2AI, 1 AO)  Load power supply: DC 24V/4A, 5V/2A</p>	1