



SHRI VITHAL EDUCATION & RESEARCH INSTITUTE'S

COLLEGE OF ENGINEERING, PANDHARPUR

P.B. No. 54, Gopalpur -Ranjani Road, Gopalpur, Tal - Pandharpur- 413 304,Dist. Solapur
(Maharashtra) Tel.:(02186) 282223, 9503103892 E-mail : coe@sveri.ac.in, Website: www.sveri.ac.in

(Approved by A.I.C.T.E., New Delhi and affiliated to Solapur University,
Solapur) Accredited by Institute of Engineers(India), Kolkata ISO 9001-2000
Certified Institute



ISO 9001:2008

www.tuv.com
ID: 810504813E

Tender Notice No. -----

Date:-

TENDER FORM FOR EQUIPMENTS

A] General Information:

1. Name of the Firm with Address :

2. Contact Nos. and Email : _____

3. Tender Fee Details: _____

B] Tender Quote:**Equipment list for Purchase**

Sr. No.	Particulars	Unit	
1	PLC Development Platform Di: 20, DO; 12 AI:4 AO:2 On board Interface with PLC 8 nos. toggle switch 5 nos. Push to ON switch 1 nos. IR Sensor 1 nos. Limit Switch 8 nos. LED 1 no. Buzzer 1 no. DC Motor 1 no. relay with lamp PLC controlling through RS232/TCPIP Communication using 485/TCPIP. PLC Can reconfigure	1	
2	Understanding Characteristics of TRIAC and SCR Mains power supply : 90 - 270V \pm 10%, 50Hz Fixed DC power supply : +15V, +35V and -35V Regulated	10	
3	1 Phase full wave Controlled rectifier	05	
4	Op-Amp Applications kit	05	
5	Switched mode power supply kit. Input : 80 to 230V AC \pm 10%, 50 / 60Hz Output : +12V DC regulated -12V DC regulated +5V DC regulated To gives constant output even when the AC mains is varied from 80V to 270V with block study and test point.	01	
6	Photo resist coating machine Processing unit that should contains:- 1.Microcontroller based LCD for time measurement 2.Timer clock with Auto and Manual mode 3.Product Tutorial	01	
7	Photo resist dryer	01	
8	PCB Etching Machine Processing unit should contains:- 1.Microcontroller based LCD for time measurement 2.Timer clock with Auto and Manual mode 3.Product Tutorial	01	
9	Transistor analyzer Step Frequency : 500 Hz - 4 KHz Sweep Frequency : 500 Hz - 4 KHz Collector sweep amplitude : 0 - 20 V No. of steps : 0 - 16 steps (selectable) Transistor Types : Only small plastic packages having power ratings below 500 mW On board micro-ammeter : 0 - 300 μ A (moving coil type) Collector-base Supply : \pm 12 V max Emitter-base Supply : \pm 5 V max Test Points : 16 nos (Gold plated)	01	

10	Control System Lab experiment kit To Verify Liquid level control system	05	
11	Arduino- v2 Kit	10	
12	Digital multimeter LCD Display with Auto/Manual Range, Capacitance, Frequency / Duty Cycle, Temperature and Transistor Test	20	
13	Antenna trainer kit Waveforms : Sine RF Generator : 750 MHz approximately (output adjustable) Tone Generator : 1 KHz approximately (output adjustable) Directional Coupler : Forward & 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 List of Accessories (10 Antenna) I. Antennas : 10 nos. 1. Simple Dipole $\lambda/2$: 1 no. 2. Yagi-UDA Folded Dipole (3E) : 1 no. 3. Yagi-UDA Folded Dipole (5E) : 1 no. 4. Yagi-UDA Simple Dipole (5E) : 1 no. 5. Yagi-UDA Simple Dipole (7E) : 1 no. 6. Hertz Antenna : 1 no. 7. Loop Antenna : 1 no. 8. Log Periodic Antenna : 1 no. 9. $\lambda/2$ Phase Array : 1 no. 10. Detector Antenna : 1 no. 11. Helix Antenna : 1 no. II. Current Probe : 1 no. III. Transmitting Mast : 1 no. IV. RF Detector : 1 no. V. Receiving Mast : 1 no. VI. Accessories Kit : Other	02	
14	Microwave Klystron test bench Setup Include :- 1.Detector mount 2.Fixed short 3.Frequency Meter Waveguide WR-90 Flange UG-39/U Calibration Accuracy \pm 2% Calibration Increment 5 MHz Max. VSWR 1.28 At 10.5GHz Return Loss -18.2 At 10.5GHz 4.Isolator 5.Klystron Mount 6.Matched Termination 7.Slide screw Tuner 8.Sollted section 9.Solid state klystron power supply 10.Tunable probe Frequency(GHz) 8.2-12.4 Detector IN23 11.Variable attenuator 20 db 12.VSWR Meter Digital 13.Wave guide stand-04 No.s 14.BNC to BNC Cable	01	

15	<p>Microwave Gunn test bench Setup Include :- 1.Detector mount 2.Fixed short 3.Frequency Meter Waveguide WR-90 Flange UG-39/U Calibration Accuracy \pm 2% Calibration Increment 5 MHz Max. VSWR 1.28 At 10.5GHz Return Loss -18.2 At 10.5GHz 4. Gunn Oscillator Frequency(GHz) 8.2-12.4 Flange UG- UG-39/U Bias Voltage max. 10V Normal Power Output 10mv 5.Gunn Power Supply input require 230V \pm10%, 50Hz 7.Isolator 8.Matched termination Frequency(GHz) 8.2-12.4 Waveguide WR-90 Flange UG-39/U VSWR 1.03 At 10.5GHz Av. Power 2W 9.Movable short 10.Pin Modulator 11.Slide screw Tuner 12.Slotted Section 13.Tunable Probe Frequency(GHz) 8.2-12.4 Detector IN23 15.Wave guide stand with height adjustable 16.BNC to BNC Cable 17.Smith Chart 18.Cooling Fan 4" with Adjustable stand</p>	01	
16	<p>Colour TV (36cm) Standard :CCIR-B-PAL-G, 625 Lines Channels :230, 2 - 4 VHP I (VL), 5 - 12 VHP III (VH), 12 - 100 : BAND IV & V, else : S BAND & HYPER BAND Picture Tube Size : 36 cms. Diagonal, RF Input Impedance : 75 W Circuit Blocks : System Control Circuit, Video IF, Sound Section, Tuner Section, Horizontal Oscillator, Horizontal Output, Vertical Oscillator, Vertical output, Video & Chroma Section, Power Supply, AV sections No. of Faults : 48, No. of Test Points : 55 I.F. Frequency : Video - 38.9 MHz, Audio - 33.4 MHz Speaker Size (mm.) : 50 \times 125 Accelerating Potential : 24 KV max. Operating Voltage for EHT : 110 V Mains Supply : 230 V \pm15 %, 50 Hz . 60 Hz</p>	02	
17	<p>Colour pattern generation Test signals : 1.Check pattern, 2. Horizontal bar pattern, 3. Vertical bar pattern, 4. Horizontal-Vertical Bar pattern, 5. Dot pattern, 6. Circle pattern, 7. White pattern, 8. Colour Bar pattern, 9. Red colour pattern, 10. Green colour pattern, 11. Blue colour pattern, 12. Yellow colour pattern, 13. Magenta colour pattern, 14. Cyan colour pattern 15. one at a time Video carrier Lower VLF band I : 41-68 MHZ, Upper VHF band III : 174-230 MHZ Sound : 1 KHz Sine Wave Chroma Section : System PAL 4.433619 MHz crystal derived Color Burst : 10 cycles \pm 2 cycle</p>	02	

18	B/W TV Demonstrator	02	
19	Understanding DVD/CD Player Signal System : PAL/ NTSC Playable Discs formats : DVD-Video; DVD+/-R/RW; Audio CD; CD-R/RW (All 8 cm/12 cm discs) File Compatibility : .avi/.mpg/.mpeg/.mp3/.wma/.jpg/.jpeg Sampling frequency : 8 to 48 KHz (MP3), 32 to 48 KHz (WMA) Test Points : 40 nos Switched Faults : 18 nos Remote Control Battery : 1.5V, (R03, AAA size) USB Reader : 1 X USB 2.0	02	
20	Tape Recorder	02	
21	CCTV trainer kit	01	
22	Wave and propagation Frequency of Operation : 10 GHz (approx) Power of Transmission : 10 -15 mW Operating Voltage : 8 V (approx) Antennas for Transmission & Reception : Horn type Goniometer Scale : 0° - 360° Tone Generator : 1 KHz Frequency Transmitter and Receiver arm length : 49 cm each (approx) Power Display : Digital, Relative Measurement	01	
23	Amplifier with Graphic equalizer	01	
24	Optical Fiber trainer kit Transmitter : 2 No., Fiber Optic LED having peak wavelength of emission 660 nm & 950 nm (Optional Laser Source) Receiver : 2 Nos., Fiber Optic Photodetector Modulation Techniques : 1. AM 2. FM 3. PWM Drivers : 1 No. with Analog & Digital modes AC Amplifier : 2 Nos. Clock : Crystal Controlled Clock 4.096 MHz PLL detector : 1 no. Comparator : 2 nos. Filters : 2 nos. 4 order Butterworth, 3.4 KHz cut-off frequency Analog Band Width : 350 KHz Digital Band Width : 2.5 MHz Function Generator : 1.1 KHz Sine wave (Amplitude adjustable) 2.1 KHz square wave (TTL) Voice Link : F.O. voice link using microphone & speaker (built in) PC-PC Communication : Using 2 channel RS232 Port : RS232 9 Pin Baud Rate : 19200 baud Switched Faults : 4 in transmitter & 4 in Receiver	01	

Maintenance of following equipment

Sr. No.	Particulars	Unit	Rate in Rs.
1.	Dual D.C.Power Supply	2	
2.	Function Generator	1	
3.	Dual Storage Oscilloscope	1	
4.	Digital Multimeter	5	
5.	Cathod ray oscilloscope	10	
6.	Function Generator	10	
7.	Color TV Pattern Generator	01	
8.	Black and White TV Trainer kit(Gururaja Make)	01	
9.	Color TV Trainer with 5 Band, Hyper Band,99 Channels & full screen Display with remote control(Gururaja Make)	01	
10.	30 MHz Dual Trace CRO with sweep delay HM203M,S.No.02128722	01	
11.	Black and White TV Demonstration-19x15 BDM 101	01	
12	Color TV Demonstration 30x24 CDM 101	02	
13	Tape Recorder Trainer TDM 100	02	
14	DVD Player Trainer DVD 100	01	
15	Color Pattern Generator S-1044	01	
16	30 Mhz CRO Scientific HM 203M	01	
17	Klystron power supply KPS151,240-420V dc	01	

18	Solid state VSWR meter ,VS411, 1000Hz frequency	01	
19	Gunn power supply X110 , Bias Voltage 0-10 V	01	
20	Frequency meter (Micro meter type) Model X-4055	02	
21	Microwave Test Bench X-Band (Gun based)	01	
22	Klystron power supply	03	
23	Solid state VSWR meter	03	
24	Microwave Test Bench X-Band (Klystron based)	01	
25	Antenna trainer kit	03	
26	Microwave Test Bench X-Band (Klystron based)MT-9000	01	
27	Transmission line trainer kit	04	
28	Classic 333 LCR Meter	04	
29	Control system lab equipment 1) To verify potentiometer as transducer and as error detector. 2) To verify Synchro as transducer. 3) To verify Synchro as error detector. 4) To verify operation of AC position control system. 5) To verify operation of DC position control system. 6.To study D.C. servomotor and its speed torque characteristics 7.To study A.C. servomotor and its speed torque characteristics	2 3 3 3 2 1 1	
30	Microprocessor trainer kit	30	
31	Analog Communication Trainer Kit	09	
32	Optical Fiber Communication Trainer Kit	02	

33	CDS kit		
34	SMPS for microprocessor kit		
35	0-30v/5-10a Regulated Power Supply		
36	Signal generator		

SIGNATURE OF THE
TENDERER
WITH STAMP