

**TECHNICAL & HIGHER EDUCATION INSTITUTIONS SOCIETY,
U.T. OF DAMAN & DIU
OFFICE OF THE PRINCIPAL
GOVT. POLYTECHNIC-DIU
FORT ROAD, DIU: 362520**

No.5.1/THEIS/GP-DIU/TENDER/2015-16/137

Dated: 27/08/2015

TENDER NOTICE

Sealed tenders are hereby invited by the Principal. Govt. Polytechnic - Diu on behalf of the President of India for supply of **A.C. Lab. And Electronics Lab. Equipment's** as stated below as per the terms and condition stipulated attached herewith. Tender documents should be submitted along with nonrefundable tender fees of Rs. 500/- DD, favor of Daman & Diu Society for Technical Edu. & Higher Edu. (CENT). And refundable E.M.D Rs. 10,000/- (FDR) of the total cost of supply items in favor of Daman & Diu Society for Technical Edu. & Higher Edu. (CENT).

Last date of Submission of Tender : 11/09/2015 at 12:00 PM

Opening of Tender : 11/09/2015 at 03:00 PM (if Possible)

Sr. No.	Peripheral	Configuration/ Specification	Qty	Rate	Total
1.	Experimentation with Diodes	Nvis 6501 On Board DC power supply : +12V DC Variable Ammeter Range : 1µA to 200mA with selector switch Display : 3½ digit Voltmeter Range : 1mV to 200V with selector switch Display : 3½ digit Mains power : 230V AC ±10% Dimension (mm) : W 365 x D 260 x H 120 List of Experiments Scope of VI Characteristics of Silicon Diode Scope of VI Characteristics of Zener Diode Scope of VI Characteristics of LED Diode	01		
2.	Experimentation with Zener Diode Voltage Regulator	Nvis 6508 Transformer : 0 - 9V, 500mA (approximate) Filter : Capacitive 1000µF, 35V Zener Diode : V = 5.6V z I = 178mA ZM Potentiometer, P1 : 4.7kW Potentiometer, P2 : 4.7kW Mains Supply : 230V ±10%, 50Hz Dimensions (mm) : W 250 x D 150 x H 80 Weight: 600g (approximate) List of Experiments Study of Zener Diode as a Voltage Regulator, when input voltage, Vin is fixed while load resistance RL is variable. Study of Zener Diode as a Voltage Regulator, when input voltage, Vin is variable while load resistance RL is fixed.	01		
3.	Experimentation with Rectifiers	Nvis 6503 Transformer Rating : 9V center tapped (300mA) approximate Half wave Rectifier output : +4V DC approximate Center-Trapped Rectifier : +8V DC approximate Bridge Rectifier Output : +8V DC approximate Filter : LC Type Load : Resistive 220Ω, ½W Mains Supply : 230V ±10%, 50Hz Dimensions (mm) : W 250 x D 150 x H 80 List of Experiments Study of Half-wave Rectifier Study of Full-wave Center-tapped Rectifier Study of Full-wave Bridge Rectifier Calculation of	01		

		Ripple Factor and Efficiency of various Rectifiers			
4.	Experimentation with Transistor Characteristics	<p>Nvis 6502</p> <p>Fixed DC Power Supply : +5V, -5V, +12V, -12V Variable DC Supply : $\pm 1.5V$ to $\pm 11V$, Transistor : BC547, BC557</p> <p>Ammeter with range selector knob Range : $1\mu A$ to 200mA Display : $3\frac{1}{2}$ digit</p> <p>Voltmeter with range selector knob Range : 1mV to 200V Display : $3\frac{1}{2}$ digit</p> <p>Mains : 230V AC $\pm 10\%$</p> <p>Dimension (mm) : W 450 x D 280 x H 113</p> <p>Weight : 2kg (approximate)</p> <p>List of Experiment</p> <p>Study of the characteristics of PNP transistor in Common Base Configuration and to evaluate - Input resistance, Output resistance and Current gain.</p> <p>Study of the characteristics of PNP transistor in Common Collector Configuration and to evaluate - Input resistance, Output resistance and Current gain. Study the characteristics of NPN transistor in common Emitter Configuration and to evaluate - Input resistance, Output resistance and Current gain.</p> <p>Study of the characteristics of NPN transistor in Common Base configuration and to evaluate - Input resistance, Output resistance and Current gain.</p> <p>Study of the characteristics of NPN transistor in Common Collector configuration and to evaluate - Input resistance, Output resistance and Current gain.</p> <p>Study the characteristics of PNP transistor in Common Emitter Configuration and to evaluate - Input resistance, Output resistance and Current gain.</p>	01		
5.	Experimentation with Hartley and Colpitt Oscillator	<p>Nvis 6505</p> <p>Biasing Voltage : +12V DC SMPS</p> <p>Design of Oscillators : Passive Elements with NPN Transistors Dimensions (mm) : 240 W x 345 D x 110 H Weight : 1kg (approximate) List of Experiments</p> <p>Study of design and functioning of Hartley Oscillator Study of design and functioning of Colpitt Oscillator</p>	01		
6.	Experimentation with Kirchhoff's Current and Voltage Law	<p>Nvis 6513</p> <p>Mains supply : 230V $\pm 10\%$, 50Hz</p> <p>DC Power supply : +12V</p> <p>Fuse : 500 mA, slow blow</p> <p>DC Ammeter Range : $2\mu A$ to 200mA</p> <p>Display : $3\frac{1}{2}$ digit</p> <p>Dimensions (mm) : W 240 x D 345 x H 110</p> <p>List of Experiments Verification of Kirchhoff's Current Law Verification of Kirchhoff's Voltage Law</p>	01		
7.	Experimentation with FET Amplifier	<p>Nvis 6521</p> <p>DC power supply : +12V DC</p> <p>Mains supply : 230V $\pm 10\%$, 50Hz</p> <p>Dimensions (mm) : W 255 x D 155 x H 80</p> <p>List of Experiments</p> <p>To study the theoretical analysis of FET Amplifier To study and measure the frequency response of FET Amplifier To measure various parameters</p>	01		

		of FET Amplifier and compare them theoretically To observe the output of FET Amplifier in ohmic and cutoff regions			
8.	LDR Characteristics	NV6536 Mains supply : 90 - 275 V, 50 /60Hz DC power supply : +12 V, -12 V, +5 V Voltmeter (2Nos.) : 0 -12 V Weight : 1.21 Kg. (approx.) Dimensions (mm.) : W 240 × D 345 × H 110. List of Experiment To study and plot the characteristics of LDR	01		
9.	SCR Characteristics	PE03 SCR Characteristics board without meters & with Fixed DC Power Supply (±35V, +15V). Simtel Power Electronics Software as per given document attached	01		
10.	UJT Characteristics	PE01 UJT Characteristics board without meters & with Fixed DC Power Supply (±35V, +15V) Simtel Power Electronics Software as per given document attached	01		
11.	Triple Power supply	Scientech 4071 DC Output : 2 x 0 - 30 V, 500 mA and 5V/1A Output Voltage : 0 - 30 V continuously variable by means of Coarse and Fine controls Internal resistance : ≤ 15 mΩ Stability : 2.5 mV at line voltage variations of up to 10% Recovery time : ≤ 80 ms Load regulation : ± (0.05 % + 10 mV) Line regulation : ± (0.05 % + 10 mV) Temperature Coefficient : ± 0.1% / C Ripple and noise : ≤ 1mVrms Output current : 500 mA Maximum Current limit : 10 mA to 500 mA Adjustable Output voltage : 5 V / 1 A fixed Internal resistance : ≤ 0.06 Ω Stability : 5 mV at line voltage variations of up to 10% Recovery time : ≤ 100 ms Temperature coefficient : ≤ 0.1 % / C Ripple and noise : ≤ 5 mVrms Output current : 1 A Maximum Display : 2 x 3 - digit 7-segment LED display for Voltage & Current. Two LED (for V and mA) indicate the unit of display. Accuracy : ± (1% of reading + 1 digit) Over range indication : Glowing 'OR' LEDs indicate overload General Information Built in over voltage, overload, overheat & short circuit protection. All outputs are floating. Insulation Between chassis and output terminal > 10 MΩ at 100 VDC Between chassis and AC plug > 50 MΩ at 500 VDC Power Supply : 230 V, ±10%, 50/ 60 Hz Operating Temperature : 0 - 40 C, 80% RH Dimension (mm) : W 196 × H 80 × D 262 Weight : 4 Kg approximately Product Tutorials : Online (Operating procedure, Front panel control, Theory, Control software optional) etc. Included Accessories Mains cord -1 no.	01		
12.	Instrumentation Amplifier	AB39 Instrumentation Amplifier board with DC Power Supply (±12V, ± 5V) Simtel Analog Electronics Software as per given document attached	01		

13.	Two way Probe		20		
14.	Single Phase Transformer	NV7004 Mains Supply : Single Phase, 230V AC $\pm 10\%$, 50Hz Single Phase Transformer Rating : 1kVA Primary Voltage : 0-125V, 0-125V Secondary Voltage : 0-125V, 0-125V Rated Current : 5A Single Phase Auto Transformer Primary Voltage : 230V Secondary Voltage : 0-270V. Rated Current : 5A Analog Meters Used Voltmeter (MI) : 300V (2 Nos. Voltmeter (MI) : 50V Ammeter (MI) : 5A (2 Nos.) Ammeter (MI) : 1A Wattmeter : 100W Wattmeter : 1000W MCB (SP) : 6A Dimensions (mm) : W 600 x D 450 x H 600 With wood table facility. Weight : 39kg (approx.)	01		
15.	Wheatstone Bridge	MAKE – VAISESHIKA Type – 9401 Technical Specifications : Resistance Range : 0.01 ohm to 1.0 Megaohm Series Arm : 10 x 1000, 10 x 100, 10 x 10, 10 x 1 ohm totaling to 11,110 ohms Ratio Arm : Seven ratio arms having the multiplier of x1000; x100; x 10; x 1; x 0.1; x 0.01; and 0.001 Accuracy Series Arm : $\pm 0.05\%$ Ratio Arm : $\pm 0.02\%$ Galvanometer : taut suspension built in type Supply Source Mains : 230 $\pm 10\%$ AC, 50Hz Battery : 4.5 Volts Switch : Phosphor bronze hard silver plated Dimensions (in cms) : 38(L)x28(D)x18(H) Weight : 5kg.	01		
16.	Three Phase Measurement by Two Wattmeter	NV-7005 Mains Supply: Three Phase, 415V $\pm 10\%$, 50Hz Load: R – L Analog Meters Used Wattmeter: 500W (2 Nos.) Voltmeter (MI) : 500V Ammeter (MI) : 1A MCB (TPN) : 10A Dimensions (mm) : W 600 x D 350 x H 450 Weight: 16.5kg(approx.)List of Experiments Measurement of Power Factor in a Three Phase Circuit Measurement of Active, Reactive and Apparent Power in a Three Phase Circuit by two wattmeter method Measurement of Three Phase Parameters	01		
17.	Ammeter	Range: 0-5A AC Portable Moving Iron type AC Ammeter. Ammeter should be a moving iron type require. Instrument with Accuracy Class 1. Robust housing suitable for laboratory operations for continuous use. Housing material made of Black Engineering Plastic. Scale length 145mm approx. Confirming to BS89, IEC 51 & IS 1248 Company Test report should be provide with meter. Company must be having ISO certification.	01		
18.	Voltmeter	Range: 0-500V AC Portable Moving Iron type AC Voltmeter. Voltmeter should be a moving iron type require. Instrument with Accuracy Class 1. Robust housing suitable for laboratory operations for continuous use. Housing material made of Black Engineering	01		

		Plastic. Scale length 145mm approx. Confirming to BS89, IEC 51 & IS 1248 Copany Test report should be provide with meter. Company must be having ISO certification.			
19.	Wattmeter	Range: 0-1500W (5A,300V) Portable Type Wattmeter with Accuracy Class 1. Robust housing suitable for laboratory operations for continuous use. Housing material made of Black Engineering Plastic. Scale length 145mm approx. Confirming to BS89, IEC 51 & IS 1248 Company Test report should be provide with meter. Company must be having ISO certification.	01		
20.	Digital Multimeter	MAKE – NVIS Model - Nvis63T FEATURES: 12 different measurement capabilities DCV/ACV, DCI/ACI, W2 W/W4 W, Frequency/ period Diode Test continuity-dB/dBm etc. High brightness vaccum fluorescent dual display True-rms AC voltage and current measurement, Frequency bandwidth up to 100 KHz/300 KHz DCV measurement accuracy up to 0.01 % / 0.005, resolution; 1 mV/0.1JL/V Max. measurement rate: 45 results per second Equal accuracy frequency measurement greater than 1 MHz, Min resolution 10 mHz Zeroing (REL) mode 2 W, 4 W Resistance measurement Build in mX+b, %, dB, dBm etc. mathematics calculation function 512 reading storage and MAX/ MIN/ AVER/ STD statistics HI/ IN/ LO for speed sieving RS-232 interface for easy communication and optional GPIB Calibration without opening the case 10 sets of meter status can be stored and loaded TECHNICAL SPECIFICATIONS : Test Parameter (DCV), (ACV), (DOI), (ACI), (ACI), (W 2 W), (W 4 W). (FREQ), (PERI), (CONT), (DIODE). Mathematics Calculation Function : mX + b, % dB, dBm, REL Range Auto, Manual Display VFD Trigger Mode INT/ MAN/ EXT Programmable Time Delay :0 -6000mS Reading and Statistics :Storage 2 to 1024 sets of reading can be stored, loaded and counted Type of statistics : MAX. MIN. AVER. STD Reading Hold To give best stable reading for each of the Test Parameter according to the given accuracy Limitation Measurement To judge III. IN, LO and display with ALARM for 1 HI/LO Storage setting 10 setting files can be stored loaded Calibration Recommended Fluke 5520A with NB 62 Accurate calibration software (option) Communication Interface GPIB (option), RS 232C. SCPI command programmable SPECIFICATIONS: Accuracy: \pm (reading % + full scale reading %) Full Scale Reading and reading Rate (Reading /Second)Reading Rate Slow Medium Fast Full scale Reading 1.99,999 119,999	03		

		<p>11,999 Reading rate (reading /Sec.) DCV, DCI, 2.3, 2.4, 2.5 ACV, ACI 1.5, 4.5 24W-2W 2.3 21 36(DCV) Range Min. Resolution Max. Accuracy (One year) Nvis 63T 100mV- 1000V 0.1mV 0.005% +0.0010%(DCI) Range Min. Resolution Max. Accuracy (One year) Nvis 63T 10 mV-3 A 10 nA 0.005% +0.005% (1kHz) (ACV) Bandwidth Range Min. Max. Accuracy (One year) Resolution Nvis 63T 5Hz-300kHz 100mV-750V 0.1mV 0.06% + 0.05% (ACI) Bandwidth Range Min. Max. Accuracy Resolution (One year) Nvis 63T 5Hz-300kHz 100mV-750V 0.1mV 0.15% + 0.06% (Q2WQ4W) Range Measurement Min. Max. Accuracy Current Resolution(One Year) Nvis 63T 100W-1000MW 0.7 mA- 1mA 100 mW 0.015% +</p>			
21.	Cathod Ray Oscilloscope	<p>30 MHZ BANDWIDTH, 2 CHANNEL, 20 NS SAMPLING TIME ,Microcontroller Based Oscilloscope with Built-in Frequency Counter and Color LCD Digital Readout MAKE - SCIENTECH Model - 803 FEATURES: 30 MHz Bandwidth X10 Magnification 20 ns max sweep speed Stable Triggering upto 40 MHz Alternate Triggering Sharp display & Auto focus Digital Readout with backlit Color LCD Technical Specifications : Operating Modes : Channel I, Channel II, Channel I & II alternate or chopped (approximately 350 KHz), X-Y operation (Ratio 1:1 Input via CH II), Add/Sub CH I ± CH II, Invert CH II Vertical deflection (Y) Identical channels Bandwidth : DC -30 MHz (-3 dB) Risetime : 12 ns approximately Deflection coefficients : Microcontroller based 12 calibrated steps 5 mV /div. - 20 V / div. (1-2-5 sequence). Electronic control. Display on Color LCD Accuracy: ±3 % Input Impedance: 1 MW II 30 pF approximately Input: BNC connector Input coupling: DC-AC-GND Maximum Input voltage : 400 V (DC + Peak AC) Timebase Time coefficients : Microcontroller based 18 calibrated steps, 0.5 µs/div.-0. 2s/div. (1-2-5 sequence). Electronic control. Display on Color LCD Accuracy : ± 3% (in Cal position) Magnifier : X10 Highest TB speed : 20 ns Trigger System Trigger Bandwidth : 40 MHz Modes : Auto/ Level Source : CHI, CH II, ALT-CH I/ CH II, Ext. Slope : Positive or Negative Sensitivity : Int 0.5 div., Ext 0.8 V approximately Horizontal Deflection (X) Input via CHII Bandwidth : DC -3 MHz (-3 dB) X-Y mode : Phase Shift <3° at 60 KHz Deflection coefficients : Microcontroller based 12 calibrated steps 5 mV/div.-20 V/div. (1 - 2 - 5 sequence) Electronic control. Display on color LCD Input Impedance : 1 MW II 30 pF approximately Input : BNC Connector Input coupling : DC-AC-GND Maximum</p>	02		

		<p>Input voltage : 400 V (DC + Peak AC) General Information Cathode Ray Tube : 140 mm Rectangular tube with internal graticule. P31 Phosphor Accelerating potential: 2 KV approximately Display: 8×10 cm Trace rotation: Adjustable on front panel Calibrator: Square Wave generator 1KHz approximately, 0.2 Vpp ±1 % for probe compensation. Color Display LCD Type : 65K Color TFT, Negative Transmissive Resolution : 128(W) ×128(H) Viewing direction : 6 O' clock Screen Size : 1.51" USB Interface (Optional) : For remote control settings of Volt/div. & Time/div. Stabilized Power Supply : All operating voltages including EHT Mains Supply : 230 V ±10%, 50/60 Hz Power consumption : 45 VA approximately Weight : 7.5 Kg approximately Dimensions (mm.) : W 325 × D 370 × H 155 Operating Temp. : 0-40°C, 80 % RH Product Tutorials: Online (Operating procedure, Front panel control, Theory). Included Accessories: BNC to Crocodile cable -1no. BNC to Test Prod cable -1no. Power cord -1no.</p>			
22.	Function generator	<p>MAKE – SCIENTECH Model – Scientech 4061 FEATURES : 1 Hz - 10 MHz (Sine) (Optional) Sine, Square, Triangle, Ramp, Pulse and TTL outputs 20 Vpp output and DC Offset 40 MHz Frequency Counter Rise time & Fall time £ 50 ns 20 × 4 character LCD TTL output 50 W Output Impedance Various types of modulations 20 dB/ 40 dB (fixed) & 20 dB variable attenuation Gold plated BNCs. 3 Year Warranty Technical Specifications Operating Modes Sine, Square, Triangle, Ramp, Pulse, TTL Frequency Range 0.3 Hz - 3 MHz (Sine, Square & Triangle) 0.3Hz - 2 MHz (Ramp, Pulse & TTL) Frequency Accuracy ± 0.5 % Frequency Range & Microcontroller based Menu Selection Sine Wave Distortion 1 % (typical) Square Wave Rise Time & Fall Time Pulse Duty Cycle 15 % to 85 % var. (min width 200 ns) Triangle Nonlinearity £1% (typical) Output Impedance 50W Output Voltage 20 Vpp O.C. Attenuation 20 or 40 dB(fixed) & 20 dB (variable) Level Flatness Upto 300 KHz : ±0.2 dB Upto 3 MHz : ±0.5 dB DC Offset ±5 V adjustable Internal Sweep 20 ms-4 s variable External Modulation AM Std, AM Bal,FM, PWM Modulation Freq. Range DC to 20 KHz Modulation Input 2 Vpp max. Frequency Counter Range DC - 40 MHz Accuracy ± 0.5 % Resolution 1 Hz Sensitivity 0.5 V Input Impedance 1 MW General: Mains Supply 230 V ±10%, 50 Hz / 60 Hz Power Consumption 12 VA (approx.) Operating Temp. 0 to 40°C, RH90% Weight 2.5 Kg (approx.) 3 Kg (approx.) Dimensions (mm.) W 198× D 285 × H 90 Included Accessories Learning Material CD, BNC-BNC Cable 1 No.</p>	01		
23.	RLC resonance trainer	<p>MAKE – NVIS Model - Nvis7009</p>	01		

		Mains Supply 90-275v,50/60HZ,Genertor output: 8Vpp,Frequency range 1KHZ, 10KHZ, 60 KHZ,Voltmeter 2V. List of Experiments Study of Series R-L-C Resonance and to determine its Resonance Frequency. Study of Parallel R-L-C Resonance and to determine its Resonance Frequency.			
24.	Capacitance box (six decade)	Range : 10 Pico Farads to 11.11111 Micro Farads in 6 decades in CDB6 Accuracy : $\pm 1\%$ ± 50 Pico Farads Max. Voltage : 100V DC or 63V AC	01		
25.	RC Phase shift Oscillator circuit	MAKE - OMEGA Type - ETB 94 OBJECT 01. To study R.C. Phase Shift Oscillator of phase advance type. 02. To study R.C. Phase Shift Oscillator of phase retard type. 03. To study Wien-Bridge Oscillator. 04. To study Hartely's Oscillator. 05. To study Colpitt's Oscillator. 06. To study Pierce (X-Tal) Oscillator. 07. To study method of frequency measurement using a CRO. FEATURES The board consists of the following built-in parts: 01. +9V D.C at 100mA, IC Regulated Power Supply. 02. Two stage buffer/amplifier using PNP transistors and controllable A.C. gain. 03. NPN Transistor biased in Class A common emitter configuration. 04. Wien-bridge network. 05. R.C. Phase Shift Net-work (advance type & retard type). 06. Tank circuits for Hartley's & Colpitt's Oscillators. 07. 3.579 MHz X-tal with series trimmer. 08. Adequate no. of other electronic components. 09. Mains ON/OFF switch, Fuse and Jewel light. * The unit is operative on 230V $\pm 10\%$ at 50Hz A.C. Mains. * Adequate no. of patch cords stackable from rear both ends 4mm spring loaded plug length $\frac{1}{2}$ metre. * Good quality, reliable terminal/sockets are provided at appropriate places on panel for connections & observation of waveforms. * Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References. * Weight 3.1 Kg. (Approx.) * Dimension 387 mm L x 286 mm D x 144 mm H.	01		
26.	Understanding Network Theorems	Nvis 6509C Mains power supply : 90 - 270V $\pm 10\%$, 50Hz DC power supply : +5V, Regulated +12V, Regulated Constant Current Source : 3.2 mA Voltmeter Range : 200mV to 20V Ammeter Range : 200 μ A to 200mA Dimensions (mm) : W 350 x D 280 x H 55 List of Experiments Study and verification of Norton's theorem Study and verification of Thevenin's Theorem Study and verification of Maximum Power Transfer Theorem Study and verification of Superposition theorem Study and verification of Reciprocity theorem Study and verification of Tellegen's Theorem	01		
27.	RF ammeter	Model-Scientech 1500 150MHz RF Signal Generator Technical Specifications : Frequency Range : 100 KHz to 150 MHz in	01		

		<p>7 Steps (Variable in between)</p> <p>A : 100 KHz - 300 KHz</p> <p>B : 300 KHz - 1000 KHz</p> <p>C : 1 MHz - 3 MHz</p> <p>D : 3 MHz - 10 MHz</p> <p>E : 10 MHz - 30 MHz</p> <p>F : 30 MHz - 100 MHz</p> <p>G : 100 MHz - 150 MHz</p> <p>Frequency accuracy on scale : 5 % RF</p> <p>Output : Min. 100 m Vrms (up to 30 MHz)</p> <p>Modulation : Amplitude Modulation (AM)</p> <p>35% approximately Audio Frequency</p> <p>Range : 150 Hz - 1.5 KHz (typical)</p> <p>Audio Output : 2 Vrms (typical) External</p> <p>Audio Input : 50 Hz to 20 KHz at less than 1 Vrms</p> <p>General Information :</p> <p>Mains Supply : 230 V AC 10 %, 50/60 Hz</p> <p>Power Consumption : 6 VA approximately</p> <p>Operating Temperature : 40°C, RH 80 %</p> <p>Dimensions (mm) : W 262 × D 316 × H 130</p> <p>Weight : 2.70 Kg approximately Product</p> <p>Tutorials : Online (Operating procedure, Front panel control, Theory Accessories</p> <p>Included : BNC cable : 1 no. Power cord : 1 no.</p>			
28.	Choke coil, Single Phase	<p>0- 0.5H, variable choke coil, 10 Amp</p> <p>Trolley Size (approximately) : 750 x 750 x 150 mm</p> <p>Input Power Supply : 440Vac, 50Hz AC Mains, Delta or Star 6 terminals should be provided for Star – Delta connection</p> <p>Total Choke coils : 30 Nos. of Inductor choke coil of 1A each for delta connection</p> <p>Total Switches : 10 Nos., 3 – Pole ON/OFF, 6A Terminals:6 Nos. MCB: 1 No. (1 – Phase) of 10A Load Trolley should have provision to use as 1Phase also. Trolley must be highly powder coated and mount on revolving caster wheel for easy movement.</p>	01		
29.	Single phase variac	<p>The basic Dimmerstat is meant for operation from a nominal input voltage of 240V AC & should give output voltage anywhere between 0 to 240 V or 0 to 270V AC by simple action.</p> <p>Resin molded dimmerstat is basically a variable Auto-Transformer which is partially or fully reinforced Polyster Resin. This has adjustable spindle which allows easy assembling of table type in a single or three phase models. This models are designed upto 120% continuous load.</p> <ul style="list-style-type: none"> •Simple, Rugged construction. •Coil made from high grade CRGO Silicon steel & 99.9% pure Copper. •Output voltage variation is smooth, Continuous, Breakless & linearly proportional to angular rotation. •High efficiency. •Negligible Waveform & Power factor distortion. •Excellent short time over load capacity. •Remote operation possible by motorization. •Wide range of current ratings. •High Quality carbon brush for current collection. • Operating Temperature: 0 –45C. •Insulation Resistance: Not less than 5M Ohm at 500V 	01		

		DC. •Dielectric Test: 205V RMS for 1 Minute. •Storage Temp. : -9 C to 70C. •Humidity: Upto 95% RH. •Conforms to: I.S. 5142.			
30.	2 Way Probe Different Color RYBN		20		
31.	B.N.V. cord & B.N.C to B.N.C. connector		20		
32.	AC/DC Load Resistive Load Bank 1.25 KW	NV726 One can connect a load upto 1.2KW, Mains Supply: AC / DC, 230V ±10% Load Range: 0 - 1.2 kW, in steps of 100W Load Type: Resistive (Lamp Load). Ammeter (MI) : 10A Dimensions (mm.) : 450 W *600 D *450H	01		
33.	Lamp Load (100 Watt & 60 Watt)	(100 Watt & 60 Watt) MAKE - MELAMP LOAD, single phase 1.25 KW (5Amps) Single Phase Lamp Load Trolley 230V AC/DC Input Power Supply: 230 V AC/DC 2 Terminals should be provided for connection Total Lamp: 15 Nos. Total Switches: 10Nos. MCB: 1No. For Mains ON-OFF Trolley must be highly powder coated and mount on revolving caster wheel for easy movement.	01		
34.	Maxwell Bridge	MAKE - NVIS Model - Nvis6533 Mains supply : 230 V ±10%, 50 Hz DC Power supply : +12V, -12V Sine wave generator Frequency : 1 KHz Amplitude : 20 Vpp Max Speaker : 8 ohm Unknown Inductors : 12 µH, 1.2µH, 4.7 µH, 10 mH 20mH, 30 mH Unknown Internal Resistance : 470Ω, 10Ω , 20Ω , 30Ω Dimensions (mm) : W 240 x D 345 x H 110	01		
35.	Digital Energy Meters	single Phase, Size : 96 x 96mm Model - KWHM30142 Range : 63.5/110/240/440 & 1A /5A	01		
36.	D.C. machine Model in Demonstration module.	Working Cut section of 0.5 HP / 375 W / 180 V DC / DC Shunt Machine	01		
37.	Portable current Transformer	Primary taps 10Amps. Secondary 5 Amps. CLASS (1.0)/7.5VA Supplied in Pine Wood case with carrying strap	01		
38.	Portable type potential Transformer	Primary 250V Secondary 75/150/300/600 Volts. CLASS (1.0)/7.5VA Supplied in Pine Wood case with carrying strap	01		
39.	Decade Resistance box	Range: 10hm to 1.111111 Mega Ohms in 6 Decades Accuracy: ±1% ±0.5 Ohms Wattage: 3Watts for Values below 10 Ohms, 1/2 Watt from 10 Ohms to 1Kilo Ohms and 1/4 watt for values more than 1 Kilo Ohms.	01		
40.	Strain Gauge Trainer	MAKE - SCIENTECH Model - Scientech2304 Strain Gauge (30): 4 nos. Gauge factor : 2.1 Maximum bearable weight : 500 gm Cantilever material : Stainless Steel Cantilever width : 2.5 cm Cantilever thickness : 0.16 cm Cantilever length : 20 cm ridge Voltage : 8 V DC ridge configuration : Full Bridge Display : 3½ Digit LED Test points : 8 nos. (Gold Plated) Power Supply : 230 V ±10 %, 50 Hz . 60 Hz	01		

		<p>on reuest Power Consumption: 3 VA (approx.) Dimensions (mm) : W 340 D 240 H 105 Weight : 3.5 Kg (approx.) Accessories Included : Mains cord-1no. Standard Weights-1set. USB cable (optional)-1no. Learning Material CD (Theory, procedure, reference results, etc),Online (optional)</p> <p>o Operating Conditions 0-40 C,</p>			
41.	Linear Variable Differential Transducer Trainer	<p>MAKE - SCIENTECH Model - Scientech2303</p> <p>Measurement Range : 20 mm (± 10 mm) Excitation Frequency : 4 KHz (approximately) Excitation Voltage : 4 V (approximately) PP Sensitivity : 10 mV DC/mm Linear Range : Full Scale Signal conditioner output : 0.1 V DC or Maximum Displacement Display : 3½ Digit LED with Polarity Indicator Micrometer Scale : 25 mm Micrometer Least count : 0.01 mm Test points : 8 nos. (Gold Plated) Learning Material : CD (Theory, procedure, reference results etc), Online (optional) Power Consumption : 2 VA (approximately) Dimensions (mm) : W 326 x D 252 x H 52 Power Supply : 110V - 260V AC, 50/60Hz Weight : 1.5Kg (approximately) Operating Conditions : 0-40 C, 85% RH Included Accessories : Mains cord-1no. Patch cord 16" (2mm) -2nos.*USB Cable (optional) -1no.(* Only for USB Interface Model).</p> <p>Technical Specifications</p>	01		
42.	Multiple Transducer Kit.	<p>MAKE - SCIENTECH Model - Scientech2302 Transducers: 4 Nos. N.T.C. Thermistor Platinum R.T.D. K Type Thermocouple IC Temperature Sensor Heating Element :Wire wound resistance 47W, 10 W Signal Conditioning Circuitry : }Instrumentation Amplifier }X100 Amplifier }DC Amplifier }Comparator }Electronic Switch Input Circuits : Rotary & Slide Potentiometers Output Circuits : }Relay }Digital Voltmeter }Buzzer Interconnections : 2mm banana sockets (Gold plated) Mains Supply : 100V-240 V, AC, 50/60 Hz Power Consumption : 2 VA (approximately) Dimensions (mm) : W 326 x D 252 x H 52 Weight : 1.5Kg (approximately) Operating Conditions : 0-40 C, 85% RH Included Accessories : Mains cord-1no. TechBook Power Supply-1no. Patch Cord 16" (2mm) -8nos. Patch Cord 8" (2mm) -7nos. Learning Material : CD (Theory, procedure, reference results, etc), Online (optional) Technical Specifications Study of Temperature Transducers</p>	01		

Quantities may vary according to the requirement

TERMS & CONDITIONS

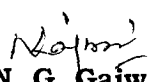
1. Eligibility:

- i. The bidder should be registered under Sales Tax/VAT
 - ii. The bidder should be manufacturer/authorized dealer should produce authorized dealership letter.
2. The Earnest Money Deposit (EMD) of **Rs.10,000/-** is payable in the form of FDR issued by Scheduled Bank in favor of **Daman & Diu Society for Technical Edu. & Higher Edu. (CENT)** payable at Diu. Tender received without Earned Money Deposit will be treated as invalid.
 3. The rate(s) quoted should be strictly for free door delivery at Diu Districts respectively & will be valid and operative for supply order issued on or before.
 4. The rates should be quoted inclusive of all taxes, installation & commissioning charges.
 5. No extra charge for packaging, forwarding and insurance, transportation etc. will be paid in addition to the rates quoted.

Financial Bid Cover

1. The rates should be quoted only for the items specified in the list of requirement and should be for the items of given special make / manufacture.
2. Rates quoted for items other than the required specification/ make/manufacture may not be considered.
3. Minimum onsite training shall be given to users on operational modules of the item.
4. Model, Make and standards of the item should be ISO certified & specified clearly with valid documents.
5. Supply, installation, testing, integration of the item shall be sole responsibility of the selected supplier.
6. The purchaser / indenter reserves the right to change the specification, size, quantity of the purchase if necessity arises or desired and intimated accordingly.
7. The supplier should give a comprehensive warranty period of 3 years, during which, if due to manufacturing and other technical defects of the equipment supplied, the equipment which is down should be restored within 18 working days.
8. The supplier also provide Manual, C.D. for demonstration of given practical as per delivered Equipments.
9. Delivery: The Equipment should be delivered and installed within the period as specified in the purchase order and be ready for use within two week of delivery unless otherwise prescribed / ordered.
10. Penalty: If the suppliers fails to deliver and place any or all the Equipment or perform the service by the specified date, penalty at the rate of 1% per week of the total order value subject to the maximum of 10% of total order value will be deducted.
11. The successful Tenderer should give guarantee for a period of one year for the equipment and accessories etc., installed against breakage or breakdowns due to manufacturing defects. The guarantee period takes effect from the date of trial run after installation. The Tenderer shall be liable to make good the loss by replacing the equipment or other accessories found defective free of cost during the guarantee period.
12. The decision of the Principal, Govt. Polytechnic-Diu for acceptance/rejection of any articles supplied including the decision for equivalent specifications, standard and quality etc. of articles shall be final.
13. The Purchase Committee will open the Tenders in presence of tenderer(s) or their representatives, if any presents in the Office of the Principal, Govt. Polytechnic-Diu on **11/09/2015 at 03:00 pm.**
14. The Principal, Govt. Polytechnic-Diu will be at liberty to accept the tender for the entire quantity or the part there of at the rates submitted by the Bidder or at reduced rate during the negotiations if any.
15. Rates tendered/offered in response to the concerned Tender Notice by the successful bidder shall be considered as acceptance of all above terms and conditions for supply for all legal purpose.
16. (a) Non-receipt of Security Deposit within stipulated time limit will result in automatic cancellation of the order for supply without any intimation.

17. The Earnest Money(s)/Security Deposit(s) paid by the tenderer(s) earlier against any tender(s) or supply order(s) is/are not adjustable with Earnest Money or Security Deposit required as per conditions of this tender.
18. All bills should be in Triplicate and should invariably mention the number and date of supply order.
19. All bills for amount above Rs. 5,000/- should be pre-receipted on a Revenue Stamp of proper value. Bills for amount exceeding Rs. 5,000/- not pre-receipted on Revenue Stamp of proper value will not be accepted for payment.
20. The Selected vendor will require to submit a Security Deposit in the favour of "**Daman & Diu Society for Technical Edu. & Higher Edu. (CENT)**" of 05% of total order value in F.D.R. (from a Nationalized bank) and shall be returned only after 3 years of warranty period.
20. Each bill in which Value Added Tax is charged must contain the following certificate on the body of the bill.
"CERTIFIED that the goods on which Value Added Tax has been charged have not been exempted under the Central Sale Tax Act or the Rules made there under and the amount charged on account of Value Added Tax on these goods is not more than what is payable under the provisions of relevant Act or Rules made there under".
21. In respect of any dispute given rise to the legal proceedings between the parties, the courts at Daman and Diu & DNH shall alone have the jurisdiction.
22. The tender can be submitted up-to **12:00 pm 11/09/2015** and shall be opened on same day at 3:00 hrs if possible in the office of the Principal, Govt. Polytechnic-Diu in the presence of the Purchase committee and Tenderer(s) or their representative(s) if present.
23. The designated committee will check quality of the A.C. Lab. And Electronics Lab. Equipment's supplied before installation at Principal, Govt. Polytechnic-Diu.


(N. G. Gajwani)
Principal
Govt. Polytechnic-
Diu.

THE ABOVE CONDITIONS **ARE ACCEPTED**
AND ARE BINDING TO ME/US.

(Signature of Supplier/Tenderer)
Date & Rubber Stamp.

Note: Please return one copy of these conditions duly signed along with your tender/ Quotations.