

GOVT. ENGINEERING COLLEGE, AJMER
(An Autonomous Institute of Govt. of Rajasthan)
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MECAT 1601P-III 29/325

Date 15/3/19

S.No	Name of equipment	Detailed Specifications	Procured for which Laboratory	Vendor Name and Address	Unit Rate	Date of Delivery	Date of Installation
1	8085 Microprocessor Trainer	Diagrammatic representation of full system (a) -On board Timer/Counter using 8253 (b) On board 24 I/O lines provided through 8255 © -On board HEX key pad (d) -On board Serial mode (e) -Battery Backup for RAM (f) -On board Seven Segment Display compatible with 8085/8086 Trainer kit ; see : 26 Pin FRC	ECE - Microprocessor Lab	M/s Excel Technologies, C - 92, Sector - 63, Noida, Uttar Pradesh - 201309, Noida, Uttar Pradesh, 201309	79650	25.08.2018	05.09.2018
	Stepper Motor Controller card compatible with 8085/8086	compatible with 8085/8086 Trainer kit ; Interface : 26 Pin FRC					
	DC Motor Controller card	compatible with 8085/8086 Trainer kit ; Interface : 26 Pin FRC					
	Traffic Light Controller card compatible with 8085/8086	compatible with 8085/8086 Trainer kit ; Interface : 26 Pin FRC					
	Relay & opto coupler card compatible with 8085/8086	compatible with 8085/8086 Trainer kit ; Interface : 26 Pin FRC					
2	Microstrip trainer kit	The complete system should comprise of: (1) Microstrip ring resonator (2) Power meter (3) Microstrip 3dB branchline coupler (4) Backward wave stripline coupler (5) Microstrip 3dB power divider (6) Race track hybrid ring (7) Low pass and band pass microstrip filters (8) Microwave amplifier The system should also comprise of microwave source, short, termination, VSWR meter, detector, attenuators, cable and connectors etc	ECE - Microwave Lab	M/s Technilab Instrument, No. 10/8, 3rd Cross, Marubbi Seva nagar, Banaswadi Main Road, Banaswadi Main Road, Bengaluru-560034	506220	08.09.2018	28.09.208
	Back-Boost regulators	Input Voltage : 180-270 Volt Ac, Output voltage : 200-240 Volt Ac, Frequency : 50 Hz, Output Current : 1.1 Amp, Capacity : 250 Watt.					
	Motor control- open loop and closed loop	Motor Description : 1/25 Hp Ac/Dc Motor Coupled With 12V Dc Generator. Neatly Enclosed In A Powder Coated Metal Box, Isolated 230 V/50 Hz, 40 W Ac Power Supply, +/- 12 V/500 Ma Dc Power Supply.					
	SCR TRIGGERING CIRCUIT	Onboard AC source : 18 V - 0 V - 18 V, Power Supply (Mains) : 110V - 260V AC, 50/60Hz, Operating Conditions : 0-40°C					
	Single Phase bridge converter	230V A.C. Isolated Transformer, Power 50 watt, 9V D.C. at 100mA Zener Regulated Power Supply, Two UJT, Four SCR's, Two Pulse transformer 1:1:1, Two Potentiometers for controlling UJT firing angle, Bulb 40W, 230V A.C., The unit is operative on 230V ±10% at 50Hz A.C. Mains.					
	Single Phase Cycloconverter	Firing angle variation: 0-180, SCR assembly: 4SCRs 2P4M, 400V/2A, Main supply: 220V/110V, 50Hz/60Hz, Load 279E 5W					
	Single phase dual converter- speed control of DC motor using Single phase dual converter- speed control of DC motor using single phase dual converter	Built in power supply +/-12V/500mA, Built in AC power supply 0-18V/2A, SCR TYN612-8 Nos. Diodes - 30 Nos, Transistors, CL100-8 Nos, BD115-3 Nos, 2N222-4 Nos, ICs TL084-2 Nos, 741-1 No, 755- 4 Nos 4011-2 Nos, Resistors- 54 Nos, Potentiometers-1 No, Tapped choke, 20-0-20 mH; 2 Nos, Set of Patch Chords & Manual					
	Single phase PWM inverter	IGBT PWM Controller & 3 Phase IGBT Power Circuit, RL Load & DC Power supply, Digital IC (Dspic4011) based Single phase & 3 Phase PWM generation, 6 Numbers of PWM Outputs with Frequency & Modulation index variation					
	Speed control of DC motor using chopper	Input-230V, 50Hz AC 1. Output-Variable DC (0 - 12V) Chopped output, Circuitry- Square wave generator, Square to triangle wave generator, Comparator, isolation & driver circuit Power Circuit- Using power transistor; Loads-1) 12V / 1.5 A DC Motor (L-load), 2) 12V / 2A Lamp load (R load)					
	Understanding characteristics of DIAC, TRIAC, SCR	*Main power supply - 90 - 270V ±10%, 50Hz, Fixed DC power supply - +15V, Regulated +35V, Regulated -35V, Voltmeter Range - 0V to 99V Ammeter Range - 0mA to 20mA *					
3			ECE - Industrial Electronics Lab	M/s Technozon Solutions, Level 4, Tower - A, Godrej Eternia, Plot No 70, Industrial Area - 1, Chandigarh - 160002	474714	18.09.2018	24.09.2018

<p>M/s Electronics (India), B 131-A Parshwanath colony, nirman nagar, ajmer road jaipur, jaipur, Rajasthan, 302019</p>	<p>486750</p>	<p>09.10.2019</p>	<p>04.02.2019</p>
<p>M/s Vinytics Peripherals Pvt. Ltd. WB-10, Shakarpur, Delhi, 110092</p>	<p>328158</p>	<p>17.09.2018</p>	<p>28.09.2018</p>

QEEE-QEEE LAB

ECE - Electronic
Instrument Workshop

<p>4</p>	<p>Digital Podium</p> <p>The podium shall be wheel mounted capable of moving in all directions with a facility of lock, them while the Electronic podium is in use. The enclosure shall be made of Polymer Powder Coated Steel Body with wooden top panels, designed to work in suitable environmental conditions. The wooden top shall have lock and key and should have a sliding cover for opening/closing easily. The Podium should have housing and connectivity for Visual Presenter while the visualizer is in use and not in use. At the time of using the Visualiser, drawer can be opened and Visualizer can be used. The construction of the podium should be such that, while the podium is locked and not in use, there should not be any port exposed/ visible on the outer body for breakage/mishandling.</p> <p>Wall Mounted Lockable Enclosure, CRCA Steel Sheet. Computer should be of 2 liters Volume or less. Intel Core i3 (7th Gen with minimum 3.5 GHz Processing Speed), 4 GB (Upgradable upto 8 /16 GB), 1 TB or better, Should have a inbuilt Wi-Fi / Wireless LAN Card</p> <p>The instrument should have following features:</p> <ul style="list-style-type: none"> • Accurate and Advanced temperature Control with micro controller technology, • User-friendly operation, • Set / Read of temperature
<p>Interactive Board(DTIS)</p>	<p>(1) PCB Curing machine (Oven) (2) PHOTO RESIST DIP COATING MACHINE (3) DOUBLE SIDED U.V.EXPOSURE UNIT</p> <p>Technical Specifications :</p> <ul style="list-style-type: none"> • Inbuilt Variable DC regulated power supply • Output Voltage : 0-3VDC, On Board Digital Meters • Voltmeter : 0-3VDC, • Ammeter : 0-50MicroADC/0-5mA (Dual Range). <p>Construction : Superheterodyne Frequency Range : 980 KHz to 2060 KHz Intermediate Frequency : 455 KHz</p> <p>Audio Construction : Superheterodyne, FM Frequency Band : 88 MHz to 108 MHz, Tuning Range: 96 MHz to 120 MHz, IF Frequency : 10.7 MHz</p>
<p>Soldering desoldering station</p>	<p>Trainer should have following features:</p> <ul style="list-style-type: none"> • Superior quality 100W high power Public Address System • Bass and Treble tone controls with Master control • Complete block diagram of a Public Address System on-board • The different circuit boards of Public Address System should be exposed on a PCB; • 3 Speaker outputs (4 / 8 /16 Ohm) • 5 Mic and 2 Aux Inputs • Easy identification of different parts and components of the system at a glance • Easy measurement of voltages and observation of waveforms on test points • Soldering free Fault creation and troubleshooting
<p>PCB Fabrication setup</p>	<p>Manual and Remote Control Operation</p> <ul style="list-style-type: none"> • DVD/ VCD/ CD/ MP3/ JPEG/ WMA Play,back • PAL/ NTSC video formats • USB reader (2.0) • Composite video output
<p>Opto-Electronic devices Characteristics Trainer kit</p>	<p>Superior quality 21-inch HD LCD Color Television/ PC Monitor</p> <ul style="list-style-type: none"> • Manual and Remote control operation • PAL/ NTSC video formats • Composite video input/ VGA input
<p>Transistor radio AM kit</p>	<p>Superior quality 20-inch full HD LED Color Television/ PC Monitor</p> <ul style="list-style-type: none"> • Manual and Remote control operation • PAL/ NTSC video formats • Composite video input/ VGA input
<p>Transistor radio FM kit</p>	<p>LED TV Demonstration kit</p>
<p>Public address System</p>	<p>LED TV Demonstration kit</p>
<p>5</p>	<p>DVD Player Demonstration kit</p>
<p>DVD Player Demonstration kit</p>	<p>LCD TV Demonstration kit</p>
<p>LCD TV Demonstration kit</p>	<p>LED TV Demonstration kit</p>

6	MICROCONTROLLER 8051	<p>Devices : 80C51 (Intel) Operating Frequency : 10MHz crystal 40-pin IC base 40pin-ZIF Socket (optional) for MCU 32KB-SRAM for user Data 32KB-EEPROM for Monitor Program</p> <p>SID/SOD Lines with Auto baud rate. Two modes of commands - Hex. Key pad mode & - Serial mode All address, data & control lines are buffered and made available at the edge connector as per STD bus configuration. 25/28 key hexadecimal keyboard and six seven segment displays through 8279. Powerful software commands like Relocate, String.</p>	E/C- Microprocessor & Microcontroller Lab	79945	27.12.2018	07.02.2019
8085 MICROPROCESSOR KIT	<p>* Series and Shunt voltage regulators</p> <p>* UJT and UJT as relaxation experimental kit</p> <p>* Zener diode and study of zener diode as voltage regulator.</p> <p>* Two stage RC coupled amplifier experimental trainer</p> <p>ANALOG AMMETER</p> <p>ANALOG VOLT METER</p> <p>ANALOG AMMETER</p>	<p>"Product Description: On panel 3 combinations of C, & R. On panel circuit diagram for charging & discharging SPDT switch for charge & discharge operation Fixed power supply 9 V @ 500 mA On panel 10 V digital meter"</p> <p>"Product Description: DC supply 12 V @ 500 mA On panel circuit diagram Required numbers of patch cords and operating manual. D Required numbers of patch cords and operating manual. Features: High Quality, Highly Efficient, Safest"</p> <p>"Variable DC regulated power supply of 0-12V at 250mA On board different valued three Zener diodes On board Different valued three resistors Dual Range DC Voltmeter of 1.5V/15V Dual Range DC Ammeter of 250uA/20mA Required number of patch cords"</p> <p>"Power ON switch & indicator. • Set Of Resistance. • RC arrangement. • Sin wave input. • complete manual. • Connecting wires and Patch cords. • Thick metallic cabinet."</p> <p>0-50 MA</p> <p>0-500 MICRO AMP</p> <p>0-20V</p> <p>0-100 MICRO AMP.</p>	M/s Vinytics Peripherals Pvt. Ltd WB-10, Shakarpur, Delhi, 110092			
BJT amplifier with and without feedback	<p>BJT in CB, CC and CE trainer</p> <p>Bridge rectifier experimental trainer</p> <p>Design Fabrication and Testing of k-derived filters (LP/HP)</p> <p>Digital storage CRO (Study and Store a transient on it)</p>	<p>"Features: Built-in 1KHz Sine Wave Generator Good quality, reliable sockets and test points are provided Strongly supported by systematic operating instructions A low cost training system including many experiments 2 Years warranty Specifications: Mains Supply: 230 V ± 0%, 50 Hz Sine Wave Generator: 1 KHz, 15V Vpp (approx.) DC Power Supply (2No.) : 0 - 5 V (vary through rotary switch for specific voltage level) Weight: 1.7 Kgs. (approx.) Dimensions (mm). W 260 X D 355 X H 125"</p> <p>"Power Supply ±8V Amplifier Circuit Using BC 108 With Load Wood Box (Closed Type)"</p> <p>Features : Instrument comprises of fixed output DC Regulated Power Supply ±12V, Circuit diagram is printed and Components mounted on the front panel & connections of important points brought out at Sockets.</p> <p>Bridge Rectifier Trainer Kit is a complete set consists of a step down transformer of different taping with four diode fixed on board for bridge connection with necessary terminals. All terminals are special Push to Open Hole type and circuit can be connect with bar Hook up wire a filter section provided with one Inductor and two electrolytic capacitors. Complete with variable load resistance and one AC voltmeter in dual range for measuring input AC supply voltage and ripple voltage. One DC voltmeter and one current meter is also provided on panel</p> <p>"Built in power supply, no need Dimension : 27CMS X 17CMS [metal cabinet] Weight : 2KGS APPX"</p> <p>"Digital storage CRO (Study and Store a transient on it), DSO 100/200 MHZ OR OTHER HIGHER FREQUENCY."</p>				

Emitter follower experimental trainer	"Power Supply =8V Amplifier Circuit Using BC 108 With Load Wood Box (Closed Type)" Half Wave Rectification. Fitted with three meters & transformer with no. of tappings- Variable load is also provided near there output terminals. All connections brought out on 4mm color coded banana sockets & used to study ripple factor & relation between r.m.s. & average value. PERFORM LAB EXPERIMENT for P N Junction diode (V-I Characteristics, cut in voltage, reverse saturation current and static and dynamic resistance) To perform lab Experiment of Plot and study the characteristics of small signal amplifier using FET	M/S/Vinyls Peripherals Pvt. Ltd. WB-10, Shakarpur, Delhi, 110092	164704.4	14.03.2019
Half wave rectifier experimental trainer	Kit for P N Junction diode (V-I Characteristics, cut in voltage, reverse saturation current and static and dynamic resistance) Kit for Plot and study the characteristics of small signal amplifier using FET	EIC- Electronic Device Lab		
Kit for Plot drain current, drain voltage and drain current- gate bias characteristics of FET measure I_{dss} & V_p	PERFORM LAB EXPERIMENT for Plot drain current, drain voltage and drain current- gate bias characteristics of FET measure I_{dss} & V_p			
Kit for Plot Gain frequency Characteristic of 2 stage RC couple Amplifier and calculate its bandwidth and compare it with theoretical value	perform lab experiment on Plot Gain frequency Characteristic of 2 stage RC couple Amplifier and calculate its bandwidth and compare it with theoretical value			
Kit for Plot gain Frequency Characteristic of Emitter follower	Perform Lab experiment on Plot gain frequency Characteristic of Emitter follower			
Kit for study of push - pull amplifier to measure variation of output power and distortion with load	To perform lab experiment for study of push - pull amplifier to measure variation of output power and distortion with load			
Kit for Study of series and shunt voltage regulator and measurement of line regulation and ripple factor (Line regulation and load regulation)	To perform lab experiment of series and shunt voltage regulator and measurement of line regulation and ripple factor (Line regulation and load regulation)			
Kit for Zener diode (V-I characteristics)	PERFORM EDC LAB EXPERIMENT on Zener diode (V-I characteristics)			
Kit of Hartley oscillators observe the effect of variation of C on oscillator frequency.	To perform Lab experiment of Hartley oscillators observe the effect of variation of C on oscillator frequency.			
Kit of UJT (Plot the characteristics and relaxation)	PERFORM LAB EXPERIMENT on UJT (Plot the characteristics and relaxation)			
Oscillators: (a) Hartley (b) Colpits experimental kit	"Features: Exclusive and compact design Straight forward representation of Hartley and Colpitt Oscillators +12V SMPS Adaptor provided with the trainer for power supply. Designed by considering all the safety standards Low cost trainer including illustration of Oscillator's design using passive elements Online Product Tutorial 2 Year Warranty Specifications: Biasing Voltage: +12V DC Dimensions (mm): 240 W x 345 D x 110 H Weight: 1kg (approximate)"			
PN Junction diode trainer kit	"Instrument comprises of the following: Two Continuously Variable DC Regulated Power Supply 0-3V, 0-30V able through a toggle switch. One Round MO65 dual range voltmeter. One Round MO65 dual range ammeter. Different type of Resistances and Capacitors Two PN Junction Diodes connected behind the front panel. One ON/OFF Switch with jewel light is provided on the front panel. Made of Heavy duty metal box construction."			
Push pull amplifier experimental trainer	"Built in Regulated Power supply(DC +15V/300 mA Power supply Voltage range: AC 100V - 230 V Frequency range : 50 - 60Hz Housing is mounted in an elegant ABS Plastic cabinet for better viewing and portability Dimension 29cm x 20cm x 11 cm Weight 1.5kg"			
Single stage amplifier experimental trainer	"Power ON switch & indicator. • Set Of Resistance • RC arrangement • Sin wave input. • complete manual • Connecting wires and Patch cords • Thick metallic cabinet"			
Small signal amplifier using FET.	Features : Instrument comprises of DC Regulated Power Supply, Circuit diagram is printed, components mounted on the front panel.			
Transistor phase shift oscillator experimental trainer	"Built in fixed power supply of 12V at 250mA On board transistor with filters input and output sockets onboard Required number of patch cords"			
Wien bridge oscillator experimental trainer	"Features: Exclusive and compact design Straight forward representation of Wien Bridge Oscillator +12V, -12V inbuilt SMPS provided with the trainer for power supply. Designed by considering all the safety standards Online product tutorial Low cost trainer including illustration of Oscillator design using passive elements 2 Year Warranty Specifications: Biasing Voltage : +12V, -12V DC Dimensions(mm) 240 W x 345 D x 110 H Weight: 1kg (approximate)"			

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