

3rd Semester B.E. – Electronics and Communication Engineering

Electronic Devices and Circuits Lab

Urgently Required

S.No.	Description of Equipment	Quantity required
1.	<p>Analog Trainer Kit Self contained trainer kit to do experiments with Analog Circuits <u>Technical Specifications</u> AC supply: 9V- 0V-9V/500mA Power Supply: 220V ±10%, 50/60 Hz Breadboard: Breadboard for making various circuits and testing them Function Generator: Sine, Square, Triangular (1Hz- 100KHz) Modulation/Audio Generator: Sine/Square/ Triangular(1Hz- 10 KHz)</p>	05
2.	<p>Digital Multimeter(Benchtop) 6 ½ <u>Technical Specifications</u> DC Voltage Range 100mV ~ 1000V AC Voltage Range 100mV ~ 750V Accuracy 0.06%±0.05% Resolution 0.1µV Bandwidth 5Hz ~ 300KHz DC Current Range 10mA ~ 3A Resolution 10nA Accuracy 0.050% ±0.005% AC current Range 1A ~ 3A Accuracy 0.15% ±0.06% Bandwidth 5Hz ~ 10KHz Resolution 1µA Frequency Range 5Hz ~ 1.1MHz Input Sensitivity General Power supply 110 ~ 127V AC ±10%, 220 ~ 240V AC ±10%, 50Hz ±2Hz / 60Hz ±2Hz.</p>	2 Nos
3.	<p>Handheld Digital Multimeter Digital Multimeter, with LCD display, with standard battery, test leads pair. <u>Technical Specifications</u> DC& AC Voltages measurements: 400 mV ... 600 V Dc & AC Currents measurements: 10 µA ... 10.00 A Resistances from 400 ohms 40.00 ohms with Zero Correction. Capacitance from 1 Pf ... 200.00 micro F with Zero Correction. Frequencies from 10.00 Hz ... 500.0 KHz Diode Measurement & Continuity Testing Hold Measurement. Duty Cycle (%) Measurement. Etc.</p>	03
4.	<p>Digital LCR Meter <u>Technical Specifications</u> TEST SIGNAL Frequency : 100Hz, 120Hz, 1KHz, 10KHz, 100KHz (MT4080A only). Basic Accuracy : ±0.2% (MT4080D) ±0.4% (MT4080A). Level : 1V rms, 0.25V rms, 0.05V rms, 1V DC (for DCR). Output Impedance : 100 ohms, ±3%. OUTPUT : 100^ ±5%. IMPEDANCE</p>	3

	MEASURING : Fast : 4.5 measurements / sec. SPEED Slow : 2.5 measurements / sec. Ranging : Auto-range and Range-hold. Relative : Relative mode. Cal : Open / Short calibration. RS232C Connector : IrDA. Transmission Signal : Tx and Rx. Flow Control : XON / XOFF.	
5.	Rheostats (710 Ω , 910 Ω)	5 each
6.	Rheostats (530 Ω , 1820 Ω)	5 each
7.	Decade Resistance Box	5
8.	Decade Capacitance Box	5
9.	Decade Inductance Box	5
10.	Soldering Stand	15
11.	Variable Transformer (Variac) 110V, 50Hz	15
12.	Isolating Transformer 110V, 50Hz	20
13.	Centre-tapped Transformer 110V, 50Hz	20
14.	Step Down Transformer	20
15.	De-soldering Station	1
16.	Screw Driver Set	1
17.	Wire Cutter	10
Consumables		
18.	UJT 2N2642	Consumables (Minimum of 50 Nos. each)
19.	BJT- BC147, BC157, SK100, 2N3904, 2N718, 2N3906, 2N722.	
20.	JFET 2N4856, 2N5486, 2N5457	
21.	Capacitors	
22.	Diodes 1N4005, 1N914	
23.	Zener Diodes 1N753, 1N	
24.	Photo Diodes	
25.	Photo Transistors	
26.	Switching Transistor 2N4400/2N2222	
27.	LED (All Colors) – 50 N0s Each	
28.	Bread Boards	

3rd Semester B.E. – Electronics and Communication Engineering

Digital Electronics Lab

Urgently Required

S.No.	Description of Equipment	Quantity required
1.	Digital IC Trainer Kit Self contained trainer kit to do experiments with Digital Circuits lab <u>Technical Specifications</u> DC power supply: +5V 1A,5V/500mA,+3V to +15V Tie points: 1685 Data Switches: 16 Nos. (Toggle switches for both TTL & CMOS) LED display: 16 Nos. (TTL/CMOS Mode Toggle Switches for both TTL & CMOS) Power Supply: 220V \pm 10%, 50/60 Hz Seven Segment Display: 3 Nos Logic Probes: Logic level indicator for TTL/CMOS Pulse Generator:	5

	Frequency range: 1Hz to 1MHz Amplitude: 3V-15V (CMOS), 5V (TTL) Duty Cycle: 50%, TTL/CMOS Output	
2.	<p>Digital IC Tester <u>Technical Specifications</u> FAMILY : TTL, LTTL, LSTTL, HTTL, STTL, HC-TTL, HCT-TTL, ALS-TTL, CMOS, LINEAR, TRANSISTOR ARRAYS, PERIPHERALS, CPU'S, TIMERS, ANALOG SWITCHES, CROSS POINT SWITCHES, LINE DRIVERS, DISPLAY DRIVERS, RAMS ETC. RANGE SSI, MSI, LSI functions including Gates, Buffers, Drivers, Flip-flops, Counters, Shift Registers, Latches, Adders, Multiplexers, Parity Generators, Monostables, Parity Checkers, decoders, Encoders, ALUs, Function Generators, Line Drivers and Receivers, etc. ICs with Tri-state, open collector outputs, and of Bi-directional types can be tested PERIPHERALS :MSI, LSI Peripherals like Latches, Buffers, Transreceivers, ...etc. TEST SOCKETS : 40 pin sockets for IC Testing. PACKAGE DIP 6, 8, 14, 16, 18, 20, 22, 24, 28, 32 and 40 pins. DISPLAY: 9-digit 7-segment red LEDs. KEY LEDs:4 bright Red LEDs of 3 mm each. KEYBOARD; 35 keys sealed membrane type. ELECTRICAL requirements:230 V (+/- 10 %), 1 phase, 50 Hz (+/- 2 %)</p>	1
	Consumables	
3.	IC7400	Consumables (Minimum of 50 Nos. each)
4.	IC 7404	
5.	IC 74682	
6.	IC7402	
7.	IC7408	
8.	IC7410	
9.	IC7411	
10.	IC7420	
11.	IC7421	
12.	IC7427	
13.	IC7430	
14.	IC7432	
15.	IC7483	
16.	IC7482	
17.	IC7486	
18.	IC74139	
19.	IC74150	
20.	IC74151	
21.	IC74153	
22.	IC74147	
23.	IC7445	
24.	IC7474	

25.	IC7476	
26.	IC7485	
27.	IC7491	
28.	IC7494	
29.	IC7447	
30.	IC74180	

4th Semester B.E. – Electronics and Communication Engineering

Digital Logic Design Lab

Urgently Required

S.No.	Description of Equipment	Quantity required
	Consumables	
1.	IC7474	Consumables (Minimum of 50 Nos. each)
2.	IC 7476	
3.	IC 7490	
4.	IC7493	
5.	IC74121	
6.	IC74123	
7.	IC74138	
8.	IC74190	
9.	IC74192	
10.	IC74193	
11.	IC74194	
12.	ADC808	
13.	RAM IC7489	

5th Semester B.E. – Electronics and Communication Engineering

Analog/Linear Integrated Circuits lab

Urgently Required

S.No.	Description of Equipment	Quantity required
1.	Analog-Digital Trainer kit Self contained trainer kit to do experiments with Analog & Digital Circuits lab <u>Technical Specifications:</u> DC power supply: +5V 1A, ±15V 1A, ± 15V 200mA AC supply: 5V – 0V – 5V, 10V- 0V – 10V Sine/Square/TTL generator: 10 Hz TO 1MHz Tie points: 1685 Data Switches: 8 Nos Potentiometers: 6 LED display: 8Nos Output: Sine wave 15 Vpp, Square wave 10Vpp, TTL 5Vpp Power Supply: 220V ±10% tolerance, 50/60 Hz	10
2.	Linear cum Digital IC Tester <u>Technical Specifications</u>	1

	<p>TEST FAMILY : ADCs, DACs, OP-AMPs, ANALOG SWITCHES, COMPARATORS, VOLTAGE FOLLOWERS, SAMPLE & HOLDS, TIMERS, LINE DRIVERS / RECEIVERS, TRANSISTOR ARRAYS, DPM ICs, VOLTAGE REGULATORS, PWM GENERATORS., OPTO-COUPERS, WAVEFORM GENERATORS ... etc.</p> <p>TEST SOCKET : 40 pin universal</p> <p>PACKAGES : DIP 6, 8, 14, 16, 18, 20, 22, 24, 28, 32 and 40 pins.</p> <p>DISPLAY : 16-Character by 2-Row LCD Display.</p> <p>KEYBOARD : 55 keys sealed membrane type.</p> <p>ELECTRICAL REQUIREMENTS : 230 V (+/- 10 %), 1 phase, 50 Hz (+/- 2 %)</p>	
Consumables		
3.	IC741	Consumables (Minimum of 50 Nos. each)
4.	IC565	
5.	IC7490	
6.	LM317, LM 324 , LM723	
7.	PLL 74148	
8.	Transistor – SL100, BFW11	

5th Semester B.E. – Electronics and Communication Engineering (R 2004)

Microprocessor and Application Lab

Urgently Required

S.No.	Description of Equipment	Quantity required
1.	<p>8085 Microprocessor Trainer Kit</p> <p><u>Technical Specifications</u></p> <ul style="list-style-type: none"> • High performance 8085A CPU@ 3 MHz. • 8 K user 6264 • 40 characters x 2 lines LCD Display. • IBM Compatible PC XT/AT Keyboard. • 46 parallel I/O lines, 22 from 8155 & 24 from 8255 TTL I/O lines using one 8255 PPI chips and all signals terminated on two 26 pin FRC bus. • Serial I/O through auto adjusting type RS-232 channel. • Three 16 bit Timer/Counter channels on-board, using 8253. • Powerful 8085 interrupt capabilities. • Power supply : Specially designed 230 VAC input, switch mode power supply 	10 Nos.
2.	8255 study card	02
3.	8259 study card	02
4.	8279 study card	02
5.	DC motor controller study card	02
6.	Traffic Controller Study card	02
Consumables		
7.	ADC 0801 chip	

8.	DAC 1408 chip, AD558, AD7522	Consumables (Minimum of 50 Nos. each)
9.	IC 74LS373	
10.	Stepper motor	
11.	DC motor	
12.	Interfacing Cable (RS232)	

6th Semester B.E. – Electronics and Communication Engineering
Advanced Microprocessor and Microcontroller Lab

S.No.	Description of Equipment	Quantity required
1.	<p>8086 microprocessor Trainer Kit</p> <p><u>Technical Specifications</u></p> <ul style="list-style-type: none"> • 8086 CPU operating at 8 MHz in maximum mode. • Socket provision of co-processor. • 8284 A clock generator. • 8288A bus controller. • 64 KB Static RAM • 40 characters x 2 lines LCD Display. • IBM Compatible PC AT keyboard. • 48 TTL I/O lines • Printer interface • RS-232C compatible serial port using 8251 and all serial signals terminated on 9 pin D – type male connector • Power supply : Specially designed 230 VAC input, switch mode power supply 	10 Nos.
2.	<p>8051 microcontroller Trainer Kit</p> <p><u>Technical Specifications</u></p> <ul style="list-style-type: none"> • Intel 80C51 Microcontroller operating at 12 MHz. • 32 KB Onboard Program memory. • 12 KB Battery Backed up User program Memory. • 16 KB Battery Backed up User Data Memory. • 40 characters x 2 lines LCD Display. • IBM compatible ASCII keyboard. • 8253 timer Counter chip. Two channels available to User • 48 TTL I/O lines using two 8255 PPI chips and all signals terminated on two 26 pin FRC (PIO card compatible) • RS-232 compatible serial port using 8250, signals terminated on 9 pin D-type connector. • Power supply : Specially designed 230 VAC input, switch mode power supply 	5 Nos