

ANNEXURE 'E' & 6

LABORATORY & MAJOR EQUIPMENTS IN EACH DEPARTMENT

Chemical Engineering Department	
I	Heat Transfer Operations
1.	Conductivity of metal (One heater with regulator)
2.	Laminar Flow (1heater, 1thermostat, 2RTD, 1Pump)
3.	Turbulent Flow (3heaters, 1thermostat, 2RTD, 1pump)
4.	Natural Convection (1 heater)
5.	Heat Transfer by Finned tube (1 heater)
6.	Coil tube heat exchanger
7.	Shell and tube heat exchanger
8.	Heater and Fan for unsteady state experiment
II	Fluid Flow Operations
1.	Packed column (One pump with regulator)
2.	Flow through circular pipe (One pump with regulator)
3.	Flow through circular Annulus (One pump with regulator)
4.	Flow through orifice meter(One pump with regulator)
5.	Flow through V notch (One pump with regulator)
6.	Flow through fluidized bed(One pump with regulator)
7.	Viscosity b strokes law
8.	Viscosity by efflux time
9.	Two water tanks are kept in FFO Lab
III.	Chemical Reaction Engineering
1.	Total seven(7) Magnetic stirrer assembly
2.	Two metal stands to conduct seven(7) experiments
3.	One metal stands to conduct two(2) experiments with arrangement for the stirrer(in the experiment of Resident time in C S T R)
IV.	Solid Fluid Mechanical Operation
1	Ball Mill
2	Sieve Analysis
3	Vacuum Filtration Remi make high speed emulsifier with ¼ HP Motor & regulator& Vacuum Pump
4	Leaf filter with Vacuum pump
5	Sedimentation
6	Set up of Elutriation with one pump

7	Set up of Froth Flotation
8	Sedimentation
V.	Reaction Kinetics
1.	Constant temperature water bath (Above 10 and 20 than room temperature)
2.	Total eight tables to kept Burette stands and glasswares requires for the experiments.
3.	Komal Water Dematerialize
VI	Environmental Engineering
1.	Nephelo turbidity meter
2.	Flame photometer with air compressor (One pump with regulator)
3.	Spectrophotometer
4.	Incubalator
5.	Sohxlet extraction mantle
6.	Dissolved Oxygen setup
7.	Chloride Content setup
8.	Dragger tube
9.	Sound level meter
VII	Sets up of Production Dept. in SFMO Lab.
1.	Pipe Friction
2.	Bernoulli's
3.	Ventury and orifice
4.	Pitot tube
5.	Reynolds Number
6.	Ship mode experiment
VIII.	Mass Transfer Operation I & II
1	Atm. Tray Dryer
2	Tempo steam bath
3	Tempo hot plate
4	Tempo steam bath
5	Stirrer with motor
6	Vacuum Tray Dryer
7	Thermo Hygrometer
8	Blowe ¼Hp.

IX.	Instrumentation & Process Control Lab.
1	P.C. Controlled Level Analyser
2	P.C. Controlled Flow Analyser
3	P.C. Controlled Temp. Analyser
4	P.C. Controlled Pressure Analyser
5	Two tank interacting system
6	Two tank non-interacting system
7	Measurement & Control of temp. by thermocouple
8	Characteristics of RTD & application
9	Measurement using capacity transducer
10	Characteristics of thermocouple and application

Electronics Engineering Department

Microprocessor & Microcontroller Lab		
Sr. No.	Equipment Description	Qty.
1	Computer	
	HP, Intel Core2duo, 2 GB DDR2 RAM, 250 GB HDD	01
	Dell, Intel i3, 4 GB RAM,460 GB HDD	09
2	Power Supply	
	0 - 30V / 2 AMP DUAL O/P	05
	0 - 30V / 2 AMP multi O/P	03
3	Oscilloscope	
	Dual ch,30 MHz -	06
	Digital Storage Oscilloscope, 100 MHz.	01
4	Function Generator	
	2 Mhz Function Generator	05
	2 Mhz Function Generator	02
5	Other Facility	
	Emulator	01
	EPROM Eraser with timer	01
	Universal Programmer with 12 match card	01
	Universal Programmer	01
6	Trainer Kit	
	Microprocessor 8085 kit	12
	Microprocessor 8086 kit	07
	Microcontroller 8031 kit	07
	Microcontroller 8051 kit	05
	Atmega 2560 & LPC2184 Robotics Research Platform	04
	ARM Processor board with LPC 2138	02
	DSP Trainer Kit with PC Interface	02
	DSP Starter kit TMS320C6713 with code compressor software	01
	Image developer kit (TEXAS MAKE)	01
	AVR, development platform based on ATmege28	10
	AVR, development platform based on ATmege128	15
	MSP 430 Launch Pad	05

VLSI & Embedded System Lab		
Sr. No.	Equipment Description	Qty.
1	Computer	
	HP, Intel Core2duo, 2 GB DDR2 RAM, 250 GB HDD	06
	Dell, Intel i3, 4 GB RAM,460 GB HDD	05
2	Printer	
	Printer	01
	Printer	01

3	Power Supply	
	0 - 30V / 2 AMP multi O/P	05
	0 - 30V / 2 AMP multi O/P	03
	0 - 5V / 2 AMP FIXED	10
4	Oscilloscope	
	Dual CH., 100 MHz	01
	Palm Scope with inbuilt DSO & Multimeter facility	01
	Digital Storage Oscilloscope, 20 MHz.	01
	Dual CH., 30 MHz	04
	DSO 100MHz	01
5	Function Generator	
	Function Generator, 10MHz with AM/FM Facility	02
	Function Generator, 1MHz	08
6	Other Facility	
	Analog and digital IC Tester	01
	16 CH 128K , 50 Mhz Logic Analyzer, pattern generator	01
7	Trainer Kit	
	Universal Trainer kit (CPLD 9572 , SPARTAN II)	05
	CPLD based digital design and evaluation platform.	10

Communication & Signal Processing Lab		
Sr. No.	Equipment Description	Qty.
1	CRO	
	140 MM 30 MHz Dual Trace SWP DLY Oscilloscope	2
	Scientific CRO, 30 MHz. Dual channel.	4
	Aplab 100Mhz. 2 channel DSO	1
2	Function Generator	
	72Mhz Standard SignalGenerator	2
	1.5 to 225Mhz AM / FM SignalGenerator Make: Aplab , Model:2023	1
	AM / FM Signal Generator (100khz to 110mhz.) Make: Aplab , Model:2029	1
	2Mhz Function Generator.	4
3	Power Supply	
	0 - 30V./ 0 - 2 Amp. Multioutput Power Supply, Make : Aplab, Model:LQ 6324	8
4	Computers	
	Dell, Intel i3, 4 GB RAM, 460 GB HDD	10
5	Printer	1
6	PLC	
	Programmeble Logic Controller, Model: KV- P3E Make: Keyence with KV-H4E software for ladder programming& Hand Held Programmer	1
	Programmeble Logic Controller, Model: KV- 16R Make: Keyence withFU-7F/FS-T1 Fibre optic sensor, Pz2-41 self contained photoelectric sensor	1
	a) Analog Module and	1
	b) PLC Trainer (Industrial)	1
7	Control System Kits	
	A.C. Position Servo System Demonstration Kit	1
	D.C. Position Servo System Demonstration Kit	1
	AC Synchro TX. & RX. Demonstration Unit	1
	Test Signal Generator	3
	Type'0'	4
	Type'1'	4
	Type'2'	4

8	Insight Iie AL 220 (Fuzzy Logic)	2
9	Digital Communication Kits	
	Analog Signal Sampling & Reconstruction Trainer	1
	TDM Pulse Code Modulation Transmitter Trainer	1
	TDM Pulse Code Demodulation Receiver Trainer	1
	Delta, Adaptive Delta, and Delta Sigma Mod/Demod Trainer	1
	Data Conditioning and carrier Modulation Transmitter Trainer	1
	Data Reconditioning and Carrier Demodulation Receiver Trainer	1
10	Fiber Optic	1
	Splice Kit including MOP (Power Meter)	
	Fiber Optic Training Kit	4
	Fiber Optic Connectorization Kit	1
11	Microwave Bench	
	Series A- X Band	1
	Series B- X Band	1
	Digital Klystron Power with AM/FM	1
	Digital Gunn Power Supply	1

Advanced Communication Lab		
Sr. No.	Equipment Description	Qty.
1	CRO	
	30 MHz, Dual Trace Make : Scientific, Model: HM 203	5
	Aplab 100Mhz. 2channel DSO	1
	Scientific CRO, 30 MHz. Model : SM 410	5
2	Function Generator	
	2Mhz Function Generator Make: Aplab , Model:FG 2M	4
3	Power Supply	
	0 - 128 V./ 2 Amp.SCR Pre-Regulatd Bench Rack Adaptable Power Supply, Make : Aplab, Model:L1282-S	2
	0 - 128 V./ 5 Aplab SCR Pre-Regulatd Bench Rack Adaptable Power Supply.	2
	15 - 300V /3A.Aplab SCR Pre-Regulatd Bench Rack Adaptable Power Supply.	1
	Scientific Multi output DC Power Supply Model: PSD 3304	3
	Scientific Multi output DC Power Supply Model: PSD 3305	5
4	Computers	
	Dell, Intel i3, 4 GB RAM,460 GB HDD	8
5	Power Electronics Kit	
	Time Delay Using SCR	1
	Jones Chopper	1
	1 Ø SCR Parallel Inverter	1
	1 Ø Series Inverter	1
	Speed Control of Motor Using DC Chopper	1
	AC Motor Speed Control (1 Ø)	1
	AC Motor Speed Control (3 Ø)	1
	DC Motor Speed Control Demonstration Unit (with 1 HP, 1500 rpm motor tachogenerator & loding arrangement	1
	TACHO METER (contact type)	1
	Heater	1
6	Basic Communication Kits	
	1)DSB/SSB AM Transmitter Trainer	1
	2)DSB/SSB AM Receiver Trainer	1
	3)FM Transmitter & Receiver Trainer	1

7	T.V. Trainer Kit, Pattern Generator	
	B/W TV Trainer Kit with SMPS & Electronic Tuner with fault creating Facility	1
	B/W TV Trainer Kit with fault finding Facility	1
	B/W TV Trainer Kit with Mechanical Tuner	1
	Colour Pattern Generator	1
	Colour T.V. Trainer Kit	2
	Black & White T.V. Trainer (20") with fault creating facilities (with remote)	1
8	Spectrum Analyser	1

BEE Lab.		
Sr. No.	Equipment Description	Qty.
1	Aplab 140 MM 30 MHZ Dual Trace Osc. 3 in 1 test lab with standard accessories Model :3716 Make: Aplab	10
	Scientific CRO, 30 MHz. Model : SM 410	5
2	0.01 Hz to 1Mhz Function Generator Make: Microvac, Model SDC 22898	5
	2Mhz Function Generator Make: Aplab , Model:FG 2M	10
3	Tripple o/p 0- 32 V / 2 A ,5V /5A , +- 12V to +-15V / 0.5 A Bench power supply Model- LQ 6324 Make:Aplab	3
	0-32V / 2 A.Digital Display DC Regulated Dual O/Ppower Supply Make: Aplab , Model: LD 3202	10
4	10 ohm-1mohm(5decade) Deacade Resistance Box Make:Aquila, Model	10
	Choke 230V 80watt Copper	02
	10uH-10H deacde Inductance box in 6 decade Make: Aquilla	10
	0-20MFD 400V in step of 1ufd Capacitance box polyster filament R/st Model:PE50	2
	10pf-10uf (5decade) Deacde capacitance box Make: Aquilla	5

Analog &Digital Electronics Lab		
Sr. No.	Equipment Description	Qty.
1	30 MHz, Dual Trace Make : Scientific, Model: HM 203	5
	Aplab 20 MHZ Dual Trace Osc. Trainer (Built in DMM) with standard accessories, Model :3303 TM, Make: Aplab	2
	Scientific CRO, 30 MHz. Model : HM203M	5
	Tekotronics CRO, 100MHz. Model: TDS1012 <u>EDU</u>	1
	Sciencetech CRO 30MHz Model: 801C	5
2	1Mhz Function Generator Make: Aplab , Model: 2011	6
	2Mhz Function Generator Make: Aplab , Model:FG 2M	5
	20 MHz Function Generator Make : Aplab Model:2219U	5

3	Tripple o/p 0- 32 V / 2 A ,5V /5A , +- 12V to +-15V / 0.5 A Bench power supply Make : Aplab, Model- LQ 6324	03
	Multioutput DC Power Supply, Make :Scientech, Model:ST 4074	5
	0-32V / 2 A.Digital Display DC Regulated Dual O/Ppower Supply Make: Aplab , Model: LD 3202	5
4	0-100K/1amp(4Knobs),Decade Resistance Box Make:Pacific	4
	1 ohm-1mohm(6decade) Deacade Resistance Box Make:Pacific,Model:AER-35	5
	500ohm/1A Rheostat double tube type,Make:puri	2.
	0-1000ohm/1A Rheostat double tube type,Make:	2.
	10 ohm-1mohm(5decade) Deacade Resistance Box Make:Aquila,Model:	5
	1mH-100H,5 deacde Inductance box Make:Pacific Model:PEI30	5
	10uH-10H deacde Inductance box in 6 decade Make: Aquilla	5
	0-100ufd (4Knob) Deacde capacitance box	4
	10pf-10uf (5decade) Deacde capacitance box Make: Aquilla	10
5	Autocomputer LCR-Q meter, Model:4910	1
6	Induction/Capacitive transducer kit, Motor speed indication Based on magnetic pickup photo- electrical pickup transducer digital based kit, Make:Matrix Electronics	1,1 Resp.
7	SRI Vibration measuring system consisiting of Oscillator power Amplifire, vibration Anyalser to read velocity displacement, acceleration& frequency, Piezo electric acceleration.	1
8	LVDT trainer kit Make:HEM	1
9	Strain gauge module Make:HEM, Model:IT6	1
10	Pressure measurement kit Make:HEM,Model:IT13	1
11	I3/4 GB Ram,460 GB HDD Make: DELL, Model: OPTIPLEX 390	10
12	HP Office Printer 3 in 1 Make: HP, Model: hp psc 1315	1

Production Engineering Department

Lab Description	Space sq.mtr/# Students	Name of equipment / experimental set up.
Metrology and Instrumentation Lab.	66.sq.mtr / 17-18 students Approx. 3.5 sq.mtr./ student	a Air Gauge Unit with FRL & Accessories. b Surface Roughness Tester. c Floating Carriage Micrometer. d Interferometry setup with optical flat & Monochromatic light source. e Mechanical Comparator. f. Profile Projector. g Tool Makers microscope. h Mechanical & Digital micrometer. i. Mechanical & Digital vernier. j. 112 piece slip gauge set. k Baker dial gauge. l. Digital Height Gauge.
CAD / CAM Laboratory	66sq.mtr / 17-18 students. Approx 3.5 sq.mtr/ student	Hardware: Dell : Dell : Intel® Core i5 lable processor. 3.10 Ghz; Ram: 4 GB; 500 GB HDD with 17” Color Monitor: 20 nos. Softwares: a) UG - NX 6 --10 Licenses b) Pro E (PTC) --50 License c) Auto CAD 2008 --20 Licenses d) Ansys-14.0 --25Licenses
Material Science Laboratory	66sq.mtr / 17-18 students. Approx 3.5 sq. mtr/ student	a. Magnetic crack detector and Ultrasonic Flaw Detector. b. Trinocular Metallurgical Microscope with CCTV attachment. c. Jominy End Quench Test Apparatus. d. Double Disc specimen Polishing Machine. e. Rockwell and Brinell Hardness Tester. f. Refractory Furnace.
Automation and Control Laboratory	66sq.mtr / 17-18 students. Approx 3.5sq. mtr/student	a. Advanced Level Pneumatic Kit. b. Advanced Level Electro-pneumatic Kit. c. Electro-pneumatic kit with PLC.
Strength of Materials laboratory	66sq.mtr / 17-18 students. Approx 3.5 sq. mtr/student	a. Simply supported beam (without overhang) apparatus. b. Law of moments apparatus. c. Deflection and Bending of beam apparatus. d. Universal testing machine. e. Impact testing machine-Charpy&Izod.

Fluid Mechanics Lab.	66sq.mtr / 17-18 students. Approx 3.5 sq. mtr/ student	<ul style="list-style-type: none"> a. Bernoulli's Theorem Apparatus. b. Reynolds's Apparatus. c. Flow Measurement by Venturimeter / Orifice meter. d. Pipe Friction Apparatus. e. Pitot Tube Apparatus. f. Flat Bottomed Vessel Metacentric Height. g. Gear and Vane Pump Test Rigs (proposed). h. Hydraulic circuit trainer (proposed).
Thermal Engineering Laboratory.	66sq.mtr / 16-18 students Approx 3 sq. mtr/ student	<ul style="list-style-type: none"> a. Morse Test Rig (proposed). b. Two Stage Reciprocating Air Compressor Test Rig. c. Refrigeration Cycle Test Rig. d. Measurement of Thermal Conductivity of Metallic Rod. e. Set up to calculate overall heat transfer coefficient and LMTD of Parallel & Counter Flow Heat Exchanger. f. Two stroke single cylinder petrol Engine test Rig. g. 4 stroke diesel engine test rig.
CAD/CAM Lab. I	66sq.mtr / 17-18 students. Approx 3.5 sq. mtr/ student	<ul style="list-style-type: none"> a. Solid Modeling exercise-1. b. Solid Modeling exercise-2. c. Solid Modeling exercise-3. d. Assembly Modeling exercise-1. e. Simulation of Mechanism. f. FEA of Cantilever beam. g. FEA of a Machine Bracket.

WORKSHOP	
I	Machine Shop
a.	Spark Erosion Machine (EDM)
b.	Lathe machines with various attachments.
c.	Shaping machines
d.	Drilling machines
e.	Heavy duty Universal milling machine with attachments.
f.	Hydraulic Hacksaw machine.
g.	Bench Grinders
h.	Vertical surface grinding machine.
i.	Vertical banking press.
II	Welding & Sheet Metal Shop
a.	Spot welding machine
b.	Welding booth
c.	Rectifier & arc welding equipment
d.	Welding tools & accessories
e.	Soldering, sheet metal fabrication tools
III	Fitting, Carpentry and Plumbing
a.	Surface plates with V blocks & marking devices
b.	Bench drilling machines
c.	Bench vices, filling tool & accessories
d.	Carpentry vices & carpentry tools.

Biomedical Engineering Department

Microprocessor Lab.

Sr. No.	Name Of Instrument	Qty.
1	Cathode Ray Oscilloscope	19
2	Digital storage Oscilloscope	1
3	Function Generator	31
4	Power Supply	16
5	Multimeter	10
6	Milliammeter (0-100)ma	10
7	Milliammeter (0 - 50) ma	6
8	Milliammeter (0 - 25) ma	10
9	Microammeter(0-100) μ a	17
10	Microammeter (0 - 50) μ a	5
11	Resistance Box	7
12	Inductance Box	7
13	TD Mpulse Amplitude Mod & Demod	1
14	FM Transmitter & Receiver kit	1
15	DSB-SSBAM Receiver Trainer kit	1
16	DSB-SSB Transmitter Trainer kit	1
17	LVDT Trainer	1
18	Measurement of Pressure Kit	1
19	Capacitive Measurement Kit	2
20	Temperature Measurement Kit	2
21	8085 Microprocessor Kit	8
22	8086 Microprocessor Kit	10
23	8051 Kit	2
24	Microscope	2
25	BP Apparatus Digital	1
26	BP Apparatus Mercury	2
27	Stethoscope	4
28	Digital Spectrophotometer	1
29	Digital Colorimeter	1
30	Pulse Oximeter	1
31	PH Meter	1
32	Audiometer & Hearing Aid	1
33	Short Wave Diathermy m/c	1
34	DC Defibrillator	1
35	Solid State Ultrasonic	1
36	Interferencial Current Therapy M/C	1
37	Arrythmia Simulator	1
38	Cardiac Pacemaker	1
39	Cautery Machine	1
40	HP Scanner	1
41	LCD Projector	2
42	Computer	8

B.M.I. Lab

Sr.No.	Name Of Instrument	Qty.
1	Cathode Ray Oscilloscope	10
2	Digitalstorage Oscillocope	2
3	Function Generator	8
4	Power Supply	13
5	Multimeter	18
6	Milliammeter (0–100)ma	11
7	Milliammeter (0 – 50) ma	6
8	Milliammeter (0 – 25) ma	11
9	Microammeter (0–100) μ a	17
10	Microammeter (0 – 50) μ a	5
11	Resistance Box	8
12	Inductance Box	8
13	Capacitance Box	8
14	LCR Meter	1
15	Bed Side Monitor	1
16	Cardiac Monitor	1
17	ECG m/c	2
18	ECG Simulator	1
19	EMG Simulator	1
20	EMG Processor	1
21	EEG m/c	1
22	EEG Simulator	1
23	Respiration Rate Meter	1
24	Respiration Simulator	1
25	Ultrasonic Foetal Heart Beat Monitor	1
26	Ultrasound Foetal Monitor	1
27	Test Signal Generator	6
28	Typ-0-Control-Kit	5
29.	Type-1 Control Kit	5
30.	Type–2 Control Kit	5
31.	Stepper Motor Kit	1
32.	AC position Servo Kit	1
33.	DC position Servo Kit	1
34.	AC Syncro Transmitter & Receiver Kit	1
35.	Strain Guage Kit	1
36.	LVDT Kit	1
37.	Pressure Kit	1
	Computers	
1	IBM PC	4
2.	Laser Printers (HP & Samsung)	5

B.M.I. Lab

Sr. No.	Name Of Instrument	Qty.
1.	Dell Computers	20
2.	24 Port Switch (In Dept.)	4
3.	Laptop	6
4.	SERVER	1

Image Processing Lab

Sr. No.	Name Of Instrument	Qty.
1	Dell Computers	20
2.	24 Port Switch (In Dept.)	4
3.	Laptop	6
4.	SERVER	1

Department of Electronics & Telecommunication Engineering

Project Lab

Sr. No.	Equipments with Specifications	Qty.
1.	CRO:30 MHz	04
2.	Multiple Output DC Power Supply	02
	Multiple Output DC Power Supply	02
3.	2MHz Function Generator	02
	3MHz Function Generator-Counter	01
4.	Computers (P4)	10
5.	Printer (Epson LQ 1150) (Dot Matrix)	01
6.	Spectrum Analyzer	01
7.	Digital Storage Oscilloscope	01
8.	Universal Programmer	01

Advance Communication Engineering Lab

Sr. No.	Equipments with Specifications	Qty.
1.	CRO:30 MHz	07
	CRO:25 MHz Readout Oscilloscope	01
	CRO:100 MHz (3973R)	01
2.	Dual DC Power Supply	04
	Multiple DC Power Supply	02
	Regulated DC Power Supply	02
3.	1MHz Function Generator	03
	2MHZ Function Generator	02
	3MHz Function Generator-Counter	01
	20MHz Pulse Generator	01
	1.6GHz Counter	01
	Synchronized Function Generator	01
4.	Digital Communication Kits	07
5.	IC Tester (Digital cum Analog)	01
6.	Multimeter	17
7.	Computers (P4)	06
8.	OFC Connectorization Tool kit	01
9.	Printer(hpdeskjet3535)	01
10.	Ahuja Amplifiers	02
11.	LCD Projectors	02
12.	Colour Television Trainer Kits	02
13.	Colour Pattern Generator	02
14.	Fiber Optic Kit	02
15.	B/W Television Trainer Kit	01
16.	Laser Printer (Samsung)	01

Telecommunication Networking Lab.

Sr. No.	Equipments with Specifications	Qty.
1.	Cathode ray oscilloscope (scientific & Aplab)	08
2.	2MHz function generator(Aplab & Scientech)	02
3.	1MHzfunctiongeneratorST4060	05
4.	Cathode ray oscilloscope (Logicscope)	05
5.	Regulated dual DC power supply (Aplab)	03
6.	030V DC power supply (Aplab)	06
7.	030V Multiple power supply(Scientific & Scientech)	07
8.	3MHzfunctiongenerator	01
9.	Decade box 1.Inductancebox 2.CapacitanceBox	06 04
10.	LCR-Qmeter	01
11.	PCOM kits	06
12.	LVDT Kit	01
13.	Control System Kits 1.AC position servo system demonstration unit 2.DC position servo system demonstration unit 3. ADC synchro-transmitter & receiver demonstration unit. 4. Control system for type 0,1,2. 5. Type“0”controlsystem. 6. Type“1”controlsystem. 7. Type“2”controlsystem. 8.Step per motor demonstration unit with 3.5kg cmtorquemotor.	01 01 01 03 01 01 01 01
14.	Strain gauge kit.	01
15.	Pressure measurement kit	01
16.	Meters 1.Milliameters050 2.Milliameters0100 3.Voltmeters010V	01 01 01
17.	Multimeters	10
18.	Computers	06
19.	DSP Trainer Kit	01
20.	PrinterHpD4268	01
21.	PrinterHpPs1402	01

AWP & Microwave Engineering Lab.

Sr. No.	Equipments with Specifications	Qty.
1.	Vector Network Analyzer	01
2.	CRO:30MHz	04
3.	DC Power Supply	02
4.	2MHzFunctionGenerator	01
	1MHzFunctionGenerator	01
5.	Microwave Benches	04 sets
	i) Klystron	03
	ii)Gunn Diode	01
6.	Antenna Trainer Kits	02 sets
7.	Transmission Line Trainer Kit	01
8.	Computers(P4)	10
9.	PrinterLQ1150(Dot Matrix)	01
10.	PCL-818LS	03
11.	AC Micro voltmeter	01

Electronics Design Lab

Sr. No.	Equipments with Specifications	Qty.
1.	Cathode ray oscilloscope (scientific)	10
2.	2MHz function generator(Aplab & Scientech)	10
3.	1MHz function generator ST4060	05
4.	Function generator HM5030 (Scientific)	02
5.	Regulated dual DC power supply (Aplab)	03
6.	030V DC power supply (Aplab)	03
7.	100MHz oscilloscope (aplab)	01
8.	030V Multiple power supply (Scientific & Scientech)	10
9.	60MHZ Oscilloscope	01
10.	3MHz function generator counter ST5071	01
11.	Arbitrary function generator (tektronics) AFG3021	01
12.	Function generator (systronics)1016	02
13.	Meters 1)Micrometers0100 2)Milliameters050 3)Voltmeters030V	08 01 02
14.	AC micro voltmeters (systronics)	01
15.	Multimeters (mecomake)	11
16.	Printerhp656c	01
17.	Printer3535	01

18.	Scanner	01
19.	Computers	05
20.	FPGA Kit	01
21.	CPLD Kit	01
22.	PrinterHpD4268	01
23.	PrintrHpPsc1402	01

Communication Engg. Lab.

Sr. No.	Equipments with Specifications	Qty.
1.	MicrocontrollerKit,8051	08
2.	Anshumankit8085	08
3.	8086 (Dyna) kits	08
4.	Satcom kit	01
5.	8085Microprocessorkit	08
5.	80196Microcontrollerkit	05
6.	Computers	05

Department of Information Technology

Sr. No.	Computers / Equipments	Quantity	Specifications
1.	Server	01 No.	Xeon 226 IBM, 80 GB Hard disk – 03 Nos., Raid controller card, 17” inch monitor IBM (IBM E74) 52x CD writer Samsung built in s/n- 99RKx 64.
2.	Computers- <ol style="list-style-type: none"> 1. Hp Compaq Make (PIV) – 51 Nos. 2. Dell Make (i3) – 80 Nos. 3. Dell Make (i5) – 18 Nos. 4. Dell Make (P-IV) – 16 Nos. 5. IBM Make (P-IV) – 10 Nos. 	175 Nos.	<ol style="list-style-type: none"> 1. HP computers - 250GB SATA hard disk, 2GB DDR2 RAM, Intel core2 Duo EP8200 processor@ 2.93 Ghz, USB keyboard & mouse. 2. Dell computers- Intel i3 - 2100 processor, 500 GB Sata HDD, 4GB RAM, 16xmax DVD /RW 17” inch monitor, USB keyboard & mouse. 3. Dell computers- Intel i5-2400 processor@3.10Ghz, 500 GB Sata HDD, 4GB RAM, 17’ inch monitor, USB keyboard & mouse. 4. Dell computers - 2GB RAM, Intel CPU@ 2.6 Ghz, 80 GB HDD, 17” inch monitor, USB keyboard & mouse. 5. IBM computers- P-IV @ 3Ghz,80Gb HDD, 2GB & 1GB RAM
3.	Laptops <ol style="list-style-type: none"> 1. IBM laptop - 04 Nos. 2. Dell laptops - 03 Nos. 3. Hp Laptops - 03 Nos. 	10 Nos.	<ol style="list-style-type: none"> 1. HP laptop- i3 processor, 4GB RAM, 500 GB Sata hard disk - 7200 rpm. 2. IBM laptop (R52) - 1GB RAM,60GB HDD, Processor - Intel 1.73 GHz. IBM laptop (R51) - 1GB RAM, 40 GB , 1.5 Ghz processor. 3. Dell laptop – Intel ® Core™ 2 DUO processor T5500(1.66 Ghz), 1GB RAM
4.	External storage device - Hard disk	01 Nos.	Segate , 500 GB
5.	Scanner	03 Nos.	<ol style="list-style-type: none"> 1. HP ScanJet 2400 2. HP ScanJet 3670 3. HP ScanJet 2400
6.	Printers	13 Nos.	<p>A) HP PRINTERS</p> <ol style="list-style-type: none"> 1. HP DeskJet 5438- 01 No 2. HP LaserJet 1010 -01 No 3. HP LaserJet 2035n – 03 Nos. 4. HP DeskJet 640c -01 No 5. HP DeskJet 3550 -01 No <p>B) CANON PRINTER</p> <ol style="list-style-type: none"> 1. Canon laser- 2900- 01 No

			<p>C) SAMSUNG PRINTER 1. Samsung MLT 2245- 01 No</p> <p>D) DOT MATRIX PRINTER 1. Epson LQ 2080 printer- 02 Nos. 2. Epson LQ 1150 printer- 02 Nos.</p>
7.	Projectors	04 Nos.	<p>1. Hitachi Projector- CD –RX 80 - 01 Nos.</p> <p>2. NEC Projector M230xG , XGA (1024x 768), brightness 2300 lumens contrast ratio 2000:1 , 10w speakers - 03 Nos.</p>
8.	Microcontroller kits	03 Nos.	Microcontroller 8051 development board, (ADC, DAC, motor controller , 7 segment display, led display, temp controller, LCD relay keyboard, serial interface)
9.	Web Camera	01 No.	Logitech
10.	Switch	07 Nos.	<p>1. D link 24 port 10/100 MBPS unmanageable switch - 6 Nos.</p> <p>2. 16 port 10/100 SD 216 linksys MBPS switch- 01 No.</p>
11.	OHP	02 Nos.	Overhead projector 24 yx 250W
12.	Mercury Speakers	24 Nos.	440 W speakers make – mercury , Model – MS 440
13.	External DVD writer portable	01 No.	Make - buffalo S/n – 25541995082668

List of Software's

Sr. No.	List of Software's	Quantity
1.	Oracle 8i	1 Server + 05 Clients
2.	Turbo C++	22
3.	MATLAB (R2011B)	50 Licenses for college.
4.	Rational Suite	1 Server + 15 Clients
5.	Oracle 9i Std Edition	01 Server + 10 Clients
6.	Campus Agreement 1. Windows XP 2. Office 2003, 2007 3. Visual Studio 2005 4. Visual Studio 6 5. MS Project 6. Windows server 2000 7. Windows server 2008 8. SQL server 2005	Unlimited

Other Software's used for Practical's.

Sr. No.	List of Software's
1.	Sun Wireless Toolkit
2.	Net Beans 6.8
3.	Java
4.	Eclipse
5.	DirectX
7.	GPSS
8.	Testing Tool (Mercury, Load Runner)
9.	Prolog
10.	Windows Azure
11.	Eucalyptus
12.	LISP
13.	Scilab

Department of Computer Engineering

Database & Software Engineering Lab.

Sr. No	Equipment	Description	Qty.
1	Printer	HP deskJet	1
2	Screw Driver Set	Taparia	1
3	New Hp Compaq E7500 CPU 2.93 Gz 2 GB Ram 250 GB HDD Win Xp Sp3	New Hp Compaq E7500 CPU 2.93 Gz 2 GB Ram 250 GB HDD Win Xp Sp3	11
4	DELL OPTIPLEX 390 INTEL CORE I3 -2100 & I5-2400, CPU @ 3.10 GHz,3.09GHz,	DELL OPTIPLEX 390 INTEL CORE I3 -2100 & I5-2400, CPU @ 3.10 GHz,3.09GHz, 4 GB RAM, 500 GB HDD with DVD+ /RW CD-ROM	11
5	D-link make 24-port Switch	D-link make 24-port Switch DES- 1024D 10/100 MBPS	1
6	Wireless - G Access Point	Access Point – Wireless G	1

Computer Graphics & Multimedia Lab.

Sr. No.	Description	Qty Nos.
1	DELL OPTIPLEX 390 INTEL CORE I3-2100, 3.09GHz, 4 GB RAM, 500 GB HDD with DVD+ /RW CD-ROM (Dead Stk. P. No. 33 Item no. 01)	3
2	DELL OPTIPLEX 390 INTEL CORE I3 -2100 & I5-2400, CPU @ 3.10 GHz,3.09GHz, 4 GB RAM, 500 GB HDD with DVD+ /RW CD-ROM (Dead Stk. P. No. 33 Item no. 02)	18
3	HP Deskjet Printer – 5748C (Dead Stk. P. No. 18 Item no. 31)	1
4	Cisco Switch	1
5	HP Deskjet Color Printer – 3550C 80 col. (Dead Stk. P. No. 07 Item no. 15)	1
6	HP LaserJet P2035n Printer	1
7	Overhead Projector Phil Star Over Head Projector, 240 x 250 W Halogen Lamp, Dual bulb (Dead Stk. P. No. 07 Item no. 14)	1
8	D-link make 24-port Switch DES- 1024D 10/100 MBPS Unmanageable (Dead Stk. P. No. 08 Item no. 16)	1
9	HP Scanjet Scanner 3770	1

Microprocessor Lab.

Electronics Equipments:	Qty.	Configuration	Propose Qty.
Micro processor Kit	6	MicroProcessorKit(EducationalTrainerKit),8086Dynalog Make,Dyna86withSMPSCableandConnector	Nil
CROS	6	AplabMakeCathodeRayOscilloscopes,DualTraceandDua lChannel30MHzwithSweepDelayModel3330	Nil
Function Generator	6	APLABMAKE,2MHzFunctionGenerator,ModelFG2MD0. 01Hzto2MHz,	Nil
Power Supply	6	ScientificMakeMultipleOutputpowersupply,ModelPSD3 304,03V,2AMP,+12Vto+15V,1AMP5Volt5AMPwithDigita lDisplayforvoltageandCurrent	Nil

Advanced Computing & Web Technology Lab.

Sr. No.	Equipment Description	Qty.
1	DELL OPTIPLEX 390 I3 Intel Core I3-2100&15-2400,CPU @3.10 Ghz,3.09 Ghz,4GB RAM,500 GB HDD with DVD+1 RW CD-ROM	22
2	D-link make 24-port switch 10/100 switch(MBPS) Model-DES-1024	01
3	HP LASERJET P2035n Printer	

Electronic Design Lab

Sr. No.	Equipment Description	Qty.
1	New Hp Compaq E7500 CPU 2.93 Gz 2 GB Ram 250 GB HDD Win Xp Sp3	22
2	Switch	1

Faculty Room

	Qty.	Configuration
Hardware :		
1) Clients :	2	HP/Compaq Make, ModelD220, Intel Celeron@2.4GHz , Intel Chipset 845GV, 128MBDDR RAM, 40GBHDD (7200RPM), 48XCDRom, Integrated10/100 LAN Card, Intel integrated Graphics Card, Integrated Audio, 6 USB Ports, HP Monitor, HPT wobutton Scroll Mouse, HP
2) Printer	1	Laser jet HP1120nNetworkPrinter
3) Laptop	2	IBMR51SeriesCentriono,1.4GHz,400MHZFSB/Cache,Memory256MB, 33MHzDDRSDRAM,HDD30GBCDRWCombo
	2.	IBMR52SeriesCentriono,1.4GHz,533MHZFSB/Cache,Memory512MB, 33MHzDDRSDRAM,HDD80GBCDRWCombo
	4	DELL
	1	LENOVA

Applied Physics

Sr. No.	Equipment Description	Make/Model No./Year of Purchase	Quantity
01	Crystal model showing (100), (110), (111) crystal planes for SC, BCC, and FCC space lattices		02 sets
02	Cathode Ray Oscilloscope	Aplab 3305/2004 Scientific/1067078	04
03	Function Generator	2 MHz function generator Aplab (2001&2005)	06
04	Energy gap measurement	Assembled in Lab	03
05	Thermocouple	Thermo Couple Fe-Cu & Fe const Scientech(1994)	03
06	Transistor Characteristics	United Industrial Agency (1994)	03
07	Diode Characteristics	United Industrial Agency (1994)	03
08	He-Ne Laser	Jain Lasertech Pvt.Ltd. (2000)	01
09	Diffraction Grating	BioAids & Scientific Indu. (2000 & 2004)	02
10	Spectrometer	K.J.Enterprises Bestomake (2001 & 2003)	04
11	Holography	Jain Lasetech Pvt.Ltd. (2001)	02
12	Fibre Optics kit	The Link (2004)	02
13	Travelling Microscope	K.J.Enterprises (2000)	06
14	Na-Vapour Lamp	Neptune Sci.House (2000)	04
15	Newton's Ring	BioAids & Scientific Indu. (2000)	02
16	Wedge shaped thin film	(From College Workshop)	02
17	Sodium chloride crystal structure	Lab India	02
18	Barium Titanate Crystal Structure	(2001)	02
19	Edge Dislocation		02
20	Screw Dislocation		02
21	DC Power Supply	Aplab 0-30V (2006)	10
22	Resistance Box		06
23	Variable Resistance		06
24	Micro ammeter	(0-100) μ A	06
25	Milli ammeter	(0-50)mA	06
26	Voltmeter	(0-10)V;(0-30)V	06
27	Milli voltmeter	(0-50)mV	06
28	Multimeter		10
29	Table Lamp	United Industrial Agency (1994)	06
30	Lamp & scale Galvanometer	Bio Aids & Scientific Indu. (2000)	01
31	Geiger Muller Counter		02

Applied Chemistry

Sr. No.	Equipment Description
1.	Redwood ViscometerNo.1
2.	Redwood ViscometerNo.2
3.	Pensky Martin apparatus forflash point
4.	Abel'sflash point apparatus
5.	Digital pHmeter
6.	Orsat apparatus & testmanifold made from Borosil glass in wooden care
7.	Water Bath Rectangular 12 holes electric heaters S.S.(16"x14"x4")
8.	S.S.Water Bath 6 holes for 500 ml flask
9.	Thermostatic Water Bathwith 6 holes
10.	Electronic Balance CB 330
11.	Electronic Balance CB 500
12.	Double pan balance
13.	Magnetic Stirrer Model 2MLH
14.	Magnetic Stirrer Remi 2MLH with hot plate
15.	Magnetic Stirrer 2MLH with hot plate 6x6 Cap2lt
16.	Kipps apparatus
17.	Heating Mantle T166RB-250 ml
18.	Heating Mantle for 5 lt flask
19.	Heating Mantle for 2.5 Lt
20.	Melting Point apparatus
21.	Oven
22.	Tempo make oven Mode T125B
23.	Vicat's apparatus
24.	Vacuum pump Universal model
25.	Hot Plate 20.5 cm
26.	Hot Plate 8"
27.	Conductivity meter
28.	Potentiometer
29.	Remi make high speed emulsifier RQ/27A/D