

23 Pattern Generator Colour. coverage, composite video output, line
 DIGITAL ELECTRONICS & MICROPROCESSOR LAB. (SUB CODE-1621507, SEMESTER-5th)

Sl.No.	Name of article with specification
1	Expt. board for verification and interpretation
2	Expt. Board for construction of half adder
3	Expt. Board for construction of full adder
4	Expt. Board for verification operation of a 8-
5	4 bit adder, 2's compliment subtractor ckt.
6	Kit to verify the truth table for +ve edge
7	Kit to verify the truth table for encoder and
8	Basic digital Electronics kit
9	4 bit adder and subtractor kit
10	Flip flop kit
11	Multiplexer de-multiplexer kit
12	Digital frequency meter/universal counter/timer experimental kit
13	Logic probes TTL and CMOS
14	Logic trainer boards
15	Universal programmer
16	EPROM programmer
17	EPROM eraser
18	Half and full subtractor ckt. from universal
19	RS flip-flop
20	4-Bit Binary Counter
21	4-Bit Decade Counter
22	4 Bit BCD Counter
23	4 Bit Binary ripple counter
24	4 Bit BCD Adder
25	4 Bit BCD Subtractor
26	Binary to BCD Converter
27	Binary to grey Converter
28	Binary to decimal
29	BCD to Seven segment decoder
30	Code Converter
31	8085 Microprocessor Trainer
32	8086 Microprocessor Trainer
33	Universal IC Tester
34	Digital Multimeter
35	ADC Kit
36	30MHz. Dual Trace Oscilloscope
37	Logic Probe
38	Digital Function Generator. 3 1/2 Digit Display
39	Microprocessor based Digital IC Tester with

ADVANCE COMMUNICATION SYSTEM /ADVANCE SYSTEMS LAB.

Sl.No.	Name of article with specification
1	Amplitude Modulation/demodulation system trainer
2	DSB-SC AM Modulation/demodulation system trainer
3	Amplitude modulation/demodulation using I.C.
4	PLL FM Modulation/demodulation
5	Sampling Theorem Trainer (Sampling & Reconstruction)
6	Time division multiplexing/demultiplexing system trainer

7	AM/DSB/SSB Kit
8	Noise- audio kit
9	Voltage controlled oscillator(V.C.O.) Module
10	Phase locked loop (PLL) Module
11	Pre- emphasis & De- emphasis module
12	Phase code modulation/demodulation system trainer

POWER ELECTRONICS LAB (SUB. CODE= 1621508, SEMESTER-5th)

Sl.No.	Name of article with specification
1	Characteristics of SCR
2	Characteristics of diac & triac
3	SCR Triggering Circuits
4	AC and DC Power Control Trainer
5	AC Phase Control using SCR
6	AC Phase control using diac & triac
7	DC regulated power supply using SCR
8	AC regulated power supply using triac
9	Inverter using power Transistors
10	Inverter using power MOSFET
11	Series Inverter using SCR
12	Parallel Inverter using SCR
13	Single phase half wave controlled rectifier
14	Single phase full wave bridge controlled
15	UJT Characteristic Kit
16	Speed control of DC motor using SCR with
17	UJT relaxation oscillator experimental kit
18	TRIAC based AC phase control experimental
19	Power supply training system using ICs

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GOVT. POLYTECHNIC, MADHEPURA
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

o	Name of item	Name of Article with Specification
	Desktop computer-Processor	1-Processor : Intel core i7 4770 / 4790 with 6MB to 8MB cache 2.70 GHz or higher with integrated Graphics Card, 2-Memory : 4 GB / 8 GB 1600MHz DDR, 3- Storage : 500 GB/ 1TB 3.5 inch HDD with 7200rpm SATA ; 4- Optical drive : 16x DVD RW +/- Dual Drive. 5- Ports : 6USB ports (2 Front / 4 Rear) (USB 3.0 - 2In-1) VGA Ports, PS2 Port for Keyboard & Mouse, 1x Comm Port. 6- Ethernet : 10/100/1000Mbps Onboard Network Interfacing Card. 7- Audio Interface : 5.1 integrated sound card, (Mic & Audio Out Port in the front)(Mic, Audio out & Line-in in the Rear) , 8-Additional Graphics Card : 2GB ATI Radeon / NVIDIA Graphics Card. 9-Wireless LAN : 1x 802.11 b/b/n wireless LAN card. 10- Form Factor / Cabinet : Micro Tower , 11 - Mouse: USB / PS2 Optical Scroll Mouse ; 12-Keyboard : Standard PS2 Keyboard. 13- Monitor : 18.5 inch wide flat LED screen ; 14- Operating System : Windows 8.1 Professional (Preloaded) 15- Warranty : 3 / 5 years comprehensive onsite warranty with Next Business Day Support'. 16- Software : Microsoft Office 2013 or latest version, Antivirus with 3years upgrades / updates (Quickhill, Kaspersky or Norton). ,
2	Specification of Server - 1No.	1- Processor - : Intel Xeon Processor E5 2600 V3 series, 2.1 GHz 20MB Cache and 8 cores or higher. 2- No of Processor : Standard 1 Processor maximum up to 2 Processor. 3- Chipset : Intel chipset C600 series or equivalent compatible with the system. 4- Memory : 16 GB DDR3 RAM (24-DIMM Slots), 1600MHz , expandable upto 768 GB. 5- HDD : 3 x 300 GB, 15 K RPM SAS HDD hot plug. 6- Raid Controller : RAID controller, with 512 MB RAM of non-volatile cache or equivalent with RAID 0, 1, 5, 6, 10. 7- Optical Drive : DVD Writer with 8x read / write speed or higher. 8 - Slots : 4 or more PCI Express. 9- Ports / Interfaces : 4 USB ports / 4 x 1Gbps Ethernet LAN Port / 1- Serial port. 10- Graphics : Standard Video Controller with 1280 x 768 resolution. 11- Power Supply : Redundant Power supply with hot swap Platinum Efficiency (94% efficient at 50 % Load). 12- Form Factor : Tower based with standard specification 13-OS Certification: Certification for Installation of the Microsoft Windows 2012 Server or Higher / Red Hat enterprise Linux 6.0 / SUSE Linux Enterprise Edition 11.0 / Ubuntu Server Edition 12.04 or 14.04 LTS. 14- Warranty: 3 years on-site comprehensive warranty with parts and labor with Next Business Day support. 15- O.S. : Microsoft Windows Server 2012 R2 (64 bit) or higher [Academic Edition]. 16- Monitor: 18.5 inches Wide LED thin Monitor with VGA input 17-Mouse : USB Optical Scroll Mouse. 18-Keyboard: Standard 105 PS2 or USB Keyboard
3	Web Camera	a. Connection USB b. Microphone type : Mono. Focus Type: fixed c. Video Capture: 1024 x 768 HD d. Frame rate: 30 fps of higher e. Optical resolution: 5 Mpixel or Higher
4	Operating System	Microsoft Windows 8.1 5L OEM version
5	Laser Printer	HP/ RICOH Duplex
6	Computer Table	size 2x 2x 5 1/2 and 2x 5 1/2 (60 mm) transparent with keyboard glass three sides
7	Revolving chair for comp	GODRAG
8	Projector	
9	C. Lab. (1600307)	Turbo C Compiler (Freeware)

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DEPARTMENT OF PHYSICS

S. No	Name of Item	Name of Article with Specification
Sr. no.	Name of Experiment & Apparatus Required	
1	Determination of diameter using Slide Callipers	
2	Measurement of diameter of wire using Screw Gauge	
3	Determine the young modulus of material of wire using Searle's	
4	To observe rise in water level through capillaries of different bores	
5	Determine The coefficient of viscosity of given oil using stock's method	
6	Verification of Boyle's law.	
7	Measurement of unknown temperature using Thermocouple Apparatus Required :Thermocouple, Potentiometer, Constant volume hydrogen gas Thermometer etc.	
8	Determine the coefficient of linear expansion of given material using	
9	To observe The divergence of laser light with respect to distance	
10	Plot Characteristics of Photoelectric cell (Photoelectric current verses	
11	Verification of Charles law :	
12	Comparison of illuminating power (luminous intensity) of two light	
13	Lab Tool Kit for Physics Laboratory	

Applied Science Lab (Physics)

Sr. no.	Name of Experiment & Apparatus Required
1	To represent simple harmonic motion with the help of vertical oscillation
2	To determine the time period of oscillation of compound pendulum and
3	To determine the velocity of sound by using Resonance tube.
4	To compare luminous intensities of two luminous body by using Bunsen's
5	To calculate coefficients of absorption for acoustical materials.
6	To determine Joules constant (J) by electric method.
7	To determine wavelength of sodium light by using Newton's ring.
8	To verify Ampere's rule using verified experiments and find variation of
9	To determine frequency of sound by using sonometer.
10	To calculate refractive index of material of prism using spectrometer
11	To determine The Divergence of He-Ne Laser beam,

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DEPARTMENT OF CHEMISTRY

Sr. no.	Name of Experiment & Apparatus Required
1	Magnetic stirrer with
2	Conical Flask 50 ml
3	Stopper Conical Flask
4	Weighing Bottle
5	Measuring Cylinder 50 ml
6	Measuring cylinder
7	Spatula
8	Kips Apparatus
9	Ignition Tube
10	Wash Bottle Plastic
11	Decicator
13	Glass rod
14	Glass Tube
15	Clay pipe Triangle
16	Cork Borrer Set
17	Hot Air Oven
18	Burret with stop cork
19	Burret stand
20	Beaker 250ml
21	beaker 500ml
22	Conical Flask 100 ml
23	Glass Funnel 15cm
24	Glass Funnel 6cm
25	Measuring Cylinder
26	Measuring cylinder
27	Mortal Peasteal 15cm
28	Pipette 25ml
29	Reagent Bottle 250ml
30	Reagent Bottle 500ml
31	Reagent Bottle W/M
32	Sprnt lamp Stainless steel
33	Measuring Flask with
34	Watch Glass 10cm
35	watch Glass 4cm
36	Wash bottle plastic 250
37	Wire guage with
38	Pinch Cork
39	Filter Paper
40	Hot Plate round
41	Electric Oven
42	Burette 100ml, borosile
43	Burette 50ml, borosile
38	Beaker 100ml ,Borosile
39	Beaker 200ml ,Borosile
40	Iron Stand with clamp &
41	Round Bottom Flask

42	Flat bottom flask 250ml
43	Platinum wire
44	PH Meter
45	Trough 250x100ml, for
46	Tripod stand 8" for gas
47	Wire guage for tripod
48	Specific Gravity Bottle
49	Oswald Viscometre
50	Seperating Funnel 250ml
51	Speraling Funnel 250ml
52	Behelve Soil 3" dia
53	Tringular File 3" with
54	Lock
55	Conical funnel 3"
56	conical funnel 4"
57	Measuring cylinder 250ml
58	Crucible with lid
59	Pipette 20ml, Borosil
60	Pipette 10ml, Borosil
61	China dish 50ml
62	Triod Stand
63	Test Tube Holder
64	Test Tube stand of
65	Platinum wire fix: with
66	Fraction Weight Box
67	Electronic Balance
68	Conical Flask 250 ml
69	Measuring Flask 500ml
70	Measuring cylinder 250ml
71	Dessicator 6"
72	Test Tube with rim
73	Glass Beaker 100ml
74	Glass Beaker 150ml
75	Gas taps gun metal
76	Rubber cap standard size
77	Test tube 18x150mm
78	Pairs of tongs
79	Wash Bottle 500ml
80	Reagent Bottle 100ml NIM
81	Reagent bottle 250ml

CHEMICALS

1	SODIUM CARBONATE
2	LUBRICATING OIL
3	AMMONIUM CHLORIDE
4	AMMONIUM
5	POTASSIUM NITRATE
6	ETHYLE ALCOHOL
7	SODIUM
8	METHYLE ORANGE

9	PHENOPHTHELENE
10	POTTASSIUM
11	POTTASSIUM
12	POTTASSIUM
13	SODIUM
14	Glacial acetic acid
15	Formaldehyde
16	Phenol
17	Sod. Thiosulphate
18	Potassium iodide
19	Glycerence
20	Benzene
21	Ferrous sulphate
22	Barium chloride
23	Lead acetate
24	Zinc Sulphate
25	Copper Sulphate
26	Sulpharic acid
27	Glacial acetic acid
28	Formaldehyde
29	Phenol
30	Sod. Thiosulphate
31	Potassium iodide
32	Glycerence
33	Benzene
34	Ferrous sulphate
35	Barium chloride
36	Lead acetate
37	Zinc Sulphate
38	Copper Sulphate
39	Sulpharic acid
40	Nitric acid
41	Hydrochloric acid
42	Magnesium Sulphate
43	Sodium chloride
44	Ammonium carbonate
45	Ammonium sulphar
46	Silver nitrate
47	Potassium chloride
48	Fusion Mixture
49	Liquor ammonia
50	Ferric chloride
51	Potassium
52	Cobalt Nitrate
53	Barium Hydroxide
54	Calcium hydroxide

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List of Furnichers

Sl.No	Material Name	Type/ Make etc
1	Library Almirah(Steel)	Godraj (Standard Sized)
2	Steel Chair (Steel)	Godraj (Six Storage Sized 6')
3	Book Selves(Steel)	Godraj (Four Storage Sized 5')
4	Steel Chair (Steel)	Godraj
5	Table(Steel)	Godraj (47½" X 23" X 29" With three self right side & Lock and Key)
6	Almirah(Steel)	Godraj (Standard Sized)
7	Principal Chair(Steel)	Godraj (Movable)
8	Computer chair	godrej -(Movable)
9	Computer table	godrej
10	Dual dex	Godrej/ Wood Sal
11	Plastic Chair(Plastic)	Nill kamal
12	Sopha Set(Wood)	Standered Quality (Three Seated -One, Single Seated – Two with Center Table- One -3½' X 2' X 1½' (2½' X 2' X 19mm)
13	Drawing Room Stool(Wood)	Used for Drawing Class Room(Top - 128X 188 X19 mm Height - 248X228, Top bass- 8½"X12", Lear- 5", Thickness-1½"X1½") As Per Stand Module
14	Drawing Table (Wood)	Standard Size as Previously available in the institute
15	Chauki / BED (Wood)	6' X 3' X 18" (पाँआ एवं पट्टी –सखुआ, Top /बिछावन आम)
16	Dining Table (Wood)	6' X 3' X 18"(पाँआ एवं पट्टी –सखुआ, Top / पलाई सनमाईका)
17	Dining Chair(Wood)	3' X 16" X 16" (पाँआ एवं पट्टी सखुआ, Top / पलाई सनमाईका)
18	Banch (Wood)	6' X 1½' X 15" (पाँआ एवं पट्टी –सखुआ, Top / सखुआ)
19	Reading Table (Wood)	2½' X 3' X 2' (पाँआ एवं पट्टी –सखुआ, Top / पलाई सनमाईका)
20	Reading Chair (Wood)	3' X 3' X 2' (पाँआ एवं पट्टी –सखुआ, Top / पलाई सनमाईका)
21	Single Dual dex (Wood) For Class Room	Standard Size as Previously available in the institute
22	Experimental Table (Wood)	3' X 8' X 4' (पाँआ एवं पट्टी –सखुआTop / सखुआ)
23	Stool for Experimental Lab(Wood)	2' X 15" X 15" (पाँआ एवं पट्टी –सखुआTop / सखुआ)
24	Palang (Wood)	6½' X 3' X 1½' (पाँआ एवं पट्टी सखुआ, पलाई सनमाईका बिछावन पलाई)
25	Center Table (Wood)	3' X 2' X 1½' (पाँआ एवं पट्टी –सखुआ, Top / पलाई सनमाईका)

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Miscellaneous & Office Equipments

S. No	Name of item Name of Article with Specification	
1	Photostat Machine: A3 size	
2	Water Cooler	RICHO/HP
3	Water Purifier(RO Machine)	BrandedCompany
4	Genrator 20KVA with all accessories	BrandedCompany
5	Genrator 20KVA with all accessories	kiroskar/StanderdCompany
6	Three phase Standby POWER Generator CAP- 25 KVA	kiroskar/StanderdCompany
7	f. LCD TV (Clear)	BrandedCompany
8	Multimedia projector (1024 X 786)	Panasonic
9	Pen Drive - 4 GB - 8 nos.	BrandedCompany
10	LAPTOP (Pre loaded Operating System)	HP/ StanderdCompany
11	HP laser Printer All in One Model- 3050	
12	On line UPS 5KVA with Battery	BrandedCompany

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GOVT. POLYTECHNIC, MADHEPURA
List of Books

S.NO	NAME OF BOOKS	AUTHOR	PUB
1	Industrial Engg & Management	Dr. B.P. Khanna	DHANPAT
2	Industrial Engineering and Management	Bhatia & Sharma	KHANNA PUB
3	KENNEDY'S ELECTRONIC COMMUNICATION SYSTEM	Kennedy	TMH
4	Principles of Communication engineering	Krishki Singh	S.CHAND
5	Wireless & Cellular Communication	Sanjay Sharma	S.K. KATARIA
6	Digital Principle and Application.	Mallina & Leach	TMH
7	DIGITAL INTEGRATED ELECTRONICS	Taub and Schilling.	TMH
8	Analysis of linear systems.	D. K. Cheng.	NAROSA
9	Signal & linear system.	Gabel & Roberts.	WILEY
10	Communication System.	Haykins.	WILEY
11	Signals and Systems	A. Oppenheim	Pearson
12	Control System Engineering.	Nagrath & Gopal.	NEW AGE
13	Management	Deepak Chandra	FPH
14	Introduction to Machine Design	V.B.Bhandari	TMH
15	Machine Design	R.K.Jain	KHANNA PUB
16	Machine design	Pandya & Shah	CHAROTAR
17	Shigley's Mechanical Engineering Design	Budynas	TMH
18	Hand book of Properties of Engineering Materials & Design Data for Machine Elements	Abdulla Shariff	DHANPAT
19	Machine Design	Hall, Holowenko	TMH
20	Design of Machine Elements	D.P. Mondal, R.M. PANDEY	FPH
21	Mechanical Design of Machine Elements and Machines	Jack A. Collins, Henry R. Busby	WILEY
22	Oil Hydraulic system- Principle and maintenance	Majumdar	TMH
23	Pneumatics Systems Principles and Maintenance	Majumdar	TMH
24	Industrial Fluid Power	S. Laxmikant	FPH
25	INTRODUCTION TO WORK STUDY	ILO	CBS
26	Jigs & Fixtures	P. H. Joshi	TMH
27	A Textbook of Production Engineering	P.C. Sharma	S.CHAND
28	Modern Production / Operations Management	Buffa, Sarin	WILEY
29	Production Technology	R.N.Pandey, S.P. Goyal	FPH
30	Calculus single variable	Robert T. Smith	TMH
31	Fourier series and boundary value problems	Brown	TMH
32	Higher Engineering Mathematics	B. S. Grewal	KHANNA PUB
33	Introductory Methods of Numerical analysis	S. S. Sastry	PHI
34	Numerical methods for scientific & engineering computations	M.K JAIN	NEW AGE
35	MS Office 2003 for Windows	Sanjay Saxena	VIKAS PUB.
36	MS office	Ron Mansfield	BPB PUB
37	Mastering For MS 2003	Siegel	BPB PUB
38	How to solve it by computer	R.G.Dromey	Pearson
39	The C Programming Language	Kernighan/Ritchie	Pearson
40	Software Engineering	R.S. Pressman	TMH
41	Programming in C	R. Subburaj	VIKAS PUB.
42	Programming with C Language	Balagurusamy	TMH
43	Programming in C	B.P.Mahapatra	KHANNA PUB
44	Let us C	Yashwant Kanetkar	BPB PUB
45	operating systems	Milan Milenkovic	TMH

46	operating system		
47	Operating System Concepts	Harvey M. Deitel	Pearson
48	Modern operating system	Silberschatz	WILEY
49	First course in computer	Lanenbaum	Pearson
50	computer Architecture & Organization	Sanjay Saxena	VIKAS PUB.
51	computer organization & design	J.P. Hayes	TMH
52	Modern digital electronics	R. Pal Choudhary	PHI
53	Digital electronics	R.P. Jain	TMH
54	Modern digital electronics	V.K.Puri	TMH
55	Digital Computer Electronics	R.P. Jain	TMH
56	Fundamentals of Microprocessors	Malvino	TMH
57	system Analysis & design methods	Dr. B. Ram	DHANPAT
58	Management information system	J. Whitten	TMH
59	C++ Primer	K.C. Laudon	Pearson
60	problem solving with C++	Lippman	Pearson
61	object oriented programming with C++	W. Savitch	Pearson
62	object oriented programming in C++	E. Balagurusamy	TMH
63	The C++ Programming Language	R. Lafore	GALGOTIA
64	Mastering C++	Stroustrup	Pearson
65	Data Structures Using C and C++	K.V.Venugopal	TMH
66	Digital Principles & Applications	Langsam / Augenstein	Pearson
67	Digital Principles & Applications	Malvino & Leach	TMH
68	Modern digital electronics	R.P. Jain	TMH
69	Digital electronics	V.K.Puri	TMH
70	Modern digital electronics	R.P. Jain	TMH
71	Switch gear & protection	S.Rao.	Khanna Pub.
72	A Textbook On Power System (A Course In Electrical Power)	Soni, Gupta & Bhatnagar.	DHANPAT RAI
73	A text book of Electrical power	S.L.Uppal.	Khanna Pub.
74	Power System Protection & Switchgear	Badriram & Vishwakarma P.N.	TMH
75	Switchgear & Power system Protection	Ravindra P. Singh	PHI
76	handbook of Switchgears	BHEL	TMH
77	Switchgear and Protection	Prabhat Kumar	FPH
78	Electrical Machines	S. K. Bhattacharya	TMH
79	A Textbook of Electrical Technology Volume II	B. L. Theraja	S. Chand
80	Electrical Machinery	Dr. P.S. Bimbra	Khanna Pub.
81	Electrical Machines	M.V. Deshpande	PHI
82	Electrical Machines	D.P. Kothari, I.J. Nagrath	TMH
83	Electrical Machines	Shalini Verma	FPH
84	A.C. Machines	H. Partab	DHANPAT RAI
85	Art & Science of Utilisation of Electrical Energy	J. B. Gupta	S. K. Kataria
86	Utilisation of Electric Power & Electric Traction	G. C. Garg	Khanna Pub.
87	Utilisation of Electric Power & Electric Traction	G. K. Dubey	NAROSA
88	Fundamentals of Electrical Drives	S. Shrivastava	Pearson
89	Generation & utilization of Electrical Energy	S. Shrivastava	Universities Press
90	Utilization of Electrical Energy	E. Openshaw Taylor	FPH
91	Utilization of Electrical Energy	Rajiv Banjan	DHANPAT RAI
92	Modern Electric Traction	H. Partab	FPH
93	Electric Traction-1	Deepak Srivastava	New Age
94	Control System ENGG	Nagrath Gopal	PHI
95	Modern Control ENGG	Ugata	JAICO
96	Hydraulics & Pneumatics	Andrew Parr	