B.Sc.   ELECTRONICS   *Semester   1   Paper   1*

Electronic Components, Network Theorems

Unit   1

Definition, types, identification and uses of electronic components: Resistors,

Capacitors, Inductors, Switches, Transformers and Relays

Block diagram of C. R. O.

Unit   2

Ideal Voltage and Current sources (Internal impedance of battery and its effect on

its performance), Kirchoff's current and voltage laws, Voltage and current divider

circuits, Superposition, Thevenin, Norton, Maximum power transfer theorems

(Statement and simple numerical)

(DC circuits only)

Unit   3

Introduction to semiconductors: Concept of energy band diagram (Conductor,

Semiconductor, Insulator) , Intrinsic and extrinsic semiconductor (P type, N

type), diffusion junction, depletion layer, Barrier potential, PN Junction diode,

forward and reverse bias characteristics of diode, Avalanche and Zener effect;

 Zener diode, L.E.D.

Unit   4

The bipolar junction transistor, construction of B. J. T. , modes of B.J.T. (CE, CC,

CB), transistor equation; α, β and their relationship, junction biasing, Input, output

and transfer characteristics of BJT in CE mode, Transistor Biasing (Voltage

divider and emitter biasing only), DC load line, Q point, transistor as switch

B.Sc. I   ELECTRONICS PRACTICAL   *Semester 1   Section A*

1   Study of laws of series resistor and application as voltage divider.

2   Study of laws of parallel resistor and application as current divider.

3   Study of laws of series capacitor and application as voltage divider.

4   Study of laws of parallel capacitor and application as current divider.

5   Verification of Terman's equation for inductance. Reactance characteristics of inductor

6   Study of transformer.

7   Study of battery as practical (i) voltage source (ii) current source.

8   Study of maximum power transfer.

9   Study of Forward Bias characteristics of diode. (PN & LED)

10   Study of Reverse Bias characteristics of ZENER diode.

11   Study of Characteristics of BJT. (Input, Output, Transfer)

12   Study of voltage divider biasing of transistor.

13   Verification of Norton's Theorem.

14   Verification of Thevenins Theorem.

B.Sc. ELECTRONICS *Semester 1 Paper 1*

Reference Books

1	Basic Electronics solid state physics	B.L.Theraja S.Chand and company
2	Electronic Devices and circuits	Allen Mottershed Prentice hall of India pvt.ltd.
3	An Introduction to Electronics	R.G.Kale,U.K.Puranik,V.N.Pendse,A .A.Sakale Kitab mahal
4	Basic Electronics	Grob Tata McGraw Hill
5	Electronic Devices	T.L.Floyd Pearson Education Asia
6	Electronic Principles	Malvino Tata McGraw Hill
7	Electronic components and materials	Madhuri Joshi Schroff pub. And distributors
8	Electronic components and materials	S.M.Dhir TMH
9	Network analysis	Van valkenburg PHI

B.Sc.   ELECTRONICS   *Semester   1   Paper   2*

Fundamentals of Digital Electronics

Unit   1

Number Systems and Codes: Decimal, Binary, Octal, Hexadecimal, representation of integer, fraction, mixed numbers and their mutual conversion, Complement of numbers-1's, 2's, complements, addition and subtraction using 1's and 2's complement method sign and magnitude of numbers. Codes- BCD, 8421, Excess 3, Parity and gray code

Unit   2

Logic gates- OR, AND, NOT, NAND, NOR, XOR and XNOR gates and their truth table, Boolean Laws, double inversion, De Morgans and Duality theorems, use of NAND and NOR as universal building blocks

Unit   3

Karnaugh Maps: pair, quads, octets , minterm, max term in K Map, K-map for 2,3,4 variables, concept of SOP and POS, simplification of SOP and POS logic expressions using K-map, Design of binary to gray code converter, gray to binary code converter using K-map

Unit   4

Combinational Logic Circuits- Half Adder, full adder, half subtracter and full subtracter, Concept of Encoder , Concept of Decoder: BCD to gray converter, BCD to seven segment converter, parity generator checker, 4-bit Full Adder/ subtracter, Concept of multiplexer, 4:1 mux using gate , Concept of demultiplexer, 1:4 demux using gate

B.Sc. I ELECTRONICS PRACTICAL   *Semester 1   Section B*

1   Study of basic logic gates.

2   Study of NAND as universal gate.

3   Study of NOR as universal gate.

4   Verification of Demorgan's Theorem.

5   Simplification of logic expressions using Boolean algebra.

6   Study of binary to gray code converter using K map.

7   Study of gray to binary code converter using K map.

8   Study of Multiplexer using gates.

9   Study of De Multiplexer using gates.

10 Study of Multiplexer using IC.

11 Study of De- Multiplexer using IC

12 Study of BCD to 7 segment decoder.

13 Construction and study of half adder and full adder.

14 Construction and study of half subtractor and full subtractor.

15 Verification of Boolean laws & Verification of duality theorem.

B.Sc. ELECTRONICS   *Semester 1   Paper   2*

Reference Books

1	Digital principles and applications	A.P.Malvino,D.P.Leach McGraw Hill Book Co.
2	Principles of digital Electronics	M.B.Matsagar,V.S.Kale Vision publication
3	Modern digital Electronics	R.P.Jain Tata McGraw Hill publishing co.ltd
4	Digital fundamentals	Floyd,Jain Pearson
5	2000 solved problems in digital Electronics	S.P.Bali Tata McGraw Hill publishing co.ltd.
6	Electronic circuits and systems Analog and digital	Y.N.Bapat Tata McGraw Hill publishing co.ltd.
7	Digital electronics and logic design	B.S.Nair Prentice hall
8	digital computer electronics	Malvino,Brown Tata McGraw Hill
9	Fundamentals of Digital Electronics	C.V.Dhuley and V.M. Ghodki

B.Sc.   ELECTRONICS   *Semester 1   Paper   2*

B.Sc.   ELECTRONICS   *Semester 2   Paper   1*

Semiconductor Devices

Unit   1

Construction, working, characteristics and applications of JFET, MOSFET (depletion and enhancement type), parameters of JFET and their relationship parameters of MOSFET and their relationship

Unit   2

Construction, working, characteristics and applications of Silicon Controlled Rectifier, DIAC, TRIAC and UJT, UJT as relaxation oscillator

Unit   3

Amplifier parameters, notations, concept and definition of h-parameters, open circuit and short circuit tests, Introduction to input impedance, output impedance, current, voltage and power gains using h parameters, classification of amplifiers (Descriptive ideas only)

Unit   4

Introduction to power transistor, difference between Voltage and power amplifiers, transformer coupled class A power amplifier and its efficiency, class B Push-pull amplifier, derivation for efficiency, complementary symmetry power amplifier with two power supplies

B.Sc. I   ELECTRONICS PRACTICAL   *Semester 2   Section A*

1   Study of JFET characteristics.

2   Study of MOSFET characteristics.

3   Study of SCR characteristics.

4   Study of DIAC characteristics.

5   Study of UJT characteristics.

6   Study of UJT as relaxation oscillator.

7   Study of Transistor as a switch.

8   Study of transistor as voltage amplifier using CRO.

9   Study of class A power amplifier.

10   Study of TRIAC characteristics.

11   Study of Band width in single stage amplifier.

12   Study of complementary symmetry power amplifier.

B.Sc. ELECTRONICS   *Semester 2   Paper 1*

Reference Books

1	Principles of Electronics	V.K.Mehta,Rohit Mehta
2	Functional circuits in Electronics	S.G.Pimpale,Sushama Pimpale Mcmillan India ltd.
3	Electronics,Fundamental and applications	Ryder PHI
4	Elements of electronics	M.K.Bagde,S.P.Singh,Kamal singh S.Chand and co.
5	Op-Amp and linear circuits	Gaikwad PHI
6	Electronic Instrumentation	Khedkar
7	Monograph on electronic design principles	Goel, Khaitan Khanna publisher
8	Basic electronics and linear cicuits	Bhargava,KUlshreshtha,Gupta Technical education series
9	EDC I, EDC II	A.P. Godse, U.P.Bakshi Technical Publishers pune

B.Sc.   ELECTRONICS   *Semester 2   Paper   2*

Advanced Digital Electronics

Unit   1

Logic Families: Characteristics of digital ICs, construction and working of TTL NAND and NOR gates, construction and working of CMOS NAND and NOR gates, Tristate logic, comparison of TTL and CMOS logic families with respect to propagation delay, power consumption, noise immunity, noise margin, fan in and fan out.

Unit   2

Sequential Logic Circuits- Concepts of Edge and Level Triggering, Propagation Delay, set up time, hold time, R-S Flip Flop, Clocked R-S Flip Flop, Limitations of R-S FF, D FF, JK FF, preset and clear , Limitations of JK FF: Race around Condition, JKMS FF

Unit   3

Counters: Asynchronous, up/down, Decade, Synchronous, Modified counter, Ring Counter, Johnson counter (Truth tables and timing diagrams) (4 bit)

Unit   4

Registers: Buffer , left shift, right shift, SISO, SIPO, PISO, PIPO Registers , introduction to memories, classification, Memory expansion (word size and word capacity)

B.Sc. I   ELECTRONICS PRACTICAL   *Semester   2   Section   B*

1 Switching characteristics of NOR.

2 Switching characteristics of NAND.

3 Study of RS Flip Flop using NAND/NOR gate.

4 Study of clocked RS Flip Flop using NAND/NOR gate.

5 Study of D Flip Flop using NAND/NOR gate.

6 Study of JK MS FF.

7 Construction and study of decade counter.

8 Study of mod-counter.

9 Study of ring counter.

10 Study of Johnson counter.

11 Study of SISO register.

12 Study of SIPO register.

13 Study of PISO register.

14 Study of PIPO register.

15 Construction and study of synchronous counter.

B.Sc.   ELECTRONICS   *Semester   2   Paper   2*

Reference Books

1	Digital principles and applications	A.P.Malvino,D.P.Leach McGraw Hill Book Co.
2	Principles of digital Electronics	M.B.Matsagar,V.S.Kale Vision publication
3	Modern digital Electronics	R.P.Jain Tata McGraw Hill publishing co.ltd
4	Digital fundamentals	Floyd,Jain Pearson
5	2000 solved problems in digital Electronics	S.P.Bali Tata McGraw Hill publishing co.ltd.
6	Electronic circuits and systems Analog and digital	Y.N.Bapat Tata McGraw Hill publishing co.ltd.
7	Digital electronics and logic design	B.S.Nair Prentice hall
8	digital computer electronics	Malvino,Brown Tata McGraw Hill
9	Fundamentals of Digital Electronics	C.V.Dhuley and V.M. Ghodki

B.Sc.   ELECTRONICS   *Semester 3   Paper   1*

OP AMP And Power Supply

Unit   1

Introduction to DC amplifier, difference amplifier, Need of two power supplies, working of difference amplifier, differential mode gain, common mode gain, C.M.R.R., IC OP-AMP (block diagram), parameters of OP AMP and characteristics of an ideal OP AMP.

Unit   2

OP AMP as an inverting amplifier, concept of virtual ground, non-inverting amplifier, unity gain amplifier, adder, subtractor, integrator, differentiator, comparator, zero crossing detector, Schmitt trigger

Unit   3

Half wave rectifier, full wave rectifier, bridge rectifier; concept of filter (capacitive). Unregulated, regulated PS, power supply parameters – ripple factor, efficiency, line regulation, load regulation, Zener regulator, Regulated power supply design using series pass transistor, short circuit protection

Unit   4

General features of IC regulators, design of fixed and variable power supply, 78xx,79xx , LM 317, design of dual power supply, LM 317 as variable regulator, Limitations of linear regulator, Switching regulator- (SMPS), Concept of Low Drop Out regulator (LDO)

B.Sc. II   ELECTRONICS PRACTICAL   *Semester 3   Section A*

1   Study of Op-amp as inverting and sign changer amplifier.

2   Study of Op-amp as Non-inverting and unity gain amplifier.

3   Op-amp as adder and averaging amplifier.

4   Op-amp as difference amplifier. (Subtractor)

5   Op-amp as integrator.

6   Op-amp as Differentiator

7   Op-amp as comparator and zero crossing detector.

8   Op-amp as Schmitt trigger.

9   Study of Half wave rectifier.

10   Study of Full wave rectifier.

11   Study of Full wave Bridge rectifier.

12   Study of Zener regulator.

13   Regulated P.S. using series pass transistor.

14   Study of LM-317 (variable regulator)

15   Study of 78XX

16   Study of 79XX

17   Study of difference using transistors.

B.Sc.   ELECTRONICS   *Semester 3   Paper   1*

Reference Books

1	Principles of Electronics	V.K.Mehta,Rohit Mehta
2	Functional circuits in Electronics	S.G.Pimpale,Sushama Pimpale Mcmillan India ltd.
3	Electronics,Fundamental and applications	Ryder PHI
4	Elements of electronics	M.K.Bagde,S.P.Singh,Kamal singh S.Chand and co.
5	Op-Amp and linear circuits	Gaikwad PHI
6	Electronic Instrumentation	Khedkar
7	Monograph on electronic design principles	Goel, Khaitan Khanna publisher
8	Basic electronics and linear cicuits	Bhargava,KUlshreshtha,Gupta Technical education series
9	EDC I, EDC II	A.P. Godse, U.P.Bakshi Technical Publishers pune

B.Sc.   ELECTRONICS   *Semester 3   Paper   2*
Electronic Circuit Design

Unit   1

Concept development: defining inputs, process and output, generating ideas, screening ideas, developing and testing ideas, Simulation, Prototyping or Trial Production, Design Review, techno-commercial feasibility, product development, Erogonomic & asthetic design, quality assurance and compliance.

Unit   2

Introduction to circuit maker, basics, accessing tools& features, saving schematic options, file management, drawing a schematic, creating simple RC circuit, setting up the analysis, running the simulation, mix signal simulation example.

Unit   3

Digital logic simulation, setting of parameters, analysis of simple circuits, Analog / mixed signal simulation setting of parameters, analysis of simple circuits.

Unit   4

Introduction to Virtual Instrumentation,
Virtual Instrumentation System: Interface Bus, Input devices, Output devices, Software, Advantages of Virtual Instrumentation, Applications of Virtual Instrumentation, Virtual Instruments beyond the Personal Computer:

B.Sc. II **ELECTRONICS PRACTICAL**   *Semester 3*   *Section B*

1   Study transient & AC analysis of RC circuit

2   Study transient & AC analysis of different OP-Amp as comparator

3   Study transient & AC analysis of different OP-Amp as inverting amplifier

4   Study transient & AC analysis of different OP-Amp as IA

5   Study CE amplifier parameters

6   Study CB amplifier parameters

7   Study CD FET amplifier parameters

8   Study of MOSFET Characteristics

9   Study of Low Pass Filter

10   Study of VI for Function Generator

11   Study of VI for Display(CRO)

12   Study of Average / Running average VI

Reference Books

1	Measurements of high frequency acoustic characteristics	Vilas Ghodki, Satish Sharma and S Rajagopalan
2	Circuit maker mannual	

B.Sc.   ELECTRONICS   *Semester   4   Paper   1*

Analogue And Digital Techniques

Unit   1

Feedback: type, positive and negative feedback, Barkhausen criterion, Oscillators, types (AF and RF), basic oscillator action, L-C oscillator :Colpitts oscillator, RC oscillator using OP Amp ,phase shift oscillator, Wein bridge oscillator, oscillator stability, crystal oscillator, NOT gate based crystal oscillator.

Unit   2

Study of OP AMP as: astable multivibrator (asymmetric and symmetric), monostable multivibrator (simple circuit) , concept and working of sample and hold circuit, concept of Instrumentation Amplifier (three OP Amp circuit) and working

Unit   3

D/A converter, parameter: range, resolution, linearity and speed, weighted type D/A, limitations of weighted type D/A, R-2R D/A using Op Amp, limitations, types of D/A output (voltage , current, differential), dual bias D/A

Unit   4

Need for A/D conversion, parameters: range, resolution and speed, single slope A/D converters, dual slope A/D converter, Counter type, successive approximation type, Flash type, sampling theorem, Reference voltage and ADC stability

B.Sc. II   ELECTRONICS PRACTICAL   *Semester 4   Section A*

1. Study of OP-amp based Wein bridge oscillator.

2. Study of OP-amp based Phase shift oscillator.

3. Study of Colpitt's oscillator.

4. Study of Op-amp as astable multi vibrator.

5. Study of Op-amp as Mono stable multi vibrator.

6. Study of Instrumentation amplifier.

7. Study of successive approximation ADC.

8. Study of Flash type ADC.

9. Study of Single slope ADC.

10. Study of Dual slope ADC.

11. Study of Binary weighted DAC.

12. Study of ladder type DAC

13. Study of NOT gate based crystal oscillator.

14. Study of Sample and hold circuit.

B.Sc.   ELECTRONICS   *Semester   4   Paper   1*

Reference Books

1	Digital and analogue Techniques	G.N.Navaneeth,V.M.Gokhale,R.G.Kale Kitab mahal
2	Digital principles and applications	A.P.Malvino,D.P.Leach McGraw Hill Book Co.
3	Op-Amp and linear circuits	Gaikwad PHI
4	Principles of digital Electronics	M.B.Matsagar,V.S.Kale Vision publication
5	Modern digital Electronics	R.P.Jain Tata McGraw Hill publishing co.ltd.
6	Digital fundamentals	Floyd,Jain Pearson
7	2000 solved problems in digital Electronics	S.P.Bali Tata McGraw Hill publishing co.ltd.
8	Electronic circuits and systems Analog and digital	Y.N.Bapat Tata McGraw Hill publishing co.ltd.
9	Digital electronics and logic design	B.S.Nair Prentice hall
10	Digital computer electronics	Malvino,Brown Tata McGraw Hill
11	Fundamentals of Digital Electronics	C.V.Dhuley and V.M. Ghodki

Electronic Instrumentation

Unit   1

Block diagram for electronic system, Defining the system, characteristics, Analog, digital, real, virtual, dedicated, versatile, stand alone, PC based instruments.

Concept of calibration, standards for calibration

Unit   2

Sensors, actuators, transducers, active & passive transducers, characteristics,

Passive : Thermister (NTC & PTC), LM35, L.D.R. photo-transistor

Active : Piezo-electric transducer

Digital: pressure sensor (MPXV4006DP)

Unit   3

Block diagram of :

temperature measurement using thermister,

temperature measurement using LM35, advantage over thermister

lux meter using LDR,

colorimeter using LDR

insect repellent using piezo buzzer

Unit   4

Man-Instrument system, components, introduction to physiological system,

generation of bio potential, Block diagram and working of EEG, ECG & EMG,

electrical shock hazards, precautions, safety codes biomedical

B.Sc. II   ELECTRONICS PRACTICAL   *Semester 4   Section B*

1   Study transfer characteristics of NTC type thermister

2   Study resolution in characteristics of NTC type thermister

3   Study transfer characteristics of LM 35

4   Study transfer characteristics of Water heater (around 300W)

5   Study of ON/ OFF type thermo-state using LM 35

6   Study transfer characteristics of LDR

7   Study transfer characteristics of Piezo-electric transducer

8   Comparative study of accuracy in 3 ½ digit, 4 ½ digit
    5 ½ digit Multimeters

9   Directivity study of carbon Mic.

10 "Look up table" based o/p using microcontroller

B.Sc.   ELECTRONICS   *Semester   4   Paper   2*

Reference Books

1	Applied electronics and Instrumentation	C.M.Dhir Tata McGraw Hill
2	Digital Instrumentation	Bouwens Tata McGraw Hill
3	Electronic Instrumentation	Khedkar
4	Modern . electronic Instrumentation and measurement techniques	Cooper Prentice hall

B.Sc.   ELECTRONICS

Electronics Communication

Unit   1

Introduction to Electronics communication, block diagram of communication system, Types of communication: analog, digital; simplex, duplex; baseband, modulated, concept of modulation, need for modulation, types of modulation (AM, FM, PM)

Unit   2

Propagation modes of signals: ground waves, sky waves, Ionosphere and satellite; antenna fundamentals, basic principles and types.

Unit   3

Digital communication: Introduction, synchronous, asynchronous transmission, Shannon theorem, ASK, FSK, and PSK modulation.

Unit   4

Fiber optic communication system, Advantages of FOC, concept of Fax, concept of cellular telephone, block diagram of cellular telephone, advantages

B.Sc. III **ELECTRONICS PRACTICAL** *Semester 5   Section A*

1   Study of Half duplex communication system using PC/μC (2 wire interface)
2   Study of Full duplex communication system using PC/μC (3 wire interface)
3   ASK using op-Amp
4   FSK using op-Amp
5   Study of AM detector
6   Study of narrow band amplifier using op-amp/ Transistor
7   Study of intensity characteristics of LASER diode
8   X-bee interface using PC/ μC / field strength study
9   IR Link study
10 Wire impedance measurement

B.Sc.   ELECTRONICS   *Semester 5   Paper   1*

Reference Books

1   Electronic communication system   John kennedy   Tata McGraw Hill

2   Communication electronics   Frenzel   Tata McGraw Hill
    principles and application

3

4

B.Sc.   ELECTRONICS   *Semester 5   Paper   2*

Fundamentals of Microprocessor

Unit   1

Block diagram of Intel 8085, ALU, Timing and control unit, General
purpose registers, Accumulator, PC, SP, IR, ID, Interrupt, Address and Data bus
multiplexing, Flags. Instruction Cycle: T-states, Fetch operation, Execute
operation, Machine cycle

Unit   2

Addressing mode, instruction Set- Data transfer group, arithmetic group, logic
group, simple programs

Unit   3

Instruction set: branch control group, I/O and machine control group, simple
programs,   stack and subroutines

Unit   4

Need for interfacing, modes of data transfer, synchronous and asynchronous,
interrupt driven, DMA, PPI 8255- Block diagram, modes, control word format

B.Sc. III   **ELECTRONICS PRACTICAL**   *Semester 5   Section B*

1. Program based on Data transfer instructions.
2. Program based on Arithmatic instructions.
3. Program based on Logical instructions.
4. Program based on Branch instructions.
5. Program based on Control instructions.
6. Study of PPI 8255.

Reference Books

1	Fundamentals of Microprocessor and Microcomputers	B.Ram Dhanpat Rai publications
2	Microprocessor Architecture, programming and applications with 8085/8080 A	Ramesh S. Gaonkar Wiley eastern ltd.
3	Introduction to microprocessor	A.P. Mathur Tata McGraw Hill
4	Microprocessor and interfacing	D.V.Hall Tata McGraw Hill
5	Introduction to Microprocessors	Vilas Ghodki and Satish Sharma

B.Sc.   ELECTRONICS   *Semester   6   Paper   1*

Programming in   "C"

Unit   1

Constant, Variables and Operators: Character set, C tokens, constant,
Keyword, identifiers, variables, data types, declaration of variables, Arithmetic,
relational logical, assignment, increment, conditional, bitwise,
operators, Arithmetic expression, evaluation of expression, precedence of
operators, input/output functions

Unit   2

Control Structures & Arrays: if- statements, if-else statement, switch statement,
go-to statement, while statement, do-while statement, for statement, one
dimensional array

Unit   3

User Defined Functions, Types of functions, return values and their types, scope
and lifetime of variables in function; basic concept of structure and unions,
difference between structure and union

Unit   4

Pointers: Basic concept, expression, variables Defining and opening file, closing a
file, I/O operations on file, command line arguments, port interfacing.

B.Sc. III   **ELECTRONICS PRACTICAL**   *Semester 6   Section A*

1   Programs based on use of Variables, Operators, Input Output function

2   Programs based on Control Structure using if, if-else, switch, goto, while & do while

3   Programs based on use of one dimensional Array , Operations on array

4   Programs based on function writing, Use of structure and Union

5   Programs based on pointer operation, file operation

6   Programs based on communication with external data source like Printer & serial port

B.Sc.   ELECTRONICS   *Semester   6   Paper   1*

Reference Books

1	Let us C	Y.Kanetkar
2	Gate to C programming	Kishor S B, Vilas Ghodki and Madhavi
3	C in depth	Shrivastava BPB publication
4	Programming in ANSI C-E	Balgurusamy Tata McGraw Hill
5	Programming with C	Byron Gottfried Schaums outline series Tata McGraw Hill
6		

B.Sc.   ELECTRONICS   *Semester 6   Paper   2*

Microcontroller 8051

Unit   1

Architecture and features, Internal and External memory, Flags, SFR Map, SFR Function, Accumulator, Register B, Port registers (P0, P1, P2 and P3), Power Management (PCON)

Unit   2

Instruction set: Data transfer, logical, arithmetic, interrupt handler, Addressing Modes

Unit   3

Subroutine and Stack, Need for Subroutine LCALL and RETURN Instructions, ACALL Instructions, Nesting of subroutine, Stack Operation and Stack Instruction, Branching (Jump Instruction), simple programs

Unit   4

Interfacing with Keyboard, display - LCD (16 x 2), ADC and DAC, LED Matrix and Serial communication with personal computer

B.Sc. III   ELECTRONICS PRACTICAL   *Semester 6   Section B*

1. LED Blink
2. Relay interface
3. Stepper Motor Interface
4. 16x2 Interface
5. Study of bit operation on port(A,B,C,D)
6. LED Blink using timer
7. Frequency Generator using timer
8. External frequency counting timer
9. Interrupt driven operation
10. Single blink on key I/P
11. Opto- triac interface
12. Key to clk/CC
13. Serial interface with PC
14. ADC 0808 interface
15. DAC 0808 interface
16. IIC interface using R.T.C.

B.Sc.   ELECTRONICS   *Semester   6   Paper   2*

Reference Books

1	8051 microcontroller	V.Udayshankara, Mallikarjuna swamy Tata McGraw Hill
2	Microcontroller theory and applications	A.V.Deshmukh Tata McGraw Hill
3	Microcontroller	Rajkamal Pearsons
4	Microcontroller	Mazidi and Mazidi