

DEPARTMENT OF COMPUTER ENGINEERING
LIST OF EXPERIMENTS FOR ALL SUBJECTS

S.E. COMPUTER (ODD SEM)

SUBJECT :- DLDA

1. STUDY OF BASIC GATES AND UNIVERSAL GATES.
2. REALIZATION OF LOGICAL EXPRESSION USING UNIVERSAL GATES AND BASIC GATES.
3. BINARY ARITHMETIC CIRCUITS I) ADDER II) SUBTRACTOR.
4. IMPLEMENT CERTAIN FUNCTIONS USING MULTIPLEXERS [16:1, 8:1, 4:1]
5. DESIGN AND IMPLEMENT 4:1 MULTIPLEXER WITH STROBE I/P ACTIVE LOW USING NAND & NOR GATE.
6. TO DESIGN & IMPLEMENT ANY ONE CODE CONVERTER [E.G. EXCESS-3, BCD -- GRAY] USING DECODER & DEMULTIPLEXER.
7. TO DESIGN & IMPLEMENT 4-BIT PARITY GENERATOR/ CHECKER USING
 - I) MINIMUM NUMBER OF GATES.
 - II) IC 74180.
8. DESIGN OF 7-SEGMENT DISPLAY USING DECODER [IC 7447]
9. DESIGN OF JK FLIPFLOP USING NAND GATES AND VERIFICATION OF THE SAME FLIP FLOP USING IC 7476.
10. DESIGN OF ASYNCHRONOUS UP & DOWN COUNTER.
11. DESIGN OF SYNCHRONOUS COUNTER.
12. DESIGN OF RANDOM SEQUENCE GENERATOR.
13. DESIGN OF SHIFT REGISTER USING FLIP FLOPS VERIFICATION OF DIFFERENT MODES.
14. VERIFICATION OF FUNCTION TABLE OF UNIVERSAL SHIFT REGISTER IC 74194.
15. COMPARE PROPAGATION DELAY AND TRANSFER CHARACTERSTIC OF TTL & CMOS GATES [USE ODD NO. OF GATES].

SUBJECT :- EDC

- STUDY OF CHARACTERISTICS OF FET.
- STUDY OF RC COUPLED AMPLIFIER INVOLVING NEGATIVE FEEDBACK
- STUDY OF JFET AMPLIFIER
- STUDY OF VARIABLE VOLTAGE POWER SUPPLY USING OPERATIONAL AMPLIFIER.
- STUDY OF INVERTING AMPLIFIER.
- STUDY OF NON- INVERTING AMPLIFIER.
- STUDY OF INVERTING ADDER. & SUBTRACTOR.
- STUDY OF NON- INVERTING & INVERTING COMPARATOR.
- STUDY OF SCHMITT TRIGGER.
- STUDY OF SQUARE WAVE GENERATOR.
- STUDY OF TRIANGULAR WAVE GENERATOR.
- STUDY OF IC555 AS ASTABLE MULTIVIBRATOR / MONOSTABLE MULTIVIBRATOR.

SUBJECT :- COMPUTER ORGANIZATION & ANALYSIS

1. WAP TO IMPLEMENT ARITHMETIC ADDITION OF HEXADECIMAL NUMBER.
2. WAP TO IMPLEMENT FOR THE ADDITION OF 4 BIT BINARY NUMBER.
3. WAP TO IMPLEMENT MULTIPLICATION AND DIVISION OF 4 BIT NUMBER.
4. WAP TO IMPLEMENT BOOTH'S ALGORITHM
5. WAP TO IMPLEMENT FIRST FIT AND BEST FIT OPERATION
6. WAP TO IMPLEMENT PAGING ALGORITHM USING FIFO
7. WAP TO IMPLEMENT INTERRUPT PROCESSING TECHNIQUES

S.E. COMPUTER (EVEN SEM)

SUBJECT : ANALYSIS OF ALGORITHM

- 1) WAP TO IMPLEMENT MODIFIED BUBBLE SORT.
- 2) WAP TO IMPLEMENT QUICK SORT.
- 3) WAP TO IMPLEMENT HEAP SORT..
- 4) WAP TO IMPLEMENT SHELL SORT.
- 5) WAP TO IMPLEMENT MERGE SORT.
- 6) WAP TO IMPLEMENT BINARY SEARCH.
- 7) WAP TO IMPLEMENT INDEXED SEQUENTIAL SEARCH.
- 8) WAP TO IMPLEMENT BINARY SEARCH TREE.
- 9) WAP TO IMPLEMENT MULTIWAY SEARCH TREE.
- 10) WAP TO IMPLEMENT AVL TREE.
- 11) WAP TO IMPLEMENT HASHING.
- 12) WAP TO FIND SHORTEST PATH IN GRAPH.
- 13) WAP TO IMPLEMENT MINIMUM SPANNING TREE IN A GRAPH.

SUBJECT : DBMS

- 1 CREATE COMMAND USING DIFFERENT CLASSES (INSERT INTO, SELECT *).
- 2 DATABASE MANIPULATION COMMAND (ALTER, DROP).
- 3.USE OF DIFFERENT SELECT COMMAND (DISTINCT, WHERE)
- 4.ORDER BY CLAUSE (ASC / DESC).
- 5) SET MANIPULATION OPERATIONS.
- 6) AGGREGATE FUNCTIONS.
- 7) NESTED SUB QUERIES.
- 8) MODIFICATION OF DATABASE.
- 9) TRIGGERS AND VIEWS.
- 10) PROJECT

T.E. COMPUTER (ODD SEM)

SUBJECT:- COPUTER PROGRAMMING LABOROTARY

- 1) PROGRAM TO FIND AREA & VOLUME OF SPHERE USING CONCEPT OF INHERITANCE.
- 2) PROGRAM TO FIND MULTIPLICATION OF TWO MATRIX.
- 3) PROGRAM TO DEMONSTRATE CALL BY VALUE AND CALL BY REFERENCE.
- 4) PROGRAM TO FIND GIVEN STRING IN PALINDROME OR NOT.
- 5) PROGRAM TO MAKE ADDITION, SUBTRACTION ,DIVISION , MULTIPLICATION OF NUMBERS USING SWING.
- 6) PROGRAM TO IMPLEMENT COMBO BOX , LIST, DROP DOWN MENU.
- 7) PROGRAM TO READ AND WRITE FILE.
- 8) PROGRAM ON RMI.
- 9) PROGRAM IN JAVA BEANS.
- 10) PROGRAM IN APPLLET.

SUBJECT:- MICROPROCESSOR

1. A)WAP TO ADD 2-8 BIT NUMBERS
B)WAP TO SUB 2-8 BIT NUMBERS
2. A)WAP TO ADD 16 BIT NUMBERS
B)WAP TO ADD 16 BIT NUMBERS
3. WAP TO MULTIPLY 2 NUMBERS
4. WAP TO DIVISION OF 2 NUMBERS
5. A)WAP FOR BLOCK TRANSFER
B)WAP TO FIND LARGEST NUMBER
6. A)WAP TO FACTORIZE A NUMBER
B)WAP TO FIND XN
7. A)WAP TO REVERSE INPUT STRING
B)WAP TO CONVERT BCD TO HEX
8. WAP TO CONCATINATION
9. A)WAP TO DO MULTILICATION USING 8087
B)WAP TO FIND TAN-1
10. A)WAP TO INITIALIZE 8259
B)WAP TO INITIALIZE 8255

SUBJECT:- DIGITAL COMMUNICATION

2. INTERSYMBOL INTERFERENCE
3. TRANSVERSAL EQUALIZER
4. TRM TRANSMITTER AND RECEIVER
5. WAVEFORM EQUALIZER
6. FREQUENCY SHIFT KEYING
7. AMPLITUDE SHIFT KEYING
8. LINEAR BLOCK CODES
9. CYCLIC CODES
10. CONVOLUTION ENCODING
11. ENCRYPTION AND DECRYPTION

SUBJECT:- COMPUTER NETWORK.

1. Simulation of ISO-OSI reference model.
2. Error control in computer Networks
 - Hamming code
 - CRC
3. Implementation of Flow control Mechanism
 - Stop and Wait
 - Go back N
 - Selective repeat
4. Simulation of Data Link Protocol: HDLC
5. Study and implementation of routing algorithm
6. Study and implementation of congestion control algorithm.
7. Implementation of subnet mask concept.
8. Simulation of ARP and RARP protocols.
9. Simulation of TCP protocol.
10. Network socket programming.

T.E. COMPUTER (EVEN SEM)

SUBJECT:ADBMS

- 1)PROJECT ON MULTIMEDIA DATABASE SYSTEM
- 2)PROJECT ON DISTTRIBUTED DATABASE SYSTEM
- 3)PROJECT ON GEOGRAPHICAL DATABASE SYSTEM
- 4)PROJECT ON XML AND INTERNET DATABASE SYSTEM
- 5)PROJECT ON CLIENT-DSERVER DATABASE SYSTEM
- 6)PROJECT ON TEMPORAL DATABASE SYASTEM

SUBJECT :-OOAD

- 1.ANALYSIS 1-CASE STUDY
- 2.ANALYSIS 2-CASE STUDY
- 3.STUDY OF CLASS DIAGRAM USING METAMILL
- 4.TO DRAW & ANALYSE USECASE DIAGRAM
- 5.TO DRAW ACTIVITY DIAGRAM FOR THE PROBLEM GIVEN IN ANALYSIS
- 6.TO DRAW STATECHART DIAGRAM FOR THE PROBLEM GIVEN IN ANALYSIS
- 7.TO DRAW SEQUENCE DIAGRAM FOR ANALYSIS

- 8 TO DRAW COLLABORATION DIAGRAM FOR ANALYSIS
- 9.TO DRAW COMPENENT DIAGRAM FOR ANALYSIS
- 10.TO DRAW DEPLOYMENT DIAGRAM FOR ANALYSIS

SUBJECT- SYSTEM PROGRAMMING

1. SORTING TECHNIQUES
2. PROGRAM TO DESIGN AN ASSEMBLER
3. WAP TO DESIGN MACRO PROCESSOR
4. WAP TO CONVERSION FROM NFA TO DFA
5. WAP TO SYMBOL TABLE GENERATION

SUBJECT- COMPUTER GRAPHICS

1. A) GENERATE LINE USING DDA
B) BRESENHAM LINE DRAWING
2. GENERATE CIRCLE USING MIDPOINT CIRCLE ALGORITHM
3. GENERATE ELLIPSE USING MIDPOINT ELLIPSE ALGORITHM
4. FLOOD FILL AND BOUNDARY FILL
5. BASIC 2-D TRANSFORMATIONS
6. ADVANCED 2-D TRANSFORMATIONS
7. SUTHERLAND LINE CLIPPING ALGORITHM
8. SUTHERLAND HODGMAN POLYGON CLIPPING ALGORITHM
9. TO GENERATE BEZIER CURVE

SUBJECT:-OPERATING SYSTEM

- 1 TO STUDY OF UNIX & WINDOWS NT
- 2 PRIORITY SCHEDULING
- 3 ROUND ROBIN ALGORITHM
- 4 FCFS ALGORITHM
- 5 FIFO ALGORITHM
- 6 LRU PAGE REPLACEMENT
- 7 BEST FIRST AND FIRST FIT
- 8 BANKER'S ALGORITHM
- 9 SHORTEST JOB FIRST ALGORITHM

SUBJECT: WEB ENGINEERING

- 1 . DESIGN WEBPAGE USING HTML CHARACTER TAGS, LINKS & LIST
- 2 DESIGN WEBPAGE USING HTML TABLES & FRAMES
3. CREATE A FORM USING DHTML
4. DESIGN WEBPAGE USING XML
5. DESIGN WEBPAGE USING JAVA SCRIPT
6. DESIGN WEBPAGE USING SERVLET
7. MINI PROJECT.

B.E. COMPUTER (ODD SEM)

SUBJECT:ADVANCED MICROPROCESSOR

- 1)WAP TO IMPLEMENT 32 BIT ADDITION.
- 2) WAP TO IMPLEMENT 32 BIT SUBTRACTION.
- 3) WAP TO IMPLEMENT 32 BIT MULTIPLICATION.
- 4) WAP TO IMPLEMENT 32 BIT DIVISION.
- 5)WAP TO FIND THE FACTORIAL OF A NUMBER.
- 6)WAP TO SORT THE NUMBERS IN ASCENDING ORDER.
- 7)WAP TO CONCATENATE TWO STRINGS USING PROCEDURE.
- 8)WAP TO ACCES SIMPLE DATABASE USING STRING OPERATION AND TO PRINT A SINGLE ENTITY FROM DATABASE.
- 9)WAP TO DISPLAY THE COLOURED STRING AS COLOURED STRING.
- 10)WAP TO DISPLAY PROTECTED MODE INFORMATION OF A PROCESSOR.

SUBJECT: INTELLIGENT SYSTEM

- 1) TO IMPLEMENT FAMILY TREE STUCTURE
- 2) TO IMPLEMENT COMPANY PERSONAL PROBLEM
- 3) TO IMPLEMENT TOWER OF HANOI
- 4) TO IMPLEMENT MONKEY BANANA PROBLEM
- 5) TO IMPLEMENT OPERAITON ON LIST
- 6) TO IMPLEMENT EIGHT QUEEN PROBLEM
- 7) TO IMPLEMENT QUICK SORT
- 8) TO IMPLEMENT DEPTH FIRST SEARCH
- 9) TO IMPLEMENT DFA PASSES
- 10) TO STUDY SEMANTIC AND SYNTACTIC ANALYSIS OF SIMPLE ENGLISH PHASE STRUCTURE

SUBJECT –MOBILE COMPUTING

1. STUDY AND ANALYSIS OF WIRELESS DEVICES AND PRODUCT SPECIFICATIONS
2. 802 .11G SET-UP STUDY AND PROGRAM FOR FILE TRANSFER.
3. BLUETOOTH COMMUNICATION SETUP & PROGRAM
4. ONE SURVEY OF RESEARCH PAPER BASED ON THE TOPIC RELATED TO WIRELESS/ MOBILE COMMUNICATION
5. NOKIA 30 GSM MODEM STUDY .
6. PROGRAM IN VB FOR SMS CLIENT SERVER.
7. NOKIA INTERNET TOOK KIT CLIENT–SERVER EMULATION.
8. STUDY OF UMTS AND IMT -2000
9. MOBILE SIMULATION WITH NS2.
10. ADVANCE WIRELESS PRODUCTS.

NOTE: TO COMPLETE ABOVE PRACTICAL STUDENTS HAVE TO SURF ON THE INTERNET AND THE BOOKS, MAGAZINE ETC TO GET THE RELATED MATERIAL.
PREPARE THE WRITE-UP FOR EACH STUDY PRACTICAL WITH THE PROPER DIAGRAMS AND REFERENCES AT THE END OF THE PRACTICAL

SUBJECT: IMAGE PROCESSING

- 1) DISPLAY TAGGED IMAGE FILE FORMAT
- 2) CONSTRAST STRETCHING
- 3) NEGATIVE IMAGE
- 4) BIT PLANE SLICING
- 5) HISTOGRAM
- 6) HISTOGRAM EQUILIZATION
- 7) HIGH PASS FILTER
- 8) LOW PASS FILTER
- 9) LEMPEL-ZIV-WELCH(LZW) CODING

10) EROSION AND DILATION

SUBJECT : DIGITAL SIGNAL PROCESSING

- 1) PROGRAM ON CONVOLUTION.
- 2) PROGRAM ON FREQUENCY AND PHASE RESPONSE
- 3) PROGRAM ON IMPULSE RESPONSE

- 4) PROGRAM ON POLES AND ZEROS
- 5) PROGRAM ON DTFT OF A SIGNAL
- 6) PROGRAM ON CASCADE RELATION OF IIR FILTER
- 7) PROGRAM ON FAST FOURIER RADIX-2
- 8) PROGRAM ON BUTTERWORTH LP IIR FILTER
- 9) PROGRAM ON CHEBYSHEV LPIIR FILTER
- 10) PROGRAM ON FREQUENCY AND PHASE RESPONSE
- 11) FIR FILTER USING KAISER WINDOW

B.E. COMPUTER (EVEN SEM)

SUBJECT - MULTIMEDIA SYSTEMS

- 1.CREATE ANIMATION USING MULTIMEDIA FLASH.
- 2.WRITE A PROGRAM TO IMPLEMENT TIC TAC TOE GAME
AS AN EXAMPLE OF ARTIFICIAL INTELIGENCE.
- 3.WRITE A PROGRAM TO IMPLEMENT RUN LENGTH ENCODING.
- 4.WRITE A PROGRAM TO IMPLEMENT LZW ALGORITHM.
5. WRITE A PROGRAM TO IMPLEMENT HUFFMAN ENCODING.
6. STUDY OF VARIOUS DATA INTERFACING STANDARDS.
7. STUDY OF PRINTER AND SCANNERS.
8. WRITE A PROGRAM TO IMPEMNT AUDIO PLAYER.
9. PERFORM SOME OPERATIONS ON IMAGE.
- 10.WEB BASED MULTIMEDIA APPLICATION

SUBJECT : SOFTWARE ENGINEERING

1. Project selection and Planning.
 - a. Analyze given system.
 - b. Develop the system.
 - c. Deliver the system.
2. Create a Software Requirement Specification (SRS) document.
3. Software development Model.
4. Introduction to UML and Use Case Diagram
5. System Modeling
6. Estimate the cost of project using Software project planning.
7. User Interface Design.
8. UML Diagrams.
9. Testing.
10. Technical Metrics for Software

SUBJECT:-DISTRIBUTED COMPUTING

- 1 WRITE A PROGRAM FOR SIMULATION OF R.P.C.
- 2 WRITE A PROGRAM FOR CLIENT – SERVER APPLICATION USING SOCKET PROGRAMMING
- 3 WRITE A PROGRAM FOR REMOTE METHOD INVOCATION
- 4 WRITE A PROGRAM FOR MULTITHREAD CLIENT – SERVER APPLICATION
- 5 WRITE A PROGRAM FOR SOLUTION OF MUTUAL EXCLUSION PROBLEM.
- 6 WRITE A PROGRAM FOR GROUP COMMUNICATION IN JAVA
- 7 WRITE A PROGRAM FOR SECURITY IMPLEMENTATION
- 8 STUDY A CORBA APPLICATION DEVELOPMENT PART 1
- 9 STUDY A CORBA APPLICATION DEVELOPMENT PART 2
- 10 STUDY A DCOM IMPLEMENTATION.

SUBJECT:- DATA WAREHOUSING & DATA MINING

1. STUDY OF OLAP.
2. CREATION OF OP-SYSTEM.
3. CREATION OF DW FOR CASE STUDY.
4. ETL OF DATA.
5. STAR SCHEMA.
6. SNOWFLAKE SCHEMA
7. WEKA.
8. CLUSTERING ALGO.
9. CLASSIFICATION ALGO.
10. ASSOCIATION RULES.
11. WEB MINING.

Department of Electronics Engineering

ACADEMIC YEAR- 2009-10

Sub: - Basic Electrical & Electronics Engineering

Semester:-I

List of Experiments

Sr.no	Name of Experiment
1	Verification of network theorems.
2	To study the resonance phenomenon in series RLC circuit & obtain resonance frequency.
3	To study the resonance phenomenon in parallel RLC circuit & obtain resonance frequency.
4	To study the amplification action of BJT CE amplifier.
5	To plot i/p & o/p characteristics of CE amplifier.
6	To study Linear Variable Differential Transformer.
7	To study half-wave rectifier and full-wave rectifier circuit with and without capacitor filter and determine its ripple factors.
8	To Perform Load test on a single-phase transformer.
9	To study the relation between line & phase quantities and to measure the Power using two-wattmeter method in star connected load.
10	To study the relation between line & phase quantities and to measure the Power using two-wattmeter method in delta connected load.

ACADEMIC YEAR 2008-09

DEPARTMENT OF ELECTRONICS ENGINEERING

SEM : IV SUBJECT :ELECTRONIC CIRCUIT ANALYSIS & DESIGN CLASS : SE

LIST OF EXPERIMENTS

SR. NO.	NAME OF EXPERIMENT
1	TO STUDY FREQUENCY RESPONSE OF CASCODE AMPLIFIER
2	TO STUDY FREQUENCY RESPONSE OF TWO-STAGE RC COUPLED AMPLIFIER
3	TO STUDY RC PHASE SHIFT OSCILLATOR AND CALCULATE THEORETICAL AND PRACTICAL FREQUENCY.
4	TO STUDY WEIN BRIDGE OSCILLATOR.
5	TO STUDY HARTLEY OSCILLATOR AND CALCULATE THEORETICAL AND PRACTICAL FREQUENCY
6	TO STUDY COLPITTS OSCILLATOR AND CALCULATE THEORETICAL AND PRACTICAL FREQUENCY
7	TO STUDY CLASS AB AND B PUSH PULL AMPLIFIER
8	TO STUDY CURRENT SERIES NEGATIVE FEEDBACK AMPLIFIER AND PLOT GAIN WITH FEEDBACK AND WITHOUT FEEDBACK.
9	TO SIMULATE & ANALYZE ADDER & SUBTRACTOR USING TINA SIMULATION SOFTWARE
10	TO SIMULATE & ANALYZE COLPITT'S OSCILLATOR USING TINA SIMULATION SOFTWARE

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Department of Electronics Engineering

Subjects -Electrical Network Analysis & Synthesis

Semesters - III (S.E.Electronics)

List of Experiments

Sr.no	Name of Experiment
1	Verification of Source Transformation
2	Verification of Superposition
3	Verification of Thevenin's Theorem
4	Charging & Discharging of a Capacitor
5	To calculate Y-parameters in two port network
6	To determine H-parameters for parallel interconnection of two port network

ACADEMIC YEAR- 2009-10

Subject: Control System

SE Electronics

Semester: III

List of Experiments

Sr.	Name of Experiments
1	a) To study the time response of first order system b)To study the time response of second order system
2	a)To study the frequency response first order system b)To study the frequency response second order system
3	To study the speed torque characteristics of the AC servomotor.
4	To study the speed torque characteristics of the DC servomotor
5	To study AC synchro Transmitter & Receiver.
6	To study steady state error analysis of different types of system
7	To study Potentiometer
8	Simulation :Time response (Root locus) using Matlab
9	Stability Analysis Using Matlab
10	Bode plot by Matlab

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Department of Electronics Engineering

**Subject-Digital System Design-I
Semester- III**

(S.E.Electronics)

List of Experiments

Sr.no	Name of Experiment
1	To verify the truth tables of various basic logic gates.
2	To study simplification of Boolean Function.
3	To study and build code converter.
4	To Design & test various adder & subtractor circuit.
5	To perform BCD subtraction using 9's complement.
6	To study multiplexer & demultiplexer.
7	To verify the truth table of J-K, D and T flipflop.
8	To design test & build asynchronous counter.
9	To design 3 bit binary counter using T flipflop.

Subject incharge

Ms. Vidya Sagvekar.

ACADEMIC YEAR 2008-09

DEPARTMENT OF ELECTRONICS ENGINEERING

SEM : IV SUBJECT :ELECTRONIC CIRCUIT ANALYSIS & DESIGN

CLASS : SE

LIST OF EXPERIMENTS

SR. NO.	NAME OF EXPERIMENT
1	TO STUDY FREQUENCY RESPONSE OF CASCODE AMPLIFIER
2	TO STUDY FREQUENCY RESPONSE OF TWO-STAGE RC COUPLED AMPLIFIER
3	TO STUDY RC PHASE SHIFT OSCILLATOR AND CALCULATE THEORETICAL AND PRACTICAL FREQUENCY.
4	TO STUDY WEIN BRIDGE OSCILLATOR.
5	TO STUDY HARTLEY OSCILLATOR AND CALCULATE THEORETICAL AND PRACTICAL FREQUENCY
6	TO STUDY COLPITTS OSCILLATOR AND CALCULATE THEORETICAL AND PRACTICAL FREQUENCY
7	TO STUDY CLASS AB AND B PUSH PULL AMPLIFIER
8	TO STUDY CURRENT SERIES NEGATIVE FEEDBACK AMPLIFIER AND PLOT GAIN WITH FEEDBACK AND WITHOUT FEEDBACK.
9	TO SIMULATE & ANALYZE ADDER & SUBTRACTOR USING TINA SIMULATION SOFTWARE
10	TO SIMULATE & ANALYZE COLPITT'S OSCILLATOR USING TINA SIMULATION SOFTWARE

ACADEMIC YEAR 2008-09

DEPARTMENT OF ELECTRONICS ENGINEERING

SEM : IV

SUBJECT :DSD

CLASS : SE

LIST OF EXPERIMENTS

SR. NO.	NAME OF EXPERIMENT
1	EXPERIMENT ON VHDL PROGRAM TO REALIZE ALL THE LOGIC GATES
2	EXPERIMENT ON VHDL PROGRAM TO REALIZE HALF ADDER AND FULL ADDER
3	EXPERIMENT ON VHDL PROGRAM TO DESIGN 8:1MULTIPLEXER
4	EXPERIMENT ON VHDL PROGRAM TO DESIGN 4 BIT SHIFT REGISTER
5	EXPERIMENT ON VHDL PROGRAM TO DESIGN T FLIP FLOP (TOGGLE)
6	EXPERIMENT ON VHDL PROGRAM TO DESIGN JK FLIP FLOP
7	EXPERIMENT ON VHDL PROGRAM TO DESIGN ASYNCHRONOUS BINARY UP COUNTER
8	EXPERIMENT ON VHDL PROGRAM TO DESIGN BCD UP COUNTER

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Department of Electronics Engineering

**Sub: - Electronic and Electrical Measuring Instruments and
Machine**

S.E. (Electronics), Sem-IV

List of Experiments

Sr.no	Name of Experiment
1	Measurement of medium resistance using Wheatstone bridge.
2	To study Schering bridge.
3	To study 3 point starter.
4	Speed control of DC motor.
5	To study 3Ø slipring induction.
6	To study measuring instruments.
7	To perform load test on 3Ø slipring induction motor.
8	To study stepper motor

ACADEMIC YEAR- 2009-10

DEPARTMENT OF ELECTRONICS

SEM: V

SUBJECT: MPMC

CLASS: TE

LIST OF EXPERIMENTS

SR. NO.	NAME OF THE EXPERIMENT
1.	ADDITION & SUBTRACTION OF 8-BIT NUMBERS USING 8085
2.	ADDITION & SUBTRACTION OF 16-BIT NUMBERS USING 8085
3.	MULTIPLICATION OF 8-BIT NUMBERS USING 8085
4.	ARRANGING THE ELEMENTS OF A BLOCK OF DATA IN ASENDING ORDER
5.	PROGRAM CONTROLLED DATA TRANSFER USING 8255 PPI
6.	INTERFACING OF 8253 / 8254
7.	ARITHMATIC OPERATION USING 8051
8.	8051 TIMER BASED EXPERIMENT
9.	TO DESIGN & TEST CIRCUITS ON LED BLINKING USING PROTEUS VSM PLATEFORM
10.	TO DESIGN & TEST CIRCUITS ON SEVEN SEGMENT DISPLAY USING PROTEUS VSM PLATEFORM
11.	TO DESIGN & TEST CIRCUITS ON 16X2 MULTIPLE CHARACTER LCD USING PROTEUS VSM PLATEFORM
12.	TO DESIGN & TEST CIRCUITS ON TEMPERATURE DISPLAY USING PROTEUS VSM PLATEFORM

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ACADEMIC YEAR- 2009-10

DEPARTMENT OF ELECTRONICS

SEM:v

SUBJECT: CTSS

CLASS:TE

LIST OF EXPERIMENTS

SR. NO.	NAME OF THE EXPERIMENT
1.	Generation of basic C.T. Signal
2.	Generation of complexed valued signal
3.	Demonstration of fourier transform of signal
4.	Demonstration of fourier series of signal
5.	Verification of sampling theorem
6.	Demonstration of Laplace transform

DEPARTMENT OF ELECTRONICS

**SEM: V SUBJECT: Linear Integrated Circuit
CLASS: TE**

LIST OF EXPERIMENTS

SR. NO.	NAME OF THE EXPERIMENT
1.	TO STUDY THE OP-AMP BIASING & PARAMETERS.
2.	TO STUDY OPERATIONAL INVERTING, NON INVERTING AMPLIFIERS.
3.	TO DESIGN AND TEST OP-AMP AS AN INTEGRATOR AND DIFFERENTIATOR
4.	TO STUDY THE SQUARE WAVE GENERATOR USING OP-AMP (ASTABLE MULTIVIBRATOR)
5.	TO STUDY ASTABLE MULTIVIBRATOR USING IC 555 (TIMER)
6.	TO DESIGN AND TEST SCHEMITTI TRIGGER
7.	TO STUDY THE INSTRUMENTATION AMPLIFIER
8.	TO DESIGN LOW VOLTAGE REGULATOR USING IC 723
9.	TO STUDY THE SECOND ORDER BUTTER WORTH FILTER
10	DESIGN AND TEST PRECISION HALF WAVE AND FULL WAVE RECTIFIER

DEPARTMENT OF ELECTRONICS

SEM: VI SUBJECT: ANALOG INTEGRATED CIRCUITS & APPLICATIONS (AICA)
CLASS: TE

LIST OF EXPERIMENTS

SR. NO.	NAME OF THE EXPERIMENT
1.	TO STUDY THE OP-AMP BIASING & PARAMETERS.
2.	TO VERIFY OPERATION OF OP-AMP AS SUMMING AMPLIFIER OR ADDER AND DIFFERENCE AMPLIFIER OR SUBTRACTOR
3.	TO STUDY OPERATIONAL AMPLIFIER AS A INVERTING, NON INVERTING AMPLIFIER AND VOLTAGE FOLLOWER
4.	TO DESIGN AND TEST OP-AMP AS AN INTEGRATOR AND DIFFERENTIATOR TO FIND USEFUL FREQUENCY RANGE
5.	TO STUDY THE SQUARE WAVE GENERATOR USING OP-AMP (ASTABLE MULTIVIBRATOR)
6.	TO STUDY ASTABLE MULTIVIBRATOR USING IC 555 (TIMER)
7.	TO DESIGN AND TEST SCHEMITTI TRIGGER
8.	TO STUDY THE INSTRUMENTATION AMPLIFIER
9.	TO DESIGN LOW VOLTAGE REGULATOR USING IC 723
10.	TO STUDY THE SECOND ORDER BUTTER WORTH FILTER
11.	DESIGN AND TEST PRECISION HALF WAVE AND FULL WAVE RECTIFIER
12.	TO STUDY PLL IC 565

ACADEMIC YEAR 2008-09

DEPARTMENT OF ELECTRONICS ENGINEERING

SEM : VI

SUBJECT :DTSP

CLASS : TE

SR. NO.	NAME OF EXPERIMENT
1	MAGNITUDE & PHASE RESPONSE OF GIVE SYSTEM
2	MAGNITUDE AND PHASE RESPONSE OF LINEAR PHASE FILTER
3	CONVOLUTION OF SIGNALS
4	COMPUTATION OF DFT AND ITS APPLICATION
5	DESIGN OF BUTTERWORTH IIR FILTER
6	DESIGN OF CHEBYSHEV IIR FILTER
7	DESIGN FIR FILTERS USING WINDOWS-(RECTANGULAR, BATTLE, BLACKMAN, CHEBYSHEY, HAMMIMING, HANNING, KAISER)
8	DESIGN OF IIR FILTER USING BILINEAR TRANSFORMATION
9	CASCADING OF SIGNALS

K.J.SOMAIYA INSTITUTE OF ENGINEERING & INFORMATION TECHNOLOGY,
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EXPERIMENT LIST

SEM-VI Sub: DC & Coding Techniques

- 1) To study and analysis of digital signals using DPSK.
- 2) To study and analysis of digital signals using QPSK.
- 3) To study and analysis of digital signals using BFSK.
- 4) To study and analysis of digital signals using QAM
- 5) BER calculation for a digital communication system.
- 6) Huffman coding: Simulation using MATLAB.
- 7) Linear Block code: Simulation using MATLAB.
- 8) Cyclic Code Simulation using MATLAB and demonstration with kit.
- 9) Hamming Code Simulation using MATLAB and demonstration with kit.
- 10) Lempel Ziv coding Simulation using MATLAB.

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ACADEMIC YEAR- 2007-08

DEPARTMENT OF ELECTRONICS

SEM: VI SUBJECT: COMPUTER ORGANIZATION CLASS: TE

LIST OF EXPERIMENTS

Sr.No.	NAME OF EXPERIMENT
1	WRITE THE PROGRAM FOR THE ADDITION OF TWO 4-BIT BINARY NUMBERS USING C-PROGRAMMING
2	WRITE THE PROGRAM FOR THE SUBTRACTION OF TWO 4-BIT BINARY NUMBERS USING C-PROGRAMMING
3	WRITE THE PROGRAM FOR THE HEXADECIMAL OPERATION OF TWO 4-BIT BINARY NUMBERS USING C-PROGRAMMING
4	WRITE THE PROGRAM FOR BEST FIT FIRST FIT USING C-PROGRAMMING

ACADEMIC YEAR- 2009-10

DEPARTMENT OF ELECTRONICS

SEM:VII

SUBJECT: DCOM

CLASS:BE

LIST OF EXPERIMENTS

SR. NO.	NAME OF THE EXPERIMENT
1.	WAP TO IMPLEMENT THE OPTIMUM RECEIVER ALGORITHM
2.	WAP TO GENERATE SYSTEMATIC(N,K) BLOCK CODE
3.	WAP TO GENERATE CONVOLUTIONAL CODE
4.	WAP TO PLOT SNR TO CHANNEL CAPACITY
5.	WAP TO PLOT QPSK WAVEFORM
6.	WAP TO PLOT BPSK WAVEFORM
7	WAP TO PLOT FSK WAVEFORM
8	TO OBSERVE DIFFERENT DIGITAL MODULATION WAVEFORMS USING STUDY KIT

ACADEMIC YEAR- 2008-09

DEPARTMENT OF ELECTRONICS

**SEM: VII
CLASS: BE**

SUBJECT: VLSI

LIST OF EXPERIMENTS

CLASS: B.E.

SEM: VII

SUBJECT: Basics of VLSI

1. To study NMOS Transistor and its layout diagram
2. To study NMOS Transistor and its layout diagram
3. To design CMOS inverter schematic and its stick diagram and layout.
4. To design CMOS NAND gate schematic and its stick diagram and layout.
5. To design CMOS NOR gate schematic and its stick diagram and layout.

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Somaiya Ayurvihar Complex, Near Everard Nagar, Sion(E), Mumbai-400022

Department of Electronics Engineering

**Subject-Electronics Instrumentation
(B.E.Electronics)**

Semester- VII

List of Experiments

Sr.no	Name of Experiment
1	Resistance wire strain gauge for weight measurement.
2	To measure distance by using linear variable differential transformer.
3	To measure pressure using Piezo-resistive sensor.
4	Displacement measurement using LDR.
5	Resistance Temperature Detector.
6	To study the working of the instrumentation amplifier & designing it for gain of 100.
7	Study of PID controller.
8	Study of Programmable Logic Controller.

ACADEMIC YEAR- 2009-10

DEPARTMENT OF ELECTRONICS

SEM:VII

SUBJECT: IP

CLASS:BE

LIST OF EXPERIMENTS

SR. NO.	NAME OF THE EXPERIMENT
1.	Write a program to process the image, read & manipulate resolution of image
2.	Write a program to apply arithmetic & logical operations on the image
3.	Write a program to translate & rotate an image
4.	Write a program to zoom & shrink an image
5.	To perform thresholding operation on user defined image
6.	To obtain equalized histogram of image
7.	To study the effects of averaging filters, weighted averaging filter & median filter on a given image
8.	To perform differentiation using gradient operators 1) Sobel's gradient 2) Prewitts gradient 3) Roberts gradient

DEPARTMENT OF ELECTRONICS ENGINEERING

ACADEMIC YEAR- 2008-09

SEM: VIII

SUBJECT: POWER ELECTRONICS

CLASS: BE

LIST OF EXPERIMENTS

SR. NO.	NAME OF THE EXPERIMENT
1.	CHARACTERISTICS OF IGBT
2.	TO STUDY THE R. TRIGGER CIRCUIT FOR AC PHASE CONTROL OF TRIAC
3.	TO STUDY THE DIAC TRIGGER CIRCUIT FOR AC PHASE CONTROL OF TRIAC
4.	TO STUDY THE UJT TRIGGER CIRCUIT FOR AC PHASE CONTROL OF TRIAC
5.	TO STUDY TRIAC AND AC PHASE CONTROL USING R, DIAC & TRIAC
6.	TO STUDY SINGLE PHASE SCR PARALLEL INVERTER
7.	TO STUDY JONE'S CHOPPER (VOLTAGE COMMUTATED CHOPPER)
8.	TO STUDY SINGLE PHASE SCR SERIES INVERTER
9.	TO STUDY SCR TRIGGERING CIRCUIT USING IC TCA 785
10	TO STUDY SINGLE PHASE FULL WAVE CONTROLLED BRIDGE RECTIFIER
11.	TO STUDY SPEED CONTROLLED OF MOTOR USING DC CHOPPER

ACADEMIC YEAR- 2007-08

DEPARTMENT OF ELECTRONICS

SEM: VIII

SUBJECT: DCN

CLASS: BE

LIST OF EXPERIMENTS

SR. NO.	NAME OF THE EXPERIMENT
1.	LOCAL AREA CONNECTION
2.	STAR TOPOLOGY
3.	INTERNET CHECKSUM
4.	STOP AND WAIT PROTOCOL
5.	GO BACK N PROTOCOL
6.	SELECTIVE REPEAT PROTOCOL
7.	DTE_DTE INTERFACE USING RS232
8.	POINT TO POINT PROTOCOL
9.	STUDY OF NETWORK DEVICES
10.	ROUTING PROTOCOLS

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Department of Electronics & Telecommunication

YEAR 2009-10

LIST OF EXPERIMENTS

SEM-III

SUBJECT: ELECTRONIC DEVICES AND CIRCUITS -1

SR. NO.	Name of Experiment
1	Find out h-parameters of BJT.
2	Find out the Stability factor of BJT-Fixed biased circuit with R_e and without R_e.
3	Find out the R_{in}, R_o, A_v & A_i of CE-BJT amplifier and verify with theoretical value.
4	Design and implement CE-BJT amplifier and verify various parameters.
5	Find out the parameters of JFET
6	Draw the output and transfer characteristics of D-MOSFET, E-MOSFET.
7	Find out the R_{in}, R_o, A_v of CS-JFET amplifier and verify with theoretical value.
8	Design and implement CS-JFET amplifier and verify various parameters.
9	Design and implement transistorized Regulator (Series type) and verify various parameters.
10	Design and implement transistorized Regulator (Shunt type) and verify various parameters.
11	Draw the characteristics of TRAIC/ UJT.
12	Design and implement FWR with LC filter and verify various parameters.

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LIST OF EXPERIMENTS

SEMESTER: - III

SUBJECT :- ELECTRONIC INSTRUMENTATION

SR. NO.	Name of Experiment
1	Measurement of True RMS value using True RMS meter
2	To measure various physical phenomenon's viz. Temp, Pressure, Displacement etc. using different Transducers
3	Q- Value measurement using LCR meter.
4	To measure Bandwidth using universal counter
5	To measure X- amplifier bandwidth of CRO.
6	.To measure time constant of relay using DSO
7	To build a function generator using IC.
8	To generate arbitrary waveform using arbitrary waveform generator
9	To measure harmonics in different waveforms using FFT analyzer
10	To study any one modulation technique

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LIST OF EXPERIMENTS

SEM-III

SUBJECT : DIGITAL LOGIC DESIGN AND APPLICATIONS

Sr. No.	Name of Experiment
1	Implementation of X-OR and X-NOR using NAND and NOR
2	Design of Adder, Subtractor, BCD Adder using IC 7483
3	Implementation of logic equations using MUX, DEMUX
4	Design of Encoders and Decoders
5	Conversion of Flip-Flops
6	Design of Counters and Registers
7	Application of logic design – Parity Checker
8	Application of logic design – Sequence Detector

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LIST OF EXPERIMENTS

SEM-III

SUBJECT :ELECTRICAL NETWORKS

SR NO	Name of Experiment
1	To calculate Z parameters of two port network & calculate voltage transfer.
2	To calculate Y parameters of two port network & calculate voltage transfer.
3	To calculate ABCD parameters of two port network & calculate Cascade connections.
4	a) To calculate H parameters of two port network . b) To calculate H parameters of two port network connected in series parallel combination with each other.
5	To verify Thevenin's Theorem when there is a dependent source in the circuit.
6	To calculate RC Time constant .
7	To make current dependent current source.
8	To study the bodeplot.
9	To study FET which acts as a "Voltage connected current source"

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LIST OF EXPERIMENTS

SEM-IV

SUBJECT :- ELECTRONIC DEVICES AND CIRCUITS- II

SR NO	Name of Experiment
1	To study R-C Phase shift oscillator for diff. amplifier.
2	To study Astable multivibrator
3	To design cascade BJT amplifier & find its parameters.
4	To study frequency response of CS-CS Amplifier.
5	To plot frequency response for current series feedback.
6	To study the frequency response of CE-CE amplifier.
7	To study the diff. parameters CMR, Ad, Ac
8	To study frequency response of Darlington pair.
9	To study frequency response of CE-CS amplifier.

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LIST OF EXPERIMENTS

SEM-IV

SUBJECT : ELECTROMAGNETIC WAVE THEORY

SR. NO.	Name of Experiment
1.	Study of Coordinate System
2.	Study of Coulomb's Law
3.	Study of Hysteresis Loop
4.	Study of Transformer
5.	Study of Magnetic Induction

Semester: IV

**SUBJECT
:
PRINCIPLE**

S OF COMMUNICATION ENGINEERING

Sr. No.	Name of Experiment
1	Generation (DSB-FC) and detection of AM signal
2	Generation (DSB-SC) and detection of AM signal
3	Generation (SSB-SC) and detection of AM signal
4	Generation and detection of FM signal
5	Study of AM broadcast transmitter
6	Study of AM broadcast receiver (superhet)
7	Study of FM broadcast receiver (superhet)
8	Generation of PAM signal and verify the sampling
9	Generation of PWM and PPM signal
10	Generation of TDM
11	Generation of DM

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LIST OF EXPERIMENTS

Semester: IV

Subject : SOFTWARE SIMULATION WORKSHOP

SR. NO.	NAME OF EXPERIMENTS
1	SEQUEL Software <ul style="list-style-type: none">• Astable Multivibrator• Integrator
2	Tina Software <ul style="list-style-type: none">• Cascade Amplifier
3	Xilinx Software <ul style="list-style-type: none">• AND Gate• Full Adder• Half Adder
4	MATLAB Software <ul style="list-style-type: none">• Basic Commands• 2D Plot• Communication Tools
5	Linux Operating System <ul style="list-style-type: none">• Understanding File System• Command Terminals• Installation Procedure

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LIST OF EXPERIMENTS

Semester: IV

SUBJECT: ANALOG AND DIGITAL CIRCUITS

SR NO	Name of Experiment
1	To study Inverting & non Inverting modes of op-amp.
2	To study V-I & I-V converter using op-amp.
3	To design Low pass KRC filter for frequency 1 khz.
4	To design High pass KRC filter for frequency 1 khz.
5	To design Instrumentation amplifier using op-amp.
6	To study D-A converter using op-amp / Binary weighted resistors.
7	To study UP-Down Synchronous counter using IC 74193.
8	To study Universal shift register using IC 74193.
9	To study 4 –bit synchronous counter in VHDL.
10	To study 8-bit shift register asynchronous in VHDL.

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LIST OF EXPERIMENTS

Semester: V

SUBJECT : MICROPROCESSOR & MICROCONTROLLER

Sr. No.	Name of Experiment
1	WAP to perform a) Addition & Subtraction of 8-bit numbers b) Addition & Subtraction of 16-bit numbers
2	WAP to find the largest number in an array
3	WAP to a) Multiply two numbers b) Divide 16-bit by 8-bit number
4	WAP to sort numbers in Ascending order using 8051
5	Addition and Subtraction of two 16-bit numbers using 8051
6	WAP to sort numbers in Descending order using 8051
7	WAP to perform Block Transfer
8	ARM Processor

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LIST OF EXPERIMENTS

Semester : V

SUBJECT : SIGNALS & SYSTEMS

Sr. No.	Name of Experiment
1	Convolution of Discrete Time Signals
2	Signals Operations
3	Step and Impulse response of System using Laplace Transform
4	Sampling Theorem
5	Discrete Time Fourier Transform
6	Pole-Zero plot of Z-Transform
7	Realization structures of System

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LIST OF EXPERIMENTS

Semester: V

SUBJECT : RANDOM SIGNAL ANALYSIS

Sr. No.	Name of Experiment
1	Simulation of Discrete Random Variable and estimation of its PMF and CDF
2	Uniform, Exponential, Rayleigh and Gaussian Density Functions
3	Relation between Distribution and Density Functions
4	Calculate $P(x_1 \leq X \leq x_2)$, $P(X \leq x)$, $P(X \geq x)$, $P(x_1 \leq X \leq x_2)$, from Distribution and/or Density Function
5	Mixed Random Variable
6	Joint Density Distributions
7	Power Spectral Density
8	Random Process
9	Ergodic Process
10	LTI System with Stochastic Input

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LIST OF EXPERIMENTS

Semester : V

Subject : RADIO FREQUENCY CIRCUIT DESIGN

Sr. No.	Name of Experiment
1	Characterization of Resistors
2	Characterization of Inductors
3	Characterization of Capacitors
4	Study of Q in RLC Series Resonance Circuit
5	Study of Q in RLC Parallel Resonance Circuit
6	LP Filter Design
7	HP Filter Design
8	BP Filter Design
9	Tutorial on Smith Chart
10	DC Characterization of BJT
11	DC Characterization of FET

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LIST OF EXPERIMENTS

Semester : V

Subject : PRINCIPLES OF CONTROL SYSTEM

SR. NO	NAME OF EXPERIMENTS
1	Study of Type '0' and Type '1' Control System
2	Study of Closed loop Control System
3	Study of Bode Plot
4	Study of Error Detector
5	Study of Linear System Simulator
6	Study of Series Control System
7	Study of Time Response of First & Second Order System

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LIST OF EXPERIMENTS

SEM: VI

SUBJECT :TELEVISION AND VIDEO ENGINEERING

SR NO.	NAME OF THE EXPERIMENT
1	To study the special components of monochrome television receiver
2	To study layout of b/w television receiver
3	Waveform analysis of different points in colour television
4	To study the composite video signal for monochrome television receiver
5	To study the fault simulation and step by step fault finding procedure for colour tv receiver
6	To study the vif section through test points
7	To study the detailed circuit description of smps section
8	To study the circuit description and test points horizontal oscillator section
9	Vertical oscillator
10	Video and chroma section fault finding in colour tv receiver

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YEAR 2009-10
LIST OF EXPERIMENTS
SEM:VI

SUBJECT: ANTENNA WAVE PRAPOGATION

SR N O.	NAME OF EXPERIMENTS
1.	To study the radiation pattern of monopole antenna.
2.	To study the radiation pattern of (horizontal) simple dipole $\lambda/2$
3.	To study the radiation pattern (horizontal) of folded dipole $\lambda/2$
4.	To study the radiation pattern of yagi-uda antenna.
5.	To study the radiation pattern of end fire array Antenna
6.	To study the radiation pattern of cut paraboloid antenna.
7	To study the radiation pattern of loop antenna
8.	To study the radiation pattern of log periodic Antenna.
9.	To study the radiation pattern of rhombic antenna (vertical & horizontal).
10.	To study the standing wave ratio.

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LIST OF EXPERIMENTS

SEM:VI

SUBJECT: MICROCONTROLLER & EMBEDDED SYSTEM

Sr. No.	Name of Experiment
1	Architecture of 8051 Microcontroller
2	Addition of two 8-bit and 16-bit unsigned numbers
3	Transfer a Block of Data from Internal Memory to External Memory
4	Series Addition
5	Arrange numbers in Ascending Order / Descending Order
6	WAP $Y = AB + BC$ $= B (A + C)$
7	Multiply two 16 bit words using 80196
8	Divide two numbers (double word by word)

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LIST OF EXPERIMENTS

SEM: VI

SUBJECT: ELECTRONICS INSTRUMENTATION

Sr. No.	Name of Experiment
1	Instrumentation amplifiers
2	LVDT
3	RTD for temperature measurement
4	Strain gauge
5	Flow measurement
6	Pressure measurement
7	Photo detector circuit
8	Programmable logic controller
9	PID controller action on a process
10	Fuzzy logic based process control

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LIST OF EXPERIMENTS
SEMESTER: VII

SUBJECT: DATA COMPRESSION AND ENCRYPTION

SR NO.	NAME OF THE EXPERIMENT
1	HUFFMAN CODING
2	RUN LENGTH ENCODING
3	ARITHMETIC CODING
4	LZ77 DICTIONARY METHOD
5	BLOCK CIPHER ENCRYPTION
6	SUBSTITUTION CIPHER ENCRYPTION
7	MATRIX ENCRYPTION
8	RSA PUBLIC KEY ENCRYPTION
9	DIFFIE HELLMAN EXCHANGE
10	DIDCRETE COSINE TRANSFORM

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LIST OF EXPERIMENTS

Semester: VII

SUBJECT : DIGITAL COMMUNICATION

Sr. No.	Name of the Experiment
1	Study of eye diagram
2	Program to design 5 tap equalizer to reduce ISI
3	Program to generate BPSK signal
4	Program to generate QPSK signal
5	Program to generate MSK signal
6	Program to generate QAM signal & find efficiency
7	Program to calculate the probabilities of error
8	Program to generate Hamming code
9	Program to generate Cyclic code
10	Measurement of coding gain

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LIST OF EXPERIMENTS

SEM : VII

SUBJECT : DISCRETE TIME SIGNAL PROCESSING

Sr.No.	NAME OF EXPERIMENT
1	Magnitude & phase response of a system
2	Magnitude and phase response of Linear Phase Filter
3	Computation of DFT and its application
4	Design of Butterworth IIR filter
5	Design of Chebyshev IIR filter
6	Design of FIR filter
7	Design FIR Filters using Windows-(Rectangular, Bartlett, Blackman, Chebyshev, Hamming, Hanning, Kaiser)
8	Design of IIR Filter using Impulse Invariant Method.
9	Design of IIR Filter using Bilinear Transformation

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LIST OF EXPERIMENTS

SEMESTER: VII

SUBJECT : DIGITAL IMAGE PROCESSING

Sr.No	Name of Experiment
1	Reading & manipulation of resolution of image
2	Arithmetic & logical operations on image
3	Image rotation, scaling and translation
4	Image transform – forward & Inverse of image
5	Histogram and Histogram equalization of image
6	Smoothing filters
7	Sharpening filters
8	Compression filters
9	Thresholding

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LIST OF EXPERIMENTS

Sem: VII

SUBJECT : MOBILE COMMUNICATION

Sr. No:	Name of Tutorial
1	Q1) Define : Base Station, Mobile Station and Page Q2) Write a short note on : FDD and TDD Q3) Compare CDMA TDMA and FDMA
2	Q1) Write a short note on: Paging System and Cordless System Q2) Compare with respect to Base Station and Mobile Station the following: i) Paging Systems ii) Cordless System iii) Cellular System Q3) Explain the operational units of cellular system
3	Q1) Explain cellular mobile system operation with mobile and base station. Q2) Write a note on Handoff and frequency reuse Q3) Why should the cell be in hexagonal shape?
4	<u>Q1) WRITE A NOTE ON CELL SPLITTING AND CELL SECTORING</u> Q2) What is trunking and grade of service? Q3) Compare inter system handoff and intra system handoff
5	Q1) Write a note on supervisory signals used in AMPS/ETACS systems. <u>Q2) COMPARE AMPS AND ETACS RADIO INTERFACE SPECIFICATIONS</u> <u>Q3) EXPLAIN CALL HANDLING IN AMPS AND ETACS</u> <u>Q4) WRITE A NOTE ON N-AMPS</u>
6	<u>Q1) EXPLAIN GSM ARCHITECTURE</u> <u>Q2) LIST THE GSM AIR INTERFACE</u>

	<u>SPECIFICATIONS</u>
	Q3) Explain GSM Channels Q4) Explain Signal processing in GSM
7	Q1) Explain forward link and reverse link structure of IS-95(CDMA) Q2) Explain with block diagram forward CDMA channel modulation process Q3) Explain with block diagram reverse CDMA channel modulation process

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LIST OF EXPERIMENTS

SEMESTER:- VII

SUBJECT : MICROWAVE DEVICES & CIRCUITS

Sr.No	Name of Experiment
1.	Study of KLYSTRON characteristics
2.	Study of propagation of Microwave
3.	Measurement of Frequency
4.	Measurement of Impedence
5.	Measurement of Gain & Radiation pattern of Horn Antenna
6.	Attenuation Measurement
7.	Measurement of Impedance using REFLEXOMETER
8.	To measure dielectric constant of solid

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LIST OF EXPERIMENTS

Semester: VIII

SUBJECT : RADAR ENGINEERING

1	Problems on Radar Equation
2	Study of existing Radar system in world
3	Problems on Radar Equation(noise, transmitted
4	Problems on Radar target topic
5	Problems on Radar clutter
6	Problems on Radar Navigational & remote sensing Radar
7	Theory question linding system & hyperbolic
8	Different Pulse indicators
9	University paper problems

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LIST OF EXPERIMENTS

SEMESTER:- VII

SUBJECT : COMPUTER COMMUNICATION & NETWORKS

Sr. No.	NAME OF EXPERIMENT
1	Find CRC bits for a given message & implement error detector
2	Establish point to point communication between two nodes in the network
3	Establish broadcast communication from one node to all other nodes
4	Management of nodes in the network. (Delete, Add, Token management)
5	Data communication between two nodes using Stop & Wait, Go back N normal Mode
6	Data communication between two nodes using Data Encryption & Decryption, Error detection & correction
7	Implementation of Bellman Ford algorithm to find shortest path
8	Implementation of Dijkstra's algorithm to find shortest path
9	Implementation of Leaky Bucket's algorithm for congestion control
10	Bit and Byte stuffing method of framing in Data Link Control

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LIST OF EXPERIMENTS

SEM: VIII(EVEN)

SUBJECT: OPTICAL FIBER COMMUNICATION

SR.N O	NAME OF EXPERIMENTS
1.	Setting Of Fiber Optic Analog Link
2.	Setting Of Fiber Optic Digital Link
3.	Propagation Loss And Bending Loss In Optical Fiber
4.	Measurement Of Numerical Aperture
5.	Characteristics Of Laser Diode
6.	Study Of Splices And Connectors

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DEPARTMENT OF INFORMATION TECHNOLOGY

Class: S. E.

Semester: III

SUBJECT: Digital Logic Design & Applications

1. Study of basic Logic gates on IC"s
2. 2's complement subtraction using IC 7483
3. Study of ALU IC 74181 (Active high and Active low)
4. 4 bit magnitude comparator using 7485.
5. Study of flips flops using IC 74746
6. Mod -100 counter using IC 7490 and IC 7493
7. Study of bidirectional shift register IC 74194/7495
8. Basic logic gates on VHDL and implementation on CPLD/ FPGA
9. Design of BCD adder on any stimulation package
10. Implementation of Combinational circuits on VHDL
11. Implementation of Sequential circuits on VHDL

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DEPARTMENT OF INFORMATION TECHNOLOGY

CLASS : S.E.

SEMESTER : III

SUBJECT: DATA STRUCTURES & ALGORITHM

List of Experiments

1. Program to implement operators in java
2. Program to implement gross salary (Using if else statement)
3. Program to display the sum and reverse of the number.
4. Program for method of overriding in java.
5. Program to arrange the elements of array in ascending order.
6. Program for matrix operation in 3D array.
7. Program to implement string operations.
8. Program to implement bubble sort and insertion sort.
9. Program to implement shell sort and heap sort.
10. Program to implement merge sort and quick sort.
11. Program to implement binary search.
12. Program to implement stack-using array.
13. Program to convert infix expression to postfix expression.
14. Program to implement queue-using array.
15. Program to implement circular queue using array.
16. Program to implement linked list using array
17. Program to implement circular queue using array.
18. Program to perform various operations such as insertion, deletion, search, and display using single linked list.
18. Program to implement circular linked list and doubly linked list.
19. Program for implementation of simple binary search tree and perform traversals (Inorder, Postorder, Preorder)
20. Program to implement Binary search tree and perform operations insertion, deletion, searching and display.

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DEPARTMENT OF INFORMATION TECHNOLOGY

Class: S. E.

Semester: III

SUBJECT: Electronics Devices & Linear Circuits

LIST OF EXPERIMENTS

1. Characteristics of Transistor in CE configuration.
2. Transistor as an amplifier.
3. Op-amp as an inverting and non-inverting amplifier.
4. Op-amp as an integrator and differentiator.
5. Second order low pass Butterworth Filter using IC 741.
6. Wein Bridge Oscillator using Transistor.
7. Voltage Regulator using IC 723.
8. Fixed voltage regulator using IC 7805/IC 7812.
9. Monostable Multivibrator using IC555.
10. Astable Multivibrator using IC555.

SUBJECT: Database Systems & GUI

1. Library Management System
2. Income Tax Calculation System
3. Payroll System
4. Merit List Management System
5. Inventory Management System
6. Multiple forms and MDI form
7. Menus, pull down menu and pop up menu
8. Database connectivity using command objects and connection objects

SUBJECT: Digital logic and design analysis

1. To Study of Basic Gates on IC's and verify using truth table
2. To study 2's complement subtraction using IC 7483
3. To study 4 bit magnitude comparator using 7485
4. To Study of Flips- Flops using IC 74746
5. To study bidirectional shift register IC 74194/7495
6. To study Mod-100 counter using IC 7490 and IC 7493
7. To study Basic logic gates on VHDL and Implementation on CPLD/FDGA
8. To study shift register using VHDL
9. To study comparator using VHDL
10. To study ALU and counter using VHDL

SUBJECT: Electronic Devices and ckts

1. To Study and calculate "H" parameter of CE configuration
2. To study BJT as an Amplifier
3. To study BJT as a transistor
4. To study OP-AMP as an inverting and non- inverting amplifier
5. To study OP-AMP as a differentiator and integrator ckt
6. To study first order low pass Butterworth filter
7. To study operation of Wein Bridge oscillator
8. To study IC 555 as Astable Multi vibrator
9. To study IC 55 as Mono- Stable Mulibrator
10. To study operation of voltage regulator

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Experiment List

Subject :- Object Oriented Analysis & Design

Sem :- V

Class :- T. E.

1. Analysis – 1
2. Analysis – 2
3. Use Case Diagram
4. Sequence Diagram
5. Collaboration Diagram
6. Activity Diagram
7. Class Diagram
8. Testing , Debugging & Porting
9. Component Diagram
10. Deployment Diagram

CLASS: T.E.

SEMESTER: V

SUBJECT: Convergence of Technologies and Networking in communication

1. To study PC to PC communication
2. To study ASK, FSK, PSK techniques.
3. To study handoff algorithm for Adhoc wireless networks.
4. To study bellman ford algorithm
5. To study dijkshtras algorithm
6. TO study OFDM
7. To study static allocation scheme
8. TO study dynamic allocation scheme
9. To study various types of signaling techniques.
10. TO study various types of encryption techniques.
11. Simulation of routing [protocols using NS.

CLASS: T.E.

Sub: Open Source S/W lab

SEM: V

List of Experiments

1. Linux OS Installation
2. System Accounting and Logging
3. File Systems
4. Shell Scripts
5. Logic Development
6. Command Line Argument Handling
7. Loops Using while and for statement
8. Arithmetic in shell scripting
9. File handling
10. Screen handling/echo command with escape sequence code
11. Background process implementation
12. User interface and functions in shell script
13. Application development using tools like network simulators, MySQL Database.

CLASS: T.E.

SEMESTER: V

SUBJECT: COMPUTER GRAPHICS AND VIRTUAL REALITY SYSTEMS

Laboratory Manual

1. To implement Bresenham line drawing algorithm
2. Implement a program which rotates an arrow through 30 degree about a point selected by the user. (2D Transformation)
3. Implement a program to rotate a cube about an axis parallel to a diagonal of its top plane. (3D Transformation)
4. To implement Cohen-Sutherland line clipping algorithm.
5. Implement the Sutherland-Hodgman polygon clipping algorithm.
6. Implement Boundary Fill polygon filling algorithm.
7. Write a program to implement Beizer curve segments. (Generation of 2D curves)
8. Write a program to implement koch curves. (Fractals)
9. Study of VR Architectures.
10. Write a program to display 3D objects. (VR Programming using toolkits)
11. Write a program to show positioning of objects. (VR Programming using toolkits)

SUBJECT: Computer Programming Lab

- 1) Write a program to display the message "Hello World".
- 2) Write program to display information of employees using classes and objects.
- 3) Write a program to implement command line arguments.
- 4) Write a program to accept the string from the user using String classes.
- 5) Write program to create Frame in Java.
- 6) Write a program to add Buttons and Textfield on a frame.
- 7) Write a program to implement ItemListener class.
- 8) Write a program to implement MouseListener class.
- 9) Write a program to implement Menubar.
- 10) Write a program to create Applet with Buttons and Textfield etc.
- 11) Write a program to create login window.

SUBJECT: Software Engineering

1. Feasibility study and cost benefit analysis
2. Case study on Risk analysis.
3. Case study on project estimation(LOC,FP,COCOMO Model)
4. Case study on Requirement Engineering (SRS document, Gantt, PERT chart)
5. Case study on SCM
6. Case study on design concept
7. Case study on Testing (unit, integration, system, white box, block box testing)
8. Case study on maintenance (corrective, adaptive, perfective)
9. Case study on reliability metrics.
10. Mini project

List of Experiments

1. Study of UNIX,Windows NT Operating System
2. Program to Implement Round Robin,FCFS Scheduling
3. Program to Implement FIFO Page Replacement Algorithm
4. Program to Implement LIFO Page Replacement Algorithm
5. To Implement Priority Scheduling Algorithm
6. To Implement Shortest Path Algorithm
7. Program for Symbol Table Generation of Tokens by Lexical Analysis
8. Program to Design Macro Preprocessor
9. Program to Design an Assembler
10. Case Study of LINUX

Subject :- Computer Simulation & Moduling

Sem :- VII

Class :- B. E.

- 1. Problem Definition**
- 2. Objectives & Project planning**
- 3. Model Conceptualization**
- 4. Data Collection**
- 5. Model Translation**
- 6. Verification & Validation**
- 7. Experimental Design**
- 8. Production runs & Analysis**
- 9. Documentation & Reporting**

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CLASS: B.E

SEMESTER: VII

SUBJECT: Mobile Communication

1	Form Navigation using J2ME
2	Calculator using J2ME
3	Animation using canvas class in J2ME
4	Address Book using Record Management System of J2ME
5	Destination Source Distance Vector Routing
6	Dynamic Source Routing
7	Study of 802.11 Wlan using Cheetah Access Point
8	Study of Ad-hoc Network using Bluetooth Technology
9	Study of File Transfer using Bluetooth
10	Create a webpage using Wireless Markup Language
11	Demonstration of GSM using GT - 47
12	Simulate working of mobile network algorithms using Network Simulator

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Class: B. E.

Semester: VII

SUBJECT: IMAGE PROCESSING

List of Experiments:

1. Basic Gray Level Transformation
 - i. Image Negative
 - ii. Log Transformation
 - iii. Power Law Transformation
2. Piecewise Linear Transformation Function
 - i. Contrast Stretching
 - ii. Gray Level Slicing
 - iii. Bit Plane Slicing
3. Histogram Processing
4. Image Sharpening using Spatial Filters
 - i. Implementation of Digital Laplacian Filter Mask
 - ii. Implementation of Sobel Operator for Edge Enhancement
5. Image Smoothing in Frequency Domain
 - i. Implementation of Butterworth Low Pass Filter
6. Image Sharpening in Frequency Domain
 - i. Implementation of Butterworth High Pass Filter
7. Edge Detection
8. Region Growing
9. Chain Codes
10. Huffman coding

1. To generate the MIS report on College (KJSIE / IT)
2. To generate the MIS report on any Restaurant
3. To generate the MIS report on Organization Survey
4. To generate the MIS report on Hospital
5. To generate the MIS report on any Industry
6. Case study on (MIS at manufacturing company)
7. Case study on conceptual design system.
8. Case study on detailed design system.
9. Case study on XYZ Bank

- 1) To study Specialization and Generalization with the help of an example.**
- 2) Write queries in SQL as to implement the CUBE & ROLL-UP methods.(Data warehousing)**
- 3) To implement data fragmentation that is to create a table partition in the table & enter the value in the table.(Data Fragmentation)**
- 4) To implement Object Oriented Database.(Object Oriented Database Implementation)**
- 5) To implement Object relational database.(Object Relational Database Implementation)**
- 6) To implement Extensible Markup Language(XML) using Extensible Stylesheet language(XSL).(Database Types XML)**
- 7) To implement Geographical Database.(Geographical Database)**
- 8) To implement Temporal Database.(Temporal Database)**
- 9) To implement Distributed Database.(Distributed Database)**
- 10)To implement Multimedia Database.(Multimedia Database)**

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Class: B. E.

Semester: VII

SUBJECT: Mobile Computing

1. Study of Java 2 Micro Edition
2. Implementing GUI and menu based J2ME application
3. Create a form allowing user to enter the data
4. Multiple form creation
5. Implement a program to show the usage of canvas and graphics classes
6. Write a program to draw different types and sizes of fonts
7. Creating a clipping region
8. Program for writing and reading string based records
9. To fetch a file from a server using HTTP connection
10. Bluetooth Demonstration

CLASS : B.E.

SEMESTER : VIII

SUBJECT: DATA WAREHOUSING & MINING

List of Experiments

11. Study of Business Requirement for Creating Data Warehouse
12. Creation of Operational System
13. Extraction, Transformation and Loading Process, cube & Rollup Analysis
14. Creation of STAR Schema
15. Creation of Snowflake Schema
16. Study of Weka Tools
17. To Implement Clustering Algorithm
18. To Implement Classification Algorithm
19. To Implement Association Algorithm
20. Study of Web Mining Spatial Mining & Temporal Mining

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DEPARTMENT OF INFORMATION TECHNOLOGY

Class: B.E

Semester: VIII

SUBJECT: Project Management

1. Prepare Gantt chart of project
2. Prepare Calender of project
3. Prepare Network Diagram of project
4. Prepare Tracking chart of project
5. Prepare Task Usage of project
6. Prepare Resource Graph of project
7. Prepare Resource sheet of project
8. Prepare Relationship Diagram of project
9. Prepare Resource form of project
10. Prepare PERT and Gantt chart of project

. J

Subject :- Information Security

Sem :- VIII

Class :- B. E.

- 1. Program to implement Substitution Cipher**
- 2. Program to implement Transposition Cipher**
- 3. Program to implement RSA Algorithm**
- 4. Program to implement Deffi-Hellman Algorithm**
- 5. Program to implement DES Algorithm**
- 6. Program to implement MD5 Algorithm**
- 7. Program to implement Digital Signature Algorithm**
- 8. Study of Virus**
- 9. Study of Firewalls**
- 10. Program to implement Authentication of Database**

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Engineering Mechanics

LIST OF EXPERIMENTS

SR. NO.	NAME OF EXPERIMENT
1	COPLANAR CONCURRENT FORCES
2	NON-COPLANAR CONCURRENT FORCES
3	SUPPORT REACTIONS
4	FRICTION
5	COMPOUND PENDULUM
6	MOMENT OF INERTIA OF FLYWHEEL
7	BELL CRANK LEVER

App. Chemistry

LIST OF EXPERIMENTS

FE.SEM-1

- 1. Estimation of Acid Value of Lubricant.**
- 2. Saponification Value of Oil.**
- 3. Hardness of Water**
- 4. Estimation of the amount of Chloride**
- 5. Measurement of Viscosity**
- 6. Abel's Flashpoint apparatus**
- 7. P^H Meter**

FE.SEM-1I

- 1. Estimation of Cu in Brass**
- 2. Estimation of Zn in Bass**
- 3. Estimation of Fe in carbon Steel**
- 4. Estimation of Tin in Solder Alloy**
- 5. Moisture content in the given Coal Sample**
- 6. Estimation of Ni in an Alloy.**

APPLIED SCIENCE (PHYSICS)

LIST OF EXPERIMENTS

SEMESTER – I

1. Miller Indices using Crystal Models.
2. Determination of Atomic Packing Factor using Crystal Models.
3. Use of Cathode Ray Oscilloscope.
4. Study of Ultrasonic Distance Meter Kit.
5. e/m by Thomson's Method.

SEMESTER – II

1. Determination of Angle of Wedge in Wedge shaped Film.
2. Determination of Radius of curvature of plano-convex lens by observing Newton's Rings.
3. Study of Optical Fiber Transmitter and Receiver Kit.
4. Determination of wavelength of light using Diffraction Grating.
5. Study of law of Exponential Decay.

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WORKSHOP

LIST OF EXPERIMENTS

FE.SEMESTER - I

- 1. CROSS JOINT (CARPENTRY SHOP)**
- 2. 'T' JOINT (WELDING SHOP)**
- 3. SIMPLE FITTING 'L' TYPE (FITTING SHOP)**
- 4. ELECTRIC WIRING (ELECTRIC WIRING LAB.)**

FE.SEMESTER – II

- 1. 'T' JOINT (CARPENTRY SHOP)**
- 2. THREADING PRACTICE (PLUMBING SHOP)**
- 3. MALE-FEMALE JOINT (FITTING SHOP)**
- 4. PRINTED CI**
- 5. CIRCUIT BOARD (PCB LAB)**