List of Experiments

ETE 112

Structured Programming Laboratory

Lab module 1: Basic Programming with Mathematical expression.

- **Experiment no.1:** Write a C program which will print your name, ID, Sept and University name on the Screen.
- **Experiment no. 2:** Write a C program which will print your salary statement.
- **Experiment no. 3:** Write a C program which will convert Fahrenheit value into Celsius and any length into meter and feet.
- **Experiment no. 4:** Write a C program which will swap two values.
- **Experiment no. 5:** Write a C program which will reverse a 4 digit number.

Lab module 2: Control Statements

- **Experiment no. 6:** Write a C program which will determine whether the number is even or odd.
- **Experiment no. 7:** Write a program which will determine the greatest and least between 3 given numbers.
- **Experiment no. 8:** Write a program which will print the Fibonacci Series.
- **Experiment no. 9:** Write a C program which will print the greatest and lowest between n numbers.

Lab Module 3: Array, String

- **Experiment no. 10:** Write a C program which will print a string and determine the number of characters in the string.
- **Experiment no. 11:** Write a C program which will generate a 5X5 matrix and will add all the elements of the matrix.

Lab Module 4: Functions, Pointers.

- **Experiment no. 12:** Write a program which will determine the greatest and least between 3 given numbers. (Call by value & Call by reference)

ETE 132

Electrical Circuits 1 Laboratory

Exp. No: 1 Construction and Operation of Simple Electrical Circuits.
Exp. No: 2 Verification of Ohm's Law and it's application.
Exp. No: 3 Verification of Kirchhoff's Voltage Law (KVL) & Voltage Divider Rule (VDR).
Exp. No: 4 Verification of Kirchhoff's Current Law (KCL) & Current Divider Rule (CDR).
Exp. No: 5 Verification of Superposition Theorem.
Exp. No: 6 Verification of Thevenin's Theorem.
Exp. No: 7 Verification of Norton's Theorem.
Exp. No: 8 Verification of Maximum Power Transfer Theorem.
Exp. No: 9 Verification of Reciprocity Theorem.
Exp. No: 10 Verification of Delta (Δ) to Wye (Y) and vice versa transformation.

ETE- 214

Electrical Circuits II Laboratory

Exp. No: 1 Familiarization with alternating current (AC) waves.
Exp. No: 2 Measurement of RMS and Average values.
Exp. No: 3 Verification of KVL in AC circuits.
Exp. No: 4 Verification of KCL in AC circuits.
Exp. No: 5 Series Resonance with Variable Capacitance.
Exp. No: 6 AC Power measurement using wattmeter.
Exp. No: 7 Frequency Response of RC Filters.
Exp. No: 8 Characterization of RL circuits.
Exp. No: 9 Reactance of Capacitor and Inductor from RL and RC circuit.
Exp. No: 10 Verification of Maximum Power Transfer Theorem.

ETE 214

Electronics I Laboratory

Exp. No: 1 Study of Diode Characteristics.
Exp. No: 2 Study of Zenor Diode Voltage Regulator.
Exp. No: 3 Study of Diode Rectifiers.
Exp. No: 4 Study of Clipper and Clamper Circuits.
Exp. No: 5 Study of BJT biasing circuit.
Exp. No: 6 Study of the output characteristics of CE Configuration of BJT.
Exp. No: 7 Determination of voltage gain of a signal stage BJT amplifier.
Exp. No: 8 Determination of voltage gain of cascaded BJT amplifier.
Exp. No: 9 BJT Frequency Response Amplifier.
Exp. No: 10 Study of JFET Characteristics.

ETE 222

Measurement and Instrument Laboratory

Exp. No: 1 Introduction to Oscilloscope and Function Generator.
Exp. No: 2 Resistance Measurement by Wheatstone bridge.
Exp. No: 3 High Resistance Measurement by Loss of Charge Method.
Exp. No: 4 Capacitance Measurement Using 555 Timers / TO measure an unknown Capacitance using mono-stable timer.
Exp. No: 5 Design of Active Filter: High pass filter.
Exp. No: 6 Design of Active Filter: Low pass filter.
Exp. No: 7 Design of Active Filter: Band pass filter.
Exp. No: 8 Introduction to Thermistor, Light Dependent Resistor (LDR) and Photodiode.
Exp. No: 9 Study of Basic Differential Amplifiers.
Exp. No: 10 Introduction to Analog to Digital (A/D) and Digital to Analog (D/A) Conversions.

ETE 224

Electronics II Laboratory

Exp. No: 1 Experimental Study of MOSFET and BJT inverter.
Exp. No: 2 Determination of Voltage gain of a signal stage BJT amplifier.
Exp. No: 3 Voltage Series Feedback Amplifier.
Exp. No: 4 Gain Calculation for Multi Stage Amplifier.
Exp. No: 5 Experimental Study of an inverting Amplifier using Op-Amp.
Exp. No: 6 Experimental study of non-inverting amplifier using Op-Amp.
Exp. No: 7 Determination of maximum output voltage swing of non-inverting /inverting amplifier using Op-Amp.
Exp. No: 8 Determination of slew rate of an Op-Amp.
Exp. No: 9 Study of Wein Bridge Oscillator.
Exp. No: 10 Study of Phase shift Oscillator.

ETE-226

Signals and Communication System Laboratory

Exp. No: 1 Introduction to MATLAB.
Exp. No: 2 Basic Plotting and Matrix generation using MATLAB.
Exp. No: 3 Array operation and Linear equation generation.
Exp. No: 4 Introduction to Programming in MATLAB.
Exp. No: 5 Simulate the signals (sinusoidal, impulse, ramp and step signals) in MATLAB.
Exp. No: 6 Verification of the properties of LTI system in MATLAB.
Exp. No: 7 Convolution and correlation of two signals using MATLAB.
Exp. No: 8 Analysis of LTI system using Z-transform in MATLAB.
Exp. No: 9 Find out the system impulse response of a linear system using transfer function.
Exp. No: 10 Simulation of Fourier transform in MATLAB.

ETE-236

Digital Electronics Laboratory

Exp. No: 1	Verification of the Basic Logic Gates Characteristics
Exp. No: 2	AND-OR-INVERTER (A-O-I) Gate Circuits
Exp. No: 3	De Morgan's Laws Using the Logic Gates
Exp. No: 4	Karnaugh Map (k-Map) Minimization
Exp. No: 5	Design Of Half-Adder & Full-Adder Circuit
Exp. No: 6	Design and Implementation of Comparators
Exp. No: 7	Design and Implementation of Decoder Circuit
Exp. No: 8	Design and Implementation of Encoder Circuit
Exp. No: 9	Design and Implementation of Multiplexer Circuit
Exp. No: 10	Design and Implementation of De- multiplexer Circuit

ETE-238

Digital Communication Laboratory

Exp. No: 1	Amplitude Modulation and Demodulation.
Exp. No: 2	Frequency Modulation and Demodulation.
Exp. No: 3	Amplitude Shift keying.
Exp. No: 4	Frequency Shift Keying.
Exp. No: 5	Binary Phase Shift Keying.
Exp. No: 6	Quadrature Phase Shift Keying.
Exp. No: 7	SSB Modulation and Demodulation.
Exp. No: 8	DSBSC Modulation and Demodulation.
Exp. No: 9	Double Sideband (DSB) Modulation and Demodulation.
Exp. No: 10	Sampling and Reconstruction.

ETE 314

Numerical Analysis Laboratory

Exp. No: 1 Introduction to MATLAB
Exp. No: 2 Script Files in MATLAB
Exp. No: 3 Solution of Nonlinear Equation by Method of False Position.
Exp. No: 4 Solution of nonlinear equations using Iteration.
Exp. No: 5 Finding root of an equation using Bisection Method.
Exp. No: 6 Finding root of an Equation by Newton Raphson Method.
Exp. No: 7 Solution of Simultaneous Equation of a Linear System by Gauss-Seidal (Iterative) Method.
Exp. No: 8 Solution of Simultaneous Equation of a Linear System by Gauss-Jordan (direct) Method.
Exp. No: 9 Numerical Integration Formulae (Trapezoidal and Simpson's 1/3 rule) for Equidistant x co-ordinates
Exp. No: 10 Interpolating a table of data by Newton's forward and backward difference interpolation formula, Lagrange's Interpolation formula and Inverse Lagrange's Interpolation formula.

ETE-316

Telecommunication Networks Laboratory

Exp. No: 1 To Study the basic telephony system ISDN & SS7.
Exp. No: 2 Study of basic Mobile Communication system.
Exp. No: 3 To Study the Configuration of Digital Exchange and Connection the telephones.
Exp. No: 4 Testing the main board Signals of digital Exchange.
Exp. No: 5 To observe the all phases of Establishment a call Using Analog Telephone and proprietary.
Exp. No: 6 To observe the ISDN Lines and to make call Using ISDN Phone.
Exp. No: 7 Introducing To VOIP,SIP and H323.
Exp. No: 8 To set up Linux Based Elastix IPPBX system.
Exp. No: 9 To Get up to PC call by Using Elastix IPPBX system.
Exp. No: 10 To Set up Trunk Call by Using Elastix IPPBX System

ETE-318

Microprocessor and Interfacing Laboratory

No.	Experiment Name
A (Introduction to assembly language)	
A1	Signal character string and number printing to display using assembly language
A2	Using loop and conditional jumps in assembly language
A3	Use to subroutine and macro in assembly language
B (Interfacing using 8086)	
1	Introduction of microprocessor kit 8086 and to right instruction to memory and execute.
2	Performance of mathematical operation using 8086
3	Interfacing 8086 with serial monitor and writing an assembly language program using 8086 and serial monitoring
4	Write a program to turn ON/OFF the LEDs present in MDE 8086 kit
5	To write a program to demonstrate I/O operation, creating. ABS file of it and loading it using wincomm software
6	Writing a C language program to turn ON/OFF 8*8 matrix LED present in microprocessor 8086 kit and to memory using wincomm
7	Introduction to FPGA and Verilog.

ETE 319

Simulation Laboratory

Exp. No: 1	Fast decoupled load flow analysis using MATLAB Software.
Exp. No: 2	Fault analysis using MATLAB Software.
Exp. No: 3	Economic dispatch using MATLAB Software.
Exp. No: 4	Load flow analysis using ETAP Software.
Exp. No: 5	Fault analysis using MIPOWER Software.
Exp. No: 6	Introduction to PSpice.
Exp. No: 7	DC circuit analysis using dependent sources.
Exp. No: 8	AC circuit analysis.
Exp. No: 9	Transient Analysis for AC and DC
Exp. No: 10	Design and simulation of active fitters.

ETE-322

Digital Signal Processing Laboratory

Exp. No: 1	Study of Sampling, Quantization and Encoding.
Exp. No: 2	Time domain analysis of discrete time signals and systems
Exp. No: 3	*Z*-transform and Its Application
Exp. No: 4	Frequency domain analysis of DT signals and systems
Exp. No: 5	FIR Filter Design

ETE-324

Industrial and Power Electronics Laboratory

Exp. No: 1 Experimental study of A single Phase Full Wave Uncontrolled Rectifier With Resistive Load.
Exp. No: 2 Performance Study of a Single Phase Bridge Rectifier With Inductive Load
Exp. No: 3 Performance of a Single Phase Bridge Rectifier with Resistive Load
Exp. No: 4 Performance Study of A Single Phase Bridge Rectifier With Inductive Load.
Exp. No: 5 I-V Characteristics of SCR,.
Exp. No: 6 Half Wave Controlled Rectifier Using SCR.
Exp. No: 7 Single Phase Square Wave Inverter.
Exp. No: 8 Three Phase Square Wave Inverter.
Exp. No: 9 Characteristics of DIAC and TRIAC.
Exp. No: 10 Study of an UJT switching circuit.

ETE-332

Computer Network Laboratory

Exp. No: 1 Building straight through and crossover UTP cables.
Exp. No: 2 Basic router configuration.
Exp. No: 3 Subnet and router configuration.
Exp. No: 4 Basic static route configuration.
Exp. No: 5 Challenge route configuration.
Exp. No: 6 Basic RIP configuration.
Exp. No: 7 Challenge RIP configuration.
Exp. No: 8 Basic OSPF configuration.
Exp. No: 9 Challenge OSPF configuration
Exp. No: 10 Basic EIGRP configuration.

ETE 336

Control System Laboratory

Exp. No: 1 Modeling of physical systems and study of their open loop response.
Exp. No: 2 PDI design method for DC motor speed control.
Exp. No: 3 Some impotent elementary signals generation.
Exp. No: 4 Finding step responses and various parameters of different systems simulated on a pc in math lab for given transfer functions
Exp. No: 5 Find the poles and zeros of a given transfer function
Exp. No: 6 Find the transfer function of a system form its natural frequency of oscillation and damping ratio
Exp. No: 7 Studying root locus control systems simulated using mat lab
Exp. No: 8 Characteristic of an On/Off temperature control system
Exp. No: 9 Characteristics of a light controlled On/Off control
Exp. No: 10 Characteristics of a positional control system

ETE-416

Microwave Engineering Laboratory

Exp. No: 1 Measuring the Microwave signal.
Exp. No: 2 Polarization of Microwaves.
Exp. No: 3 Reflection of Microwaves.
Exp. No: 4 Radar and Radio Propagation.
Exp. No: 5 Penetration properties of Materials.
Exp. No: 6 Standing Wave Measurement.
Exp. No: 7 Diffraction.
Exp. No: 8 Interference.
Exp. No: 9 Patch Antenna design Using CST.
Exp. No: 10 Dipole Antenna Design Using CST.