

OBJECTIVE

To know theorems and techniques to analyze electric circuits, electronic devices and their characteristics, important power supply designs, and design of amplifiers, oscillators and opamp circuits.

UNIT – I VOLTAGE AND CURRENT LAWS 9

Nodes, Paths, Loops, and Branches; Kirchoff's Current Law, Kirchoff's Voltage Law, Single Loop Circuit, Single Node-Pair Circuit, Series and Parellel Connected Independent Sources, Resistors in Series and Parellel, Voltage and Current Division

UNIT – II CIRCUIT ANALYSIS TECHNIQUES 9

Linearity and Superposition, Sources Transformation, Thevinin and Norton Equivalent Circuits, Maximum Power Transfer, Delta-Wye Conversion, Single Phase and 3 Phase Circuits-Power Factor-Power-Concept of Phasor Diagrams.

UNIT – III SEMICONDUCTOR DEVICES 9

PN-Junction Diode- Drift and Diffusion Current-Zener Diode-Zener Regulator-BJT- VI Charecteristics-CE Configuration-Current Equation h-Parameter Model.JFET- V-I Charesteristics- Current Equation- Transconductance MOSFET-Types DMOS, EMOS – V-I Charesteristics-Moll Current Equation.

UNIT – IV RECTIFIERS, AMPLIFIERS AND OSCILLATORS 9

FWR-Filter-Capacitance Input Filter-Choke Input Filter – CE Amplification with and without feedback – Analysis and Frequency Response – CS MOSFET Amplifier – Analysis

UNIT – V OPERATION AMPLIFIER 9

Introduction of an Inverting Amplifier, Non Inverting Amplifier, Basic Application of Operation Amplifier: Subractor, Summing Amplifier, Digital to Analogue Convertor, Low Pass Filter, First Order Low Pass Filter, First Order High Pass Filter, Integrator, Differentiator.

TOTAL: 45**TEXT BOOKS:**

1. David A.Bell 'Electronic Devices and Circuit/ -Oxford press-2008.

2. Robert T. Paynter Introductory Electronic Devices and Circuits – Pearson Education-Sixth Edition

REFERENCES:

1. Denal A. Neamar, Electronic Circuit Analysis and Design – Second Edition – Tata McGraw Hill, 2002.
2. Adel S. Sedra Kuanath Csmith Micro Electronic Circuit-Fourth Edition- Oxford University Press-1998.