



B.Tech-I Semester Regular Examinations, December /January-2025

Basic Electronics Engineering-24EC11RC03

SCHEME OF VALUATION

Q.No	Description
1.a)	Introduction to CRO – 1M Block Diagram of CRO -- 3M Function of Various blocks in CRO – 3M
1.b)	Definition of Inductance – 1M Use of Inductor for Filtering --3M Use of Inductor in Tuning Circuits -- 3M
2a)	Introduction to Basic Elements – 1M Resistor – 2M Inductor – 2M Capacitor – 2M
2b)	Comparison Step up and Step down Transformer – 5M Step up and Step down Transformer Diagrams -2M
3a)	Formation of P N Junction Diode – 2M Forward Bias Operation – 2M Reverse Bias operation – 2M V-I Characteristics Plot – 1M
3b)	Characteristics of Intrinsic Semiconductor – 2M Comparison of N – type and P – type semiconductor – 5M
4a)	Working of full wave Rectifier – 3M Input and Output Waveforms – 2M Derivation of ripple factor ---2M
4b)	Diagram of Zener diode as Voltage Regulator – 2M Operation of Voltage Regulator – 5M
5a)	Transistor amplifier Circuit – 2M Working – 5M
5b)	Different Operating regions of Transistor Characteristics – 1 M Active region Operation --2M Saturation region Operation – 2M Cutoff region Operation – 2M
6a)	CB configuration Circuit – 1M Input Characteristics – 2 M Output Characteristics – 2 M Effect of Base width Modulation – 2 M

6b)	Fixed Bias and Self Bias Transistor Comparison – 5M Circuits – 2 M
7a)	Characteristics Curve of JFET – 1M Ohmic region operation – 2M Saturation region operation – 2 M Cutoff region Operation – 2M
7b)	Common Gate FET amplifier Operation – 2M Circuit – 2M Voltage Gain Derivation – 3M
8a)	Comparison of BJT and FET – 6 M Symbols of BJT and FET – 1M
8b)	Biasing Methods of MOSFET Classification – 1M Fixed Bias Method – 1 M Self Bias Method – 1 M Voltage Divider Bias Method – 1 M Drain to Gate Bias Method – 1M Operation of Biasing Method – 2M
9a)	Inverting amplifier in op-amp circuit – 2M Derivation of Voltage Gain – 5 M
9b)	Differential Mode in op-amp circuit – 1M Common mode in op-amp circuit – 1M Operation of Differential Mode and Common mode in op-amp – 5 M
10a)	Working Principle of basic op-amp – 1M Ideal Characteristics – 3M Practical Characteristics – 3M
10b)	Op-amp Integrator operation – 3 M Derivation – 4M

Prepared by

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