



Gayatri Vidya Parishad College of Engineering for Women (Autonomous)

Madhurawada, Visakhapatnam

Department of Electronics and Communications Engineering

I B.Tech. I Semester – Regular Examinations. December / January – 2025

Electronic Devices and Circuits

SCHEME OF VALUATION

Q.No	Question
1.a)	Saturation Current equation ----->2M Diode current equation and Explanation ----->2M Voltage equation wrt to temp and Explanation ----->3M
1.b)	Diagram----->1M Poissons equation and Voltage equations ----->3M Net charge equation ----->2M Transition capacitance and relation----->1M
2.a)	Energy band diagram and Description----->4M Junction potential equation----->3M
2.b)	Diagram----->1M Current equations ----->3M Net charge equation ----->2M Diffusion capacitance and relation----->1M
3. a)	Zener diode as voltage regulator circuit diagram ----->3M Explanation ----->2M Working with variable resistance and equation ----->2M
3.b)	Full wave rectifier circuit diagram----->2M Capacitor voltage wave forms ----->2M Derivation for ripple factor----->3M
4.a)	Half wave rectifier circuit diagram----->1M Average current equation ----->2M RMS current equation ----->2M Expession for Ripple factor----->2M
4.b)	Working principle of Varactor diode with diagram----->3M Transition Capacitance equation ----->1M Applications ----->3M
5.a)	BJT in CE Conf Crciut diagram----->2M Out put Charecterstics----->2M Explication About three regions----->3M
5.b)	Collector to base Ckt diagram----->3M Input circuit and Ic----->2M Output circuit and Vce----->2M
6.a)	Voltage Divider bias Ckt diagram----->2M Input circuit and Ic----->1M Output circuit and Vce----->1M Derivation of Stability factor----->2M
6.b)	Current Component layer diagram----->2M Current components----->2M Parameters----->3M
7.a)	Amplification Crciut diagram----->2M Relation between change in voltage and current----->2M Gain Amplication----->3M
7.b)	CE amplifier circuit diagram----->2M h parameter model----->1M four parameters ----->4M
8.a)	Two StageR_C coupled amplifier Crciut diagram----->3M Expination ----->2M Advantages----->2M
8.b)	Transistor amplifier block diagram----->2M

	h parameter model----->1M four parameters ----->4M
9.a)	n channel JFET layer diagram and Explaniation----->3M Pinch off voltage ----->1M Drain characterstics----->3M
9.b)	Circuit and Explaniation----->4M conditions----->3M
10.a)	JFET layer diagram and Explaniation----->3M Pinch off voltage ----->1M Drain characterstics----->3M
10.b)	Mosfet circuit diagram and Explaniation----->3M Drain Characteristics----->2M Transfer Characteristics----->2M

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