

 <b>NARSIMHA REDDY ENGINEERING COLLEGE</b> <b>UGC AUTONOMOUS INSTITUTION</b> Maisammaguda (V), Kompally - 500100, Secunderabad, Telangana State, India	UGC - Autonomous Institute
	Accredited by NBA & NAAC with 'A' Grade
	Approved by AICTE
	Permanently affiliated to JNTUH

## QUESTIONBANK

### UNIT-I

S.No	Questions	BT	CO	PO
<b>Part-A(Short Answer Questions)</b>				
1	Define Static and Dynamic resistance of PN diode?	2	1	2
2	What is meant by depletion region?	2	1	1
3	Determine the forward resistance of pn junction diode. When the forward current is 5mA at T=300K assume is diode.	2	1	1
4	Write the effect of temperature on diode characteristics?	4	1	2
5	A silicon diode has a saturation current of 7.5μA at room temperature 300K. calculate the saturation current at 400K.	3	1	2
6	Draw the Diode Equivalent Circuit. Mention the applications of PN-junction diode.	3	1	1
7	Define ripple factor and PIV	4	1	1
8.	Define diffusion capacitance and its formulae.	2	1	1
9.	Define transition capacitance and its formulae.	2	1	1
10.	What is meant by biasing and types of biasing?	2	1	1
11.	Define PN junction diode and draw its symbol.	2	1	1
12.	Define drift and diffusion currents?	2	1	1
13.	What is meant by avalanche breakdown in pn junction diode?	2	1	1
14.	What is a rectifier and its types	2	1	1
15.	What do you mean by positive and negative clamping?	2	1	1
<b>Part- B(Long Answer Questions)</b>				
16	a) Write short notes on load line analysis of PN Diode	4	1	2
	b) Derive the expression for diffusion capacitance of a diode	3	1	3
17	a) Derive the expression for Transition capacitance of PN Diode	3	1	2
	b) Define equivalent circuit of pn junction diode and types of equivalent circuits.	3	1	1
18	a) Describe the action of PN junction diode under forward bias and reverse bias.	4	1	3
	b) Discuss how a diode used as a switch and define all switching times.	3	1	2
19	a) Explain V-I characteristics of a PN junction diode .	3	1	3
	b) Draw and Explain the switching characteristics of a diode.	2	1	1

20	Explain about the temperature dependence of V-I characteristics of PN diode?	1	1	2
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