

ELECTRONIC DEVICES AND CIRCUITS

WORKSHEET-1: Diode Characteristics and Applications

1. How many junction/s do a diode consists
 - a. 0
 - b. 1
 - c. 2
 - d. 3
2. The inductor filter gives a smooth output because____
 - a. It offers infinite resistance to ac components
 - b. It offers infinite resistance to dc components
 - c. Pulsating dc signal is allowed
 - d. The ac signal is amplified
3. Which of the following is not a property of semiconductors used in electronic devices?
 - a. They excite electrons
 - b. They don't emit light
 - c. They have high thermal conductivity
 - d. They have variable electrical conductivity
4. Cut-in voltage for Si diode is
 - a. 0.6 V
 - b. 0.5 V
 - c. 0.1V
 - d. 1 V
5. The dynamic resistance of the diode is usually is
 - a. Variable
 - b. Constant
 - c. Directly proportional
 - d. Inversely proportional
6. The transition capacitance of a diode is
 - a. A/W
 - b. ϵ/W
 - c. $\epsilon A/W$
 - d. W/A
7. The diffusion capacitance of a PN diode is
 - a. I/V_T
 - b. $\eta I/ V_T$
 - c. V_T/ Hf
 - d. $TI/ \eta V_T$

8. PIV is which of the following
 - a. Peak input voltage
 - b. Peak inverse voltage
 - c. Peak immediate voltage
 - d. Positive input voltage
9. The output frequency of a full-wave rectifier is ___the input frequency.
 - a. One-half
 - b. Equal to
 - c. Twice
 - d. One-quarter
10. Number of diodes used in a full wave bridge rectifier is___
 - a. 1
 - b. 2
 - c. 3
 - d. 4
11. Rectifier is an electronic device converts
 - a. AC to pulsating dc
 - b. AC to AC
 - c. DC to DC
 - d. None of the above
12. Efficiency of bridge full wave rectifier is___
 - a. 81.2%
 - b. 50%
 - c. 40.6%
 - d. 45.33%
13. Ripple factor of a full-wave rectifier with idel diode is _
 - a. 0.48
 - b. 0.2
 - c. 0.3
 - d. 0.7
14. Rectifier is an electronic device converts
 - a. AC to pulsating dc
 - b. AC to AC
 - c. DC to DC
 - d. None of the above
15. The peak inverse voltage across each diode in bridge rectifier is
 - a. T_m
 - b. C_m
 - c. 2
 - d. V_m



FILL IN THE BLANKS

16. Holes contribute to current _____ yes/no
17. The resistance of an ideal PN diode in the forward bias is _____
18. The resistance of an ideal PN diode in the reverse bias is _____
19. Diode is used as an amplifier __yes/no
20. Diode is used as a switch __yes/no
21. The equivalent circuit of an ideal PN diode in forward bias is a _____
22. The equivalent circuit of an ideal PN diode in reverse bias is _____
23. Diode current is temperature dependent _yes/no
24. The volt-equivalent of temperature is ____
25. Cut-in voltage for Ge diode is _____
26. For an ideal diode cut-in voltage____ and forward resistance _____
27. Bridge rectifier is an alternative for_____
28. Clamper is also known as_____
29. Ripple factor of a half wave rectifier is _____
30. Efficiency of a centre tapped full wave rectifier is _____