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Semiconductor Theory MCQ Test

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Below is the **Semiconductor Theory MCQ** test that checks your basic knowledge of Semiconductor Theory. This **Semiconductor Theory MCQ Test** contains 20 Multiple Choice Questions. You have to select the right answer to the question. Finally, you can also take the Online Quiz from the Take **Semiconductor Theory Quiz** Button.

Q1. A semiconductor is formed by _____ bonds.

- **A. Covalent**
- B. Electrovalent
- C. Co-ordinate
- D. None of the above

Q2. The term bias in electronics usually means _____.

- A. the value of ac voltage in the signal.
- B. the condition of current through a pn junction.
- **C. the value of dc voltages for the device to operate properly.**
- D. the status of the diode.

Q3. Under normal conditions a diode conducts current when it is ____.

- A. reverse biased
- **B. forward biased**
- C. avalanched
- D. saturated

Q4. At room temperature, an intrinsic silicon crystal acts approximately as _____.

- A. A battery

- B. A conductor
- **C. An insulator**
- D. A piece of copper wire

Q5. With forward bias to a pn junction , the width of depletion layer _____.

- **A. decreases**
- B. increases
- C. Remains the same
- D. None of the above

Q6. When the temperature of an extrinsic semiconductor is increased, the pronounced effect is on _____.

- A. Junction capacitance
- **B. Minority carriers**
- C. Majority carriers
- D. None of the above

Q7. A pn junction acts as a _____.

- A. Controlled switch
- B. Bidirectional switch
- **C. Unidirectional switch**
- D. None of the above

Q8. A hole in a semiconductor is defined as _____.

- A. A free electron
- **B. The incomplete part of an electron**
- C. pair bond A free proton
- D. A free neutron

Q9. A trivalent impurity has _____ valence electrons.

- A. 4
- B. 5
- C. 6
- D. 3

Q10. An n-type semiconductor is ____.

- A. Positively charged
- B. Negatively charged
- C. **Electrically neutral**
- D. None of the above

Q11. A pentavalent impurity has _____ Valence electrons.

- A. 3
- B. 5
- C. 4
- D. 6

Q12. Addition of pentavalent impurity to a semiconductor creates many _____.

- A. **Free electrons**
- B. Holes
- C. Bound electrons
- D. Valence electrons

Q13. When a pentavalent impurity is added to a pure semiconductor, it becomes _____.

- A. An insulator
- B. An intrinsic semiconductor
- C. p-type semiconductor
- D. **n-type semiconductor**

Q14. The strength of a semiconductor crystal comes from _____.

- A. Forces between nuclei
- B. Forces between protons
- C. **Electron-pair bonds**

- D. None of the above

Q15. When a pure semiconductor is heated, its resistance ____.

- A. Goes up
- **B. Goes down**
- C. Remains the same
- D. Can't say

Q16. A semiconductor has generally _____ valence electrons.

- A. 2
- B. 3
- C. 6
- **D. 4**

Q17. The most commonly used semiconductor is _____.

- A. Germanium
- **B. Silicon**
- C. Carbon
- D. Sulphur

Q18. As per theory of semiconductor, semiconductor in its pure form is called as ____.

- **A. intrinsic semiconductor.**
- B. undoped semiconductors
- C. multi semiconductors
- D. None of the above

Q19. undoped semiconductors is also known as _____.

- **A. i-type semiconductors**
- B. v-type semiconductors
- C. u-type semiconductors
- D. None of the above

Q20. in a semiconductor current conduction is due to _____.

- **A. both holes and electrons**
- B. only proton
- C. only newtron
- D. None of the above

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