PCB

UNIT: 01

MCQ

1. The energy gap in semiconductors is _____

A. >3ev
B. <3ev
C. >4ev
D. >5ev

2. The concentration of holes in N-type semiconductor is _____

A. Less
B. High
C. Very high
D. Moderate

3. How many valence electrons do trivalent impurities have?

A. One
B. Two
C. Three
D. Four

4. Intrinsic semiconductor has _____at room temperature

A. Few free electrons
B. Few holes
C. Both a and b
D. None of the above

5. In which semiconductor the energy gap is small?

A. Intrinsic
B. Extrinsic
C. Both a and b
D. None of the above

6._____ current happens in conduction band

A. Electron current
B. Valance current
C. Electron or valance current
D. None of the above

7. The band gap between conduction and valance band in an insulator is _____

A. Low
B. Very low
C. High
D. Moderate

8. The doping process converts intrinsic semiconductor material into extrinsic semiconductor material

A. True
B. False

9. What does MOSFET stands for?

A. Metal Oxide Semiconductor Field Effect Transistor
B. Modern Oxidized Silicon based Field Effect Transistor
C. Modern Oxidized Silicon based Force Effect Transistor
D. Metal Oxide silicon Field Equivalent Transistor

10. How many terminals does a MOSFET possess?

A. One
B. Two
C. Three
D. Four

11. Which transistor is preferred for applications of High power?

A. BJT
B. UJT
C. MOSFET
D. JFET

12. Which of the following are the charge carriers available in BJT?

A. Holes
B. Electrons
C. Neutrons
D. Both a and b

13. Identify the main function of a BJT?

A. Acts as amplifier
B. Acts as a switch
C. Acts as a rectifier
D. Both a and b

14. A BJT is an ___ electronic component?

A. Resistor
B. Transistor
C. Capacitor
D. Both a and c

15. How many types of MOSFETs are there?

A. One
B. Two
C. Three
D. Four

16. _____ characteristics gives the relationship between drain current and drain to source voltage for different values of the gate to source voltage

A. V-I characteristics
B. Transfer characteristics
C. Both a and b
D. None of the above

17. In drain characteristics when drain to source voltage is increased in the ohmic region then the drain current _____

A. Increases
B. Decreases
C. No change

18. In FET configuration the current gain of the common gate is _____

A. High
B. low
C. Moderate
D. Very high

19. IGFET stands for _____.

A. Insulated Gate Field Effect Transistor
B. Independent Gate Field Efficiency Transistor
C. Insight Gate Field Efficiency Transistor
D. Insulated Gate Field Effective Transistor

20. What are the terminals of insulated gate bipolar transistor?

A. Anode and cathode
B. Source, gate, and drain
C. Collector, emitter, and gate
D. None of the above

21. _____ act as both metal-insulator semiconductor and metal semiconductor

A. JFET
B. MOSFET
C. Both a and b
D. None of the above

22. The drift current density effected by _____

A. An electric filed
B. Concentration gradient in holes
C. Concentration gradient in free electrons
D. All of the above

23. For an intrinsic semiconductor material to have more holes, they are doped with _____atoms

A. Trivalent impurity
B. Pentavalent impurity
C. Both a and b
D. None of the above

24. The difference in energy between conduction and valance band is called the band gap

A. True
B. False

25. What are the applications of semiconductor devices?

A. Microprocessors
B. Analog circuits
C. High voltage applications
D. All of the above