

1. The most commonly used Semi conductor is _____.
a. Silicon b. Germanium c. carbon d. Sulphur
2. A Semiconductor has generally _____ valance electrons.
a. 2 b. 3 c. 4 d. 6
3. Cut-off and saturation can be illustrated in relation to collector characteristic curve by use of
a. input line b. Signal line c. load d. noise line
4. If output of transistor amplifier is 5 V and input of that amplifier is 250 mv then voltage gain will be _____.
a.20 b. 5 c. 50 d.25
5. Device which is used to couple Ac input from source to rectifier is _____.
a. regulator b. modulator c. amplifier d. transformer
6. The potential barrier of silicon PN junction diode is approximately
a. 0.3V b. 1.1V c. 10V d. 0.7V
7. Barkhausen condition for maintenance of oscillation is _____.
a. $\beta = \frac{1}{A}$ b. $A\beta = \alpha$ c. $A = \beta$ d. $A\beta = \frac{1}{\sqrt{2}}$
8. The forbidden energy gap for conductors is _____.
a. 1.1ev b. zero c. 3ev d. 0.7ev
9. In the forward characteristics curve, a diode appears as _____.
a. A high resistance b. A capacitor
c. An OFF switch d. An ON Switch
10. If internal emitter resistance of BJT is 20Ω and collector resistor of amplifier is 1200Ω then voltage gain will be _____.
a. 1200 b. 60 c. 12 d. 20
11. According to the laws of Boolean algebra, the expression $(A+AB)$ is equal to _____.
a. AB b. A c. B d. \bar{A}
12. In a colpitt's oscillator circuit _____.
a. capacitive feed back is used b. tapped coil is used
c. no tuned LC circuit is used d. no capacitor is used
13. When base-emitter voltage is subtracted from collector-emitter voltage, it gives value of _____.
a. Source voltage b. Collector-base
c. base voltage d. Collector voltage
14. In a PN junction diode on the side of N but very close to the junction there are _____.
a. donor atoms b. Acceptor tons
c. Immovable negative ions d. Immovable positive ions
15. For a transistor connected in common emitter mode (CE) the slope of the input characteristic curve gives _____.
a. input impedance b. current gain
c. Reciprocal of input impedance d. voltage gain
16. In the forward bias characteristics curve, a diode appears as _____.
a. high resistance b. a capacitor
c. an ON switch d. an off switch
17. In common emitter amplifiers, the phase reversal between input and output voltage is _____.
a. 0° b. 180° c. 270° d. 90°
18. The phase reversal between the inputs and outputs voltages in single phase CE amplifier is _____.
a. $\frac{\pi}{2}$ b. 2π c. π d. $\frac{3\pi}{2}$
19. Addition of trivalent impurity to a semiconductor creates many
a. Holes b. free electrons
c. valence electrons d. Bound electrons
20. The condition for oscillator is _____.
a. $A\beta = 0$ b. $A\beta = \alpha$ c. $A + \beta = 0$ d. $A = \frac{1}{\beta}$
21. The random motion of holes and free electrons due to thermal agitation is called _____.
a. Diffusion b. pressure c. ionisation d. None
22. Avalanche breakdown is primarily dependent on the phenomenon of _____.
a. Collision b. ionisation c. doping d. recombination
23. An example for non- sinusoidal oscillator is _____.
a. colpitt's oscillator b. Multi vibrator
c. R C oscillator d. crystal oscillator
24. Rectifier allows unidirectional current through load during entire 360° of input cycle is _____.
a. halfwave rectifier b. full wave rectifier
c. multi wave rectifier d. regulator

25. High frequency wave follow _____.
 a. Ground wave propagation b. The line of straight
 c. The curvature of the earth d. Ionosphere propagation
26. The radio waves after refraction from different parts of ionosphere on reaching the earth are called as _____.
 a. Ground waves b. Micro waves
 c. space waves d. Sky waves
27. The principle used for transmission of light signals through optical fiber is _____.
 a. Refraction b. Diffraction
 c. Polarization d. Total internal reflection
28. In amplitude modulation the bandwidth is _____.
 a. equal to signal frequency
 b. four times the signal c. Twice the signal frequency
29. 1 curie= _____
 a) $3.7 \times 10^{-10} \text{Bq}$ b) $3.7 \times 10^{10} \text{Bq}$ c) $9.11 \times 10^{31} \text{Kg}$
 d) $1.6 \times 10^{-27} \text{Kg}$
30. _____ is an example for moderator.
 a) Boron b) Germanium c) Graphite d) Silicon
31. An example for control rod _____.
 a) Cadmium b) Boron c) Both a and b d) Aluminium
32. The RF channel in a radio transmitter produces _____.
 a. audio signals b. low frequency carrier waves
 c. High frequency carrier waves d. None
33. The SI unit of activity is _____.
 a) Becquerel b) Kg c) ms^{-1} d) None
34. The mass of nuclei expressed in SI units is about _____.
 a) 10^{26}Kg b) 10^{25}Kg c) 10^{-26}Kg d) 10^{-25}Kg
35. Which of the following E.M waves has the longest wavelength?
 a) Radio waves b) IR c) X-rays d) Visible
36. Hydrogen bomb is based on _____ principle.
 a) Nuclear fusion b) Nuclear fission
 c) Neutrino particles d) None
37. The EM waves do not transport _____.
 a) energy b) charge c) momentum d) information
38. The phase difference between electric and magnetic field vectors in the electromagnetic waves.
 a) $\frac{\pi}{4}$ b) $\frac{\pi}{2}$ c) π d) zero
39. The reverse saturation current in PN junction diode is only due to _____.
 a. Majority carriers b. Minority Carriers
 c. acceptor ions d. Donor ions
40. Improper biasing of a transistor circuit produces _____.
 a. heavy loading of emitter current
 b. excessive heat at collector terminal
 c. distortion in the output signal
 d. faulty location of load line
41. A semiconductor is formed by _____ bonds.
 a. Covalent b. electrovalent c. co-ordinate d. None
42. The waves used in physiotherapy and weather forecasting is
 a) U-V rays b) I-R rays c) μ -waves d) γ -rays
43. $A \cdot \bar{A} =$ _____
 a) 0 b) A c) 1 d) \bar{A}
44. Man made 1st artificial satellite _____.
 a. Aryabhata b. Sputnik c. venera d. Rohini
45. $A \cdot A =$ _____
 a) A b) 1 c) 0 d) None
46. Electromagnetic Induction is not used in _____.
 a) Transformer b) AC generator c) Room heater
 d) Choke coil
47. Speed of electromagnetic waves through vacuum is equal to
 a) $\sqrt{\mu_0 \epsilon_0}$ b) $\frac{\sqrt{\mu_0}}{\epsilon_0}$ c) $\sqrt{\frac{\epsilon_0}{\phi_0}}$ d) $\frac{1}{\sqrt{\mu_0 \epsilon_0}}$
48. Digital signals are converted into analog signals using _____.
 a. Fax b. Cable c. coaxial cable d. Modem
49. _____ invented the modern version of transistor.
 a) Hertz b) William Shockley c) Hallwach's d) Einstein
50. Binding energy curve for Uranium is _____.
 a) 8.6 Mev b) 8.5 Mev c) 8.8 Mev d) 7.6 Mev