



### Band Theory of Solid:

- Q.14 The electrons in the outermost shell of an atom are called:  
\* Tightly bound electron                      \* Valence electron  
\* Free electrons                                      \* Loosely bound electrons
- Q.15 A vacant or partially filled band is called:  
\* Fermi band      \* Valence band      \* Forbidden band      \* Conduction band
- Q.16 The band above the valence band is called:  
\* Conduction band \* Forbidden band      \* Covalent band      \* Occupied band
- Q.17 The which have partially field conduction bands are called:  
\* Insulators              \* Semiconductors      \* Conductors              \* Transistor
- Q.18 The energy band occupying valence electrons is known as:  
\* Valence band      \* Conduction band \* Convection band \* Radiation band
- Q.19 In a semiconductor:  
\* The electrons move in the conduction band while the holes move in the forbidden band.  
\* The holes move in the conduction band and the electrons move in the forbidden band.  
\* The electrons move in the conduction band and the holes move in the valence band.  
\* The holes move in the conduction band and the electrons move in the valence band only.
- Q.20 A substance which has empty conduction band is called:  
\* Semiconductor      \* Conductor              \* Insulator              \* Transistor

### Semi-Conductors:

- Q.21 The substances with conductivities of order  $10^{-6} \Omega \text{ m}^{-1}$  to  $10^{-4} \Omega \text{ m}^{-1}$  are:  
\* Semiconductor      \* Conductor              \* Good conductor      \* Insulator
- Q.22 Solids with intermediate conductivity of the order  $10^{-6}$  to  $10^{-4} \Omega \text{ m}^{-1}$  is called:  
\* Conductor              \* Semiconductor      \* Insulator              \* Good conductor
- Q.23 Which one of the following is not a semiconductor:  
\* Copper              \* Silicon              \* Germanium              \* Gallium arsenide
- Q.24 The process of adding a small amount of impurity into the pure semiconductors is called:  
\* Mixing              \* Dropping              \* Doping              \* Inserting
- Q.25 The doped semiconductor materials are called:  
\* Extrinsic semiconductor              \* Intrinsic semiconductor  
\* P-type semiconductor              \* Pure semiconductor
- Q.26 The semi-conductor in its extremely pure form is called:  
\* Extrinsic semiconductor              \* Intrinsic semiconductor  
\* N-type semiconductor              \* P-type semiconductor
- Q.27 To make N-type substance, Antimony is mixed with:  
\* Boron              \* Silicon              \* Germanium              \* Indium
- Q.28 To make P-type substance, Indium is mixed with:  
\* Boron              \* Silicon              \* Germanium              \* Antimony
- Q.29 In the P type substance, charged carries are:  
\* Positive              \* Negative              \* Ions              \* Neutrons

- Q.30** In the N type substance charged carries are:  
\* Positive      \* Negative      \* Ions      \* Neutrons
- Q.31** Majority carries in an N type substance are:  
\* Electron      \* Protons      \* Positrons      \* Hole
- Q.32** Minority carries in N type substance are:  
\* Electron      \* Protons      \* Positrons      \* Hole
- Q.33** Majority carries in a P type substance are:  
\* Protons      \* Hole      \* Electrons      \* Positrons
- Q.34** Minority carries in a P type substance are:  
\* Protons      \* Electron      \* Neutrons      \* Hole
- Q.35** Donor impurities are:  
\*  $G_e$  and  $S_i$       \*  $I_n$  and  $G_a$       \*  $S_b$  and  $A_s$       \*  $L_i$  and  $G_a$
- Q.36** The Process of adding impurity of Trivalent or Pentavalent into Semi Conductor is called:  
\* Modulation      \* Rectification      \* Doping      \* Biasing
- Q.37** The Semi Conductor mixed with impurity of Trivalent or Pentavalent is called:  
\* None of these      \* Extrinsic Semi Conductor  
\* Intrinsic Semi Conductor      \* Electronic device
- Diode:**
- Q.38** PN-Junction Diode works as an insulator if connected:  
\* to A.C source      \* in forward bias      \* in reverse bias      \* all of these
- Q.39** The potential difference applied across P-N junctions which results in the reduction of the barrier potential is:  
\* Reverse basing      \* Forward biasing      \* Charging      \* Induction
- Q.40** A Semi-conductor Diode is used as:  
\* An amplifier      \* An oscillator      \* A rectifier      \* Holes
- Q.41** A PN-junction can be used as:  
\* Rectifier      \* Amplifier      \* Transformer      \* Ohm-meter
- Q.42** The two terminal Semi Conductor device used as a rectifier is called:  
\* Diode      \* Transistor      \* Triode      \* P-type device
- Q.43** The Process of converting A.C into D.C is called:  
\* Modulation      \* Amplification      \* Biasing      \* Rectification
- Q.44** Whenever a Potential is applied across the P-n junction diode so as to increase the height of the Potential barrier, the diode is said to be:  
\* Choked      \* Both reverse and forward biased  
\* Forward biased      \* Reverse biased
- Q.45** Whenever a Potential is applied across the P-n junction diode so as to decrease the height of the Potential barrier, the diode is said to be:  
\* Choked      \* Both reverse and forward biased  
\* Forward biased      \* Reverse biased
- Q.46** The diode which gives off visible light when energized is called:      (2013)  
\* Photo diode      \* L.C.D.      \* Photovoltaic diode      \* L.E.D.

### Transistor:

Q.47 A transistor in a circuit basically used as:

- \* An oscillator
- \* An amplifier
- \* A half wave rectifier
- \* Full wave rectifier

Q.48 The three portions of transistor form:

- \* Two junction
- \* Three junction
- \* Four junction
- \* Six junction

Q.49 In case of a transistor, the central portion has to be:

- \* N-type
- \* P-type
- \* N-type or P-type
- \* None of these

Q.50 The term transistor stands for:

- \* Transfer of resistance
- \* Transfer of voltage
- \* Transfer of current
- \* Transfer of power

Q.51 The symbol of NPN transistor is:



Q.52 The symbol of NPN transistor is:



Q.53 In the transistor be Rematic symbol, the arrow:

- \* Is located on the emitter
- \* Is located on the base
- \* Is located on the collector
- \* Points form north to south

Q.54 Emitter Base junction is forward biased in:

- \* PNP transistor
- \* NPN transistor
- \* Both PNP and NPN transistor
- \* Rectifier

Q.55 The three terminal device, used as an amplifier and brought revolution in Electronics is called.

- \* Diode
- \* Transistor
- \* Triode
- \* P-type

Q.56 The device which rises the strength of a weak signal at the output is:

- \* Amplifier
- \* Decoder
- \* Recorder
- \* Diode

Q.57. Base – Emitter junction and Base-Collector junction of transistor are:

- \* Forward biased and reverse biased
- \* Reverse biased and forward biased
- \* Both reverse biased
- \* Both forward biased

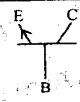
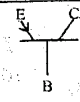
Q.58 The semi-conductor device which increases the strength of weak input signal at the output is a:

- \* N-type semi conductor
- \* P-n diode
- \* Transistor
- \* P-type semi conductor

Q.59 Which quantity of audio signal is changed by transistor:

- \* All of these
- \* Amplitude
- \* Frequency
- \* Wave length

## KEY

|   |                              |  |
|---|------------------------------|--|
| (1) Electric and magnetic field moving perpendicular to each other                    | (21) Semiconductor           | (41) Rectifier   |
| (2) $\frac{1}{\sqrt{\mu_0 \epsilon_0}}$   | (22) Semiconductor           | (42) Diode   |
| (3) Equal to the speed of light   | (23) Copper                  | (43) Rectification   |
| (4) Transverse  | (24) Doping                  | (44) Reverse biased  |
| (5) Radio waves   | (25) Extrinsic semiconductor | (45) Forward biased  |
| (6) Perpendicular to both fields  | (26) Intrinsic semiconductor | (46) LED   |
| (7) $10^6$ Hz   | (27) Germanium               | (47) An amplifier  |
| (8) Antenna   | (28) Germanium               | (48) Two junction  |
| (9) Expanding waves   | (29) Positive                | (49) N-type or P-type  |
| (10) Modulation   | (30) Negative                | (50) Transfer of resistance  |
| (11) Amplitude Modulation   | (31) Electron                | (51)  |
| (12) Demodulation   | (32) Hole                    | (52)  |
| (13) Frequency  | (33) Hole                    | (53)   |
| (14) Valance electron   | (34) Electron                | (54) Both PNP and NPN transistor   |
| (15) Conduction band  | (35) $S_b$ and $A_s$         | (55) Transistor  |
| (16) Conduction band  | (36) Doping                  | (56) Amplifier   |
| (17) Conductors   | (37) Extrinsic semiconductor | (57) Forward biased and reverse biased   |
| (18) Valence band   | (38) in reverse bias         | (58) Transistor  |
| (19) The electrons move in the conduction band and the holes move in the valence band | (39) Forward biasing         | (59) Amplitude   |
| (20) Insulator  | (40) A rectifier             |  |