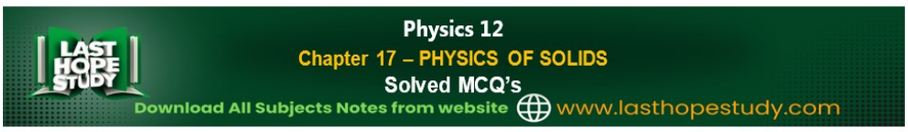

MCQs Related to the Article "17.1 CLASSIFICATIONS OF SOLIDS"

1. Solids having regular a arrangement of molecules through its structure is called:
(a) Amorphous Solids (b) Polymeric Solids (c) Glassy Solids (d) Crystalline Solids

2. Which type of solids have definite melting point:
(a) Crystalline Solids (b) Amorphous Solids (c) Polymeric Solids (d) Glassy Solids

3. Which of the following is an example crystalline solids:
(a) Plastic (b) Zirconia (c) Glass (d) Nylon

4. The arrangement of atoms, ions or molecules in crystalline solids can be studied by:
(a) Radio Waves (b) Infrared Waves (c) X-rays (d) Ultraviolet Rays

5. Formation of large molecule by joining small molecules is _____
(a) Fusion (b) Polymerization (c) Crystallization (d) Subtraction

6. Example of crystalline solids are also
(a) Metals (b) Ionic compounds (c) Ceramics (d) All of them

7. The crystal structure of NaCl is:
(a) Triclinic (b) Monoclinic (c) Cubic (d) Tetragonal

8. Amorphous solids are also called:
(a) Polymeric Solids (b) Glassy Solids (c) Crystalline Solids (d) Brittle Solids

9. Which of the following is polymeric solid:
(a) Glass (b) Iron (c) Steel (d) Nylon

10. The solids that are intermediate between order and disorder are called
(a) Polymeric Solids (b) Glassy Solids (c) Crystalline Solids (d) Ductile Solids

11. How many crystal systems are there on the basis of geometric arrangement of the atoms:
(a) 3 (b) 4 (c) 5 (d) 7

MCQ # 1: (d)	MCQ # 2: (a)	MCQ # 3: (b)	MCQ # 4: (c)	MCQ # 5: (b)	MCQ # 6: (d)
MCQ # 7: (c)	MCQ # 8: (b)	MCQ # 9: (d)	MCQ # 10: (a)	MCQ # 11: (d)	

MCQs Related to the Article "17.2 MECHANICAL PROPERTIES OF SOLIDS"

1. Any alteration produced in shapes, length or volume when a body is subjected to some external force is called _____
(a) Stiffness (b) Ductility (c) Extension (d) deformation

2. The SI unit of stress is same as that of:
(a) Momentum (b) Pressure (c) Force (d) Length

3. The stress that produces change in length is known as:
(a) Tensile stress (b) Shear stress (c) Volumetic stress (d) Longitudenal stress

4. The stress that produces change in shape is known as:
(a) Tensile stress (b) Shear stress (c) Volumetic stress (d) Longitudenal stress

5. Which one of the following physical quantities does not have the dimensions of force per unit?
(a) Stress (b) Strains (c) Young's modulus (d) Pressure

6. unit of strain is:
(a) $\frac{N}{m^2}$ (b) $\frac{N}{m}$ (c) $N\ m$ (d) $no\ unit$

7. The ratio of applied stress to volumetric strain is called:
(a) Young's modulus (b) Shear modulus (c) Bulk modulus (d) Tensile modulus

8. The amount of energy stored in the wire when it is deformed:
(a) $U = \frac{1}{2}F_1 l_1$ (b) $U = \frac{1}{2}F_1^2 l_1$ (c) $U = \frac{1}{2}F_1 l_1^2$ (d) $U = \frac{1}{2}F_1^2 l_1^2$

9. The strain energy can be determined by calculating area under:
(a) Velocity-time graph (b) Force-velocity graph (c) Force-Extension graph

10. Which of the following is an example of ductile substances:
(a) Lead (b) Copper (c) Glass (d) Lead and copper

11. Substances which break just after the elastic limit is reached are called:
(a) Ductile substances (b) Hard substances (c) Soft substances (d) Brittle substances

12. The maximum stress which a body can bear is called
(a) Proportional Limit (b) Elastic Limit (c) Permanent Stress (d) Ultimate Tensile Stress

13. Materials that undergo plastic deformation before breaking are called _____
(a) Brittle (b) Ductile (c) Amorphous (d) Polymers

14. Examples of brittle substances are

(a) Glass (b) Copper (c) Lead (d) None

MCQ # 1: (d)	MCQ # 2: (b)	MCQ # 3: (a)	MCQ # 4: (b)	MCQ # 5: (b)	MCQ # 6: (d)
MCQ # 7: (c)	MCQ # 8: (a)	MCQ # 9: (c)	MCQ # 10: (d)	MCQ # 11: (d)	MCQ # 12: (d)
MCQ # 13: (b)	MCQ # 14: (a)				

MCQs Related to the Article "17.3 ELECTRICAL PROPERTIES OF SOLIDS"

1. The band theory of solids explains satisfactorily the nature of

(a) Electrical insulators alone (b) Electrical conductors alone

(c) Electrical semi conductors alone (d) All of the above

2. Which one has the greatest energy gap _____

(a) Semi-conductors (b) Conductors (c) Insulators (d) Metals

3. A well known example of an intrinsic semi-conductor is:

(a) Germanium (b) Phosphorous (c) Aluminum (d) Cobalt

4. Holes can exist in:

(a) Super conductors (b) Conductors (c) Semi-conductors (d) Insulators

5. Germanium is:

(a) semi-conductor (b) conductor (c) insulator (d) none of these

6. The substances having negative temperature coefficient of resistance are:

(a) Conductors (b) Insulators (c) Semi-Conductor (d) None Of These

7. Good conductors have conductivities of the order of:

(a) $10^{-7}\ (\Omega - m)^{-1}$ (b) $10^{7}\ (\Omega - m)^{-1}$ (c) $10^{2}\ (\Omega - m)^{-1}$ (d) $10^{-2}\ (\Omega - m)^{-1}$

8. At $0°K$ piece of Ge or Si is a perfect:

(a) Conductors (b) Insulators (c) Semi-Conductor (d) Paramagnetic

9. A vacant or partially filled band is called _____

(a) Conduction band (b) Valence band (c) Forbidden band (d) Empty band

10. A completely filled or partially filled band is called _____

(a) Conduction band (b) Valence band (c) Forbidden band (d) Core band

11. A substance having empty conduction band is called:

(a) Semi-conductor (b) Conductor (c) Insulator (d) None of these

12. Pentavalent impurities are called

(a) Donor impurities (b) Acceptor impurities (c) None of these

13. Minority carriers in N-type materials are

(a) Electrons (b) Protons (c) Neutrons (d) Holes

14. What type of impurity is to be added to the semi-condutor material to provide holes:

(a) Monovalent (b) Trivalent (c) Tetravalent (d) Pentavalent

15. Holes can exists in_____

(a) Conductors (b) Insulators (c) Semi conductors (d) All of the above

16. In a semi conductors, the charge carriers are _____

(a) Holes only (b) Electrons only (c) Both Electrons and Holes

17. The net charge on N-type material is _____

(a) Positive (b) Negative (c) Both a & b (d) Zero

18. Total current in semiconductor is:

(a) Electronic Current (b) Current due to Hole (c) Both a & b

MCQ # 1: (d)	MCQ # 2: (c)	MCQ # 3: (a)	MCQ # 4: (c)	MCQ # 5: (a)	MCQ # 6: (c)
MCQ # 7: (b)	MCQ # 8: (b)	MCQ # 9: (a)	MCQ # 10: (b)	MCQ # 11: (c)	MCQ # 12: (a)
MCQ # 13: (d)	MCQ # 14: (c)	MCQ # 15: (c)	MCQ # 16: (c)	MCQ # 17: (d)	MCQ # 18: (c)

MCQs Related to the Article "17.4 SUPERCONDUCTORS"

1. The temperature below at which materials lose its resistivity is called _____Temperature

(a) Super (b) Kelvin (c) Critical (d) Curie

2. The critical temperature for mercury is:

(a) 7.2 K (b) 4.2 K (c) 1.18 K (d) 3.7 K

3. The critical temperature of Lead is:

(a) 7.2 K (b) 4.2 K (c) 1.18 K (d) 3.7 K

4. The temperature 77 K is the

(a) Melting point of Nitrogen (b) Boiling Point of Nitrogen

(c) Melting point of Helium (d) Boiling Point of Helium

5. The practical use of superconductors is:

(a) Fast computer chips (b) Magnetic Resonance Levitation Trains

(d) Power but small electric motors (d) All of these

MCQ # 1: (c)	MCQ # 2: (b)	MCQ # 3: (a)	MCQ # 4: (b)	MCQ # 5: (d)

MCQs Related to the Article "17.5 MAGNETIC PROPERTIES OF SOLIDS"

1. The magnetism produced by electrons within an atom is due to

(a) Spin motion (b) Orbital motion (c) Spin & orbital motion

2. The field of long bar magnet is like a current carrying

(a) Solenoid (b) Toroid (c) Loop (d) None

3. Substances in which resultant magnetic moment is zero are called

(a) Ferromagnetic (b) Paramagnetic (c) Diamagnetic (d) Conductor

4. The examples of diamagnetic are

(a) Water (b) Copper (c) Antimony (d) All of them

5. The substances in which atoms cooperate with each other in such a way so as to exhibit strong magnetic field are called:

(a) Diamagnetic (b) Paramagnetic (c) Ferromagnetic (d) Insulators

6. Domains contain atoms:

(a) 10^3 to 10^6 (b) 10^6 to 10^9 (c) 10^9 to 10^{12} (d) 10^{12} to 10^{16}

7. Curie temperature for iron is:

(a) 0 ℃ (b) 570 ℃ (c) 750 ℃ (d) 1025 ℃

8. Above curie temperature iron is:

(a) Diamagnetic (b) Paramagnetic (c) Ferromagnetic (d) Superconductor

9. Magnetization lags behind magnetizing current, this phenomenon is known as:

(a) Diamagnetism (b) Coercively (c) Susceptibility (d) Hysterisis

10. A current which demagnetize the material completely is called

(a) Applied current (b) Coercive current (c) Maximum current (d) None of these

11. The energy need to magnetize and demagnetize the specimen during the each cycle of magnetizing current is

(a) Value of current (b) Value of demagnetizing current

(c) Value of magnetic flux density (d) Area of the loop

12. Best hard magnetic materials is made up of:

(a) Alnico V (b) Iron (c) Nickel (d) Cobalt

MCQ # 1: (c)	MCQ # 2: (a)	MCQ # 3: (c)	MCQ # 4: (d)	MCQ # 5: (c)	MCQ # 6: (d)
MCQ # 7: (c)	MCQ # 8: (b)	MCQ # 9: (d)	MCQ # 10: (b)	MCQ # 11: (d)	MCQ # 12: (a)