Physics - 12th Class Physics Chapter 6 Short Questions Preparation

Q1. Define cell unit.

Ans 1: A crystalline solid consists of three dimensional pattern that repeat itself over and over again,This smallest three dimensional basic structure is called unit cell.

Q2. Distinguished between elasticity and plasticity.

Ans 1: Elasticity: In deformed crystalline solid,the atoms return to their equilibrium position after the removal of external force.This ability of the body to return to its original shape is called elasticity.

Ans 2: Plasticity:If the stress is increased beyond elastic limit,the specimen becomes permanently deformed.This is called plasticity.

Q3. What is meant by Ferromagnetic substance?

Ans 1: In ferromagnetic substance the atoms cooperate with each other in such a away so as to exhibit a strong magnetic field.In ferromagnetic substance there exists a small region called domain.

Q4. Define Fracture stress.

Ans 1: Once the limit of ultimate tensile stress (UTS) is crossed,the material breaks and the stress is called fracture stress.

Q5. Differentiate between tensile stress and shear modes of stress and strain.

Ans 1: Tensile Stress: A stress that cause the change in length of an object is called tensile stress.
Shear stress: A stress that cause the change in shape of an object is called shear stress.
Tensile stain:If the strain is due to tensile stress it is called tensile strain.A strain produced in the object when it is subjected to shear stress is called shear strain.

Q6. Distinguished between soft magnetic material and hard magnetic materials.

Ans 1: Soft magnetic: The materials in which their domains can be easily orientated on applying external magnetic field and also return to original positions when field is removes.E.g iron.

Ans 2: Hard magnetic:The material in which their domains can not easily orientated on applying external magnetic field.But once the domains are lined up by a very strong magnetic field,they will restrain their position after the removal of magnetic field.

Q7. Define crystalline and amorphous.

Ans 1: Crystalline: The solid in which there is a regular and periodic arrangements of the atoms and molecule are crystalline solids.
Amorphous: The solid in which there is no regular arrangement of molecules like that in crystalline solids are called amorphous solid. for example ordinary glass.

Q8. What is meant by hysteresis loss?

Ans 1: The area of the loop is the measure of the energy needed to magnetize and demagnetize the specimen during each cycle of the magnetizing current.This is energy required to do work against internal friction of the domains,this work is dissipated as heat.It is called hysteresis loss.

Q9. How the conductivity of semiconductor can be raised?

Ans 1: The conductivity of a semiconductor can be raised by the process of doping in which small number of impurity atoms are added to pure semiconductors.

Q10. Write the used of superconductors.

Ans 1: Superconductors can be used in :

1. Magnetic Resonance Imaging
2. Powerful but small electric motors
3. Fast computer chips
4. Magnetic Levitation Trains
