

- Q.6 Kaolin is represented by chemical formula_____
- a) $\text{Al}_2\text{O}_3\text{SiO}_2$ b) $\text{Al}_2\text{O}_3\cdot 2\text{SiO}_2\cdot 2\text{H}_2\text{O}$
 c) $\text{Al}_2\text{O}_3\cdot 2\text{SiO}_2$ d) $\text{Al}_2\text{O}_3\cdot 2\text{SiO}_2\cdot \text{H}_2\text{O}$
- Q.7 The atoms are arranged in_____ manner, in crystalline materials.
- a) Randomly b) Regular
 c) Haphazardly d) None of the above
- Q.8 The failure of a material due to cyclic or reversing loads is called_____
- a) Creep b) fatigue
 c) brittle failure d) ductile failure
- Q.9 In FCC structures of crystal, there are_____ number of atoms per unit cell
- a) 2 b) 8
 c) 4 d) 18
- Q.10 Hard magnetic materials are_____ to magnetize.
- a) easy b) difficult
 c) both a & b d) none of these

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 The p-orbital contains maximum_____ no. of electrons.(2/6)
- Q.12 Example of binary phase diagram is alumina and silica phase diagram. (True/False)

- Q.13 Number of components in unary phase diagram is one. (True/False)
- Q.14 Which magnets have higher coercive force value? (soft/hard)
- Q.15 Example of line defect is_____
- Q.16 The crystalline solids have regular arrangements of atoms. (True/False)
- Q.17 X-Ray can be used to determine crystal structure of materials. (True/False)
- Q.18 Ionic bond is formed by transfer of electrons between two atoms. (True/False)
- Q.19 Hard magnetic materials can be easily demagnetized. (True/False)
- Q.20 Coordinate bond is formed by sharing of electrons between two atoms. (True/False)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Enlist different types of bond. Explain any one.
- Q.22 Explain creep behavior.
- Q.23 Explain Gibbs phase rule.
- Q.24 Explain space lattice and unit cell.
- Q.25 Explain water system.
- Q.26 Explain magnetizing force.