

- Q.22 Discuss structure of silica.
- Q.23 Draw $\text{Na}_2\text{O-SiO}_2$ phase diagram.
- Q.24 Discuss atomic structure of sodium.
- Q.25 Define screw and edge dislocations.
- Q.26 Discuss applications of phase rule.
- Q.27 Differentiate crystalline and amorphous materials.
- Q.28 Differentiate creep and fatigue fracture.
- Q.29 Enlist thermal properties of materials.
- Q.30 Differentiate ionic and covalent bonding.
- Q.31 Discuss atomic structure of sodium.
- Q.32 Differentiate ductile and brittle fracture.
- Q.33 Name mechanical properties of materials.
- Q.34 Explain casting slips.
- Q.35 Discuss magnetic flux and flux density.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Draw and explain in $\text{Al}_2\text{O}_3 - \text{SiO}_2$ phase diagram.
- Q.37 Explain electrical properties or thermal properties of materials.
- Q.38 Explain different types of chemical bonds.

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Roll No.

3rd Sem / Ceramic Subject:- Ceramics Science

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 _____ is formed by transfer of electrons between two atoms.
- a) Covalent Bonding b) Ionic Bonding
- c) Hydrogen Bonding d) All of the above
- Q.2 Clay show plasticity when water is _____
- a) Added b) Removed
- c) Dried d) None of the above
- Q.3 Which of the following defects are found in ceramic solids?
- a) Point b) Line
- c) Surface d) All of these
- Q.4 _____ is the example of Binary phase diagram.
- a) Water system b) Alumina-silica
- c) Soda-lime-silica d) Oxygen system

- Q.5 Soft magnetic materials are
- Easy to magnetise
 - Difficult to magnetise
 - Both a and b
 - None of the above
- Q.6 Vacancies defect is an example of
- Surface defect
 - Line defect
 - Point defect
 - None of the above
- Q.7 Strongest bond is _____
- Covalent Bonding
 - Ionic Bonding
 - Hydrogen Bonding
 - Co-ordinate Bond
- Q.8 Which of the following falls under thermal properties?
- Heat Capacity
 - Thermal Expansion
 - Specific Heat
 - All of the above
- Q.9 Coercive force value is greater for
- Hard magnets
 - Soft magnets
 - Both a and b
 - None of the above
- Q.10 A change in property of a material due to heat is known as
- Physical
 - Chemical
 - Thermal
 - Mechanical

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SECTION-B

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

- Q.11 Ionic bond is strongest bond. (True/False)
- Q.12 The formula of kaolin is _____.
- Q.13 Alumina-Silica phase diagram is an example of binary phase diagram. (True/False)
- Q.14 Soft magnetic materials can be easily demagnetized. (True/False)
- Q.15 Ionic bond is formed by transfer of electrons between two atoms. (True/False)
- Q.16 Maximum number of electrons in d-orbital is _____. (2,10)
- Q.17 In simple cubic crystal system atoms occupy corners positions. (True/False)
- Q.18 The stress experienced by thermal contraction or expansion is called thermal stress. (True/False)
- Q.19 Vacancy is a type of _____ defect. (Point, line)
- Q.20 Brittle fracture involves fracture of materials without apparent plastic deformation. (True/False)

SECTION-C

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

- Q.21 Discuss water of plasticity of clay.

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