Q.22 Draw and explain structure of silica.

Q.23 Explain three component phase diagram.

Q.24 Define phase. Give two examples of phase diagrams.

Q.25 Name magnetic properties of materials.

Q.26 Differentiate screw and edge dislocations.

Q.27 Explain components and degree of freedom in relation to phase diagram.

Q.28 Define crystalline and amorphous materials.

Q.29 Differentiate creep and fatigue fracture.

Q.30 Explain importance of phase diagram in selection of raw materials.

Q.31 Explain casting slips.

Q.32 Define hard and soft magnetic materials.

Q.33 How atoms are arranged in orbital's? Explain.

Q.34 Tell differences between magnetic flux and flux density.

Q.35 Differentiate heat capacity and specific heat.

SECTION-D

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

Q.36 Explain physical nature of clay in relation to particle size, shape and size and electrical charge.

Q.37 Explain mechanical and thermal properties of materials.

Q.38 Explain Point. Line and surface defects of materials.

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Roll No. .....

3rd Sem.

Branch : Ceramic

Sub: Ceramic Science

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple type 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) Co ordinate Bonding

d) All of the above

Q.2 Clay show plasticity on _____ of water.

a) Addition b) Removal

c) Both A & B 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 ternary phase diagram

a) Water system b) Alumina-Silica

c) Soda line silica d) Carbon system

Q.5 Soft magnetic materials are

a) Easy to magnetise

b) Difficult to magnetise

c) Both A & B

d) None of the above

Q.6 Vacancies are _____ defect.

a) Surface defect b) Line Defect

c) Point defect d) None of the above

Q.7 _____ is the strongest bond.

a) Covalent b) Ionic

c) Hydrogen d) Co ordinate

Q.8 Which of the following is NOT mechanical properties?

a) Heat Capacity b) Resistance

c) Specific Heat d) All of the above

Q.9 The property which depends on heat is knows as

a) Physical b) Chemical

c) Thermal d) Mechanical

Q.10 Hard magnetic have _____ BH Loop area.

a) Small b) Large

c) Point d) Zero

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 diagram. (True/False)

Q.14 Hard magnetic materials can be easily magnetized as compared to soft magnetic materials. (True/False)

Q.15 Covalent bond is formed by transfer of electrons between two atoms. (True/False)

Q.16 Coordinate bond is formed by _____ of electrons between two atoms. (Sharing / Transfer)

Q.17 Number of components is binary phase diagram is one. (True/False)

Q.18 The crystalline solids have random arrangement of atoms. (True/False)

Q.19 Example of binary phase diagram is _____.

Q.20 The number of magnetic lines of force set up in a magnetic circuit is called_____. (Magnetic flux, Flux density

SECTION-C

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

Q.21 Explain the term "water of plasticity of clay."