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Sardar Patel University
M.Sc.(Materials Science) IVth Semester
PS04EMTS02 Ceramic Technology
Session : 2.30- 5.30p.m.

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Marks: 70

Q.No. 1 Answer the following multiple choice question "

(8)

- i) Chemical stonewares for textile industries should
- (1) corrosion resitant
 - (2) High strength
 - (3) basic pH
- ii) Chemical porecelain are
- (1) vitrous ceramic
 - (2) transparent
 - (3) ductility
- iii) Ball clay is a secondary clay characterized by the presence of
- (1) organic matter
 - (2) carbon content
 - (3) shape of particles
- iv) Feldspar is a primary igneous rocks having composition of
- (1) Potassium Aluminio silicates
 - (2) Aluminium silicate
 - (3) Potassium silicate
- v) Tungsted carbide has high
- (1) thermal shock resistnace
 - (2) hardness
 - (3) malleability
- vi) Main Constituents of abrasive grinding wheel
- (1) fused silicon carbide
 - (2) plastics
 - (3) chemicals
- vii) Mullite porecelain have better resistance to
- (1) Thermal Shock
 - (2) Wear Shock
 - (3) Deformation
- viii) Ceramic bonded abrasives includes
- (1) Silicone carbide
 - (2) silicone nitride
 - (3) Ball clay

Q.No. 2 Answer any seven from following short questions

(14)

- (1) What are Mullite refractories?
- (2) Explain slaking nature of clays.
- (3) Why water of plasticity is important for workability?
- (4) What is frit? How this is made and what are its functions?
- (5) What are low tension, low frequency porecelain insulators?
- (6) Define the importance of ultimate and proximate analysis of coals.
- (7) Explain different types of gaseous fuels.
- (8) What are different types of pyrometers?
- (9) Explain Heating values of fuels and how these are measured?

Q. No. 3(a) Explain different types of Ceramics building industry

(6)

(b) Explain different types of chemical and Technical Ceramics.

(6)

Or

(b) Explain Ceramics in Electrical Industry.

Q.No. 4(a) What are fuels and their characteristics properties? Explain classification of fuels

(6)

(b) Explain and differentiate between updraft and downdraft kilns.

(6)

Or

(b) Explain Glass tank furnace, Glass pot and Lehr used for manufacture of Glass.

Q.No. 5 (a) What are plastic and non plastic raw materials used in ceramic industry. Explain

(6)

Alumina, Bauxite and Bone ash

(b) Explain Fired Ceramic scraps. Explain Frit, Plaster of Paris and Pyrophyllite

(6)

Or

(b) Explain properties and uses of Zircon, Zirconium oxide and zinc oxide

Q.No.6 (a) What are Glazes? How glaze is applied? Describe any two methods for decoration

(6)

(b) Explain the sequence of die pressing operation and compare this pressing technique

(6)

With vibro- compaction technique.

Or

(b) What is plasticity of clay? Differentiate among drain casting, solid casting and pressure casting of slip.

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