Q.27 Explain determination of density of glass.

Q.28 Explain recuperators in brief.

Q.29 Find the empirical formula for glass having following chemical composition

Oxide name	Percentage
SiO_2	70
Na_2O	18
CaO	10
Al_2O_3	2

Take atomic weight of Si=28, O=16, Ca=40, Na=23, C=12, AI=27

Q.30 Explain functions of glass making oxides.

Q.31 Differentiate between day tank and continuous tank.

Q.32 How will you determine density of glass? Explain.

Q.33 Name any five properties of glass.

Q.34 List factors influencing choice of batch materials.

Q.35 Explain constructions of pot furnace.

SECTION-D

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

Q.36 Explain fundamental concept of glassy state.

Q.37 Discuss chemical composition of soda-lime glass and lead glass.

Q.38 Classify and explain glass making oxides.

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4th Sem. / Ceramic

Subject : Glass Technology-I

Time : 3 Hrs. M.M. : 100

SECTION-A

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

Q.1 Glass is _____ liquid.

a) Super cooled b) Super Heated

c) Solid d) Gas

Q.2 Potash results in _____.

a) Fluidity b) High Expansion

c) Solubility d) All of the above

Q.3 Melting of glass is carried out in _____ furnace

a) Rotary b) Tank

c) Tunnel d) None of these

Q.4 Which of the following is raw material of silica ?

a) Sand b) Boric acid

c) Alumina hydrate d) All of these

Q.5 Which of the following is network modifier?

a) Silicon b) Sodium

c) Alumina d) Lead

Q.6 The blow pipe is used to make _____.

a) Hollow ware b) Flat ware

c) Both a & b d) None of these

Q.7 Alumina increases _____ of glass.

a) Solubility b) Durability

c) Expansion d) All of these

Q.8 Tank Furnace is

a) Batch furnace b) Continue furnace

c) Lime furnace d) Rotary furnace

Q.9 _____ increases density of glass.

a) Silicon dioxide b) Sodium oxide

c) Alumina d) Lead oxide

Q.10 Which of the following is acidic oxide?

a) Silica b) Soda

c) Lithia d) Potash

SECTION-B

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

Q.11 _____ is major raw material of glass. (Sand/Clay)

Q.12 Alumina is network former. (True/False)

Q.13 Pot furnace is type of batch furnace. (True/False)

Q.14 Formula of soda ash is _____. (Na_2CO_3/NaOH)

Q.15 Boro-silicate glasses have higher resistance to chemical corrosion and temperature changes. (True/False)

Q.16 Glass has sharp melting point. (True/False)

Q.17 Cullet is _____ glass. (Broken/Melted)

Q.18 In conditioning, the glass bubbles are reabsorbed in glass melt. (True/False)

Q.19 Hardness of glass can be measured by Moh's scale. (True/False)

Q.20 Increase in soda in glass decrease the viscosity of glass. (True/False)

SECTION-C

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

Q.21 Explain role of rings and boots in glass making.

Q.22 Discuss in brief origin of glass

Q.23 Discuss chemical composition of sheet glass.

Q.24 Explain how impact strength of glass is determined?

Q.25 Explain how temperature of glass melting furnace is controlled ?

Q.26 Name five raw materials of glass.