

- Q.29 Explain terms Glass former, Glass modifier and Glass Intermediate.
- Q.30 Discuss importance of phase equilibrium studies in glass.
- Q.31 Write short note on Regenerative tank furnace.
- Q.32 Explain how temperature of glass melting furnace is controlled.
- Q.33 Explain impact strength of glass.
- Q.34 Explain conveying of materials.
- Q.35 Discuss storage mixing and conveying of batch materials.

Section-D

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

- Q.36 Explain properties of glass.
- Q.37 Explain function of different parts of glass tank furnace.
- Q.38 Define viscosity. Explain its importance in glass making.

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**4th Sem. Branch: Ceramic Engg.
Sub : Glass Technology - I**

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Which metal oxide gives blue colour to the glass?
- a) Cobalt oxide
 - b) Fire oxide
 - c) Iron oxide
 - d) Zinc oxide
- Q.2 Soda results in ____.
- a) Fluidity
 - b) High Expansion
 - c) Solubility
 - d) All of these
- Q.3 Hardness of glass can be measured by
- a) Moh's Scale
 - b) Ohm law
 - c) Moh's Law
 - d) Ohm scale
- Q.4 Which of the following oxide increases thermal expansion of glass?
- a) Alumina
 - b) Silica
 - c) Arsenic oxides
 - d) Potash

- Q.5 The unit viscosity of glass is _____.
 a) Coise b) Poise
 c) Celcius d) Kg/m
- Q.6 Function of lithia in glass is to increase _____.
 a) Viscosity b) Fluidity
 c) Density d) Devitrification
- Q.7 Glass is a _____ liquid.
 a) Super cooled b) Super heated
 c) Solid d) Gas
- Q.8 Sources of SiO₂ glass batch is
 a) Sand b) Boric Acid
 c) Alumina hydrate d) Soda Ash
- Q.9 Percentage of Soda in Soda ash is _____.
 a) 38% b) 50%
 c) 58% d) 25%
- Q.10 Which of this furnace is used in melting glass?
 a) Tunnel b) Chamber
 c) Tank furnace d) Down draught
- Section-B**
- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Boron oxide is network former. (True/False)
- Q.12 Formula of Silica is _____.
 Q.13 Soda is network modifier. (True/False)
 Q.14 Pieces of broken glass is also called as _____.
 Q.15 Tank furnace is batch furnace. (True/False)
 Q.16 Increase in soda % in glass decreases the viscosity of glass. (True/False)
 Q.17 Glass is brittle. (True/False)
 Q.18 Tank furnace is type of batch furnace. (True/False)
 Q.19 Formula of soda feldspar is _____.
 Q.20 Main raw material for glass making is _____.
Section-C
- Note:** Short answer type Questions. Attempt any twelve questions out of fifteen Questions. (12x5=60)
- Q.21 What is glass? Write its properties & uses.
 Q.22 Discuss in brief origin of glass.
 Q.23 Explain general melting process of glass.
 Q.24 Explain density estimation of glass.
 Q.25 Explain flue system and chimney draft in glass tank furnace.
 Q.26 Name five raw materials of glass.
 Q.27 Explain fundamental concept of glassy state?
 Q.28 Explain importance of viscosity in glass melting.