

- Q.23 Explain moisture estimation in glass sample.
 - Q.24 Discuss preparation of glass batch.
 - Q.25 Explain tank temperature of glass.
 - Q.26 Explain viscosity.
 - Q.27 Explain functions of basic oxides in glass making.
 - Q.28 Explain fundamental concept of glassy state.
 - Q.29 Explain phase equilibrium studies.
 - Q.30 Tell use of port in glass melting.
 - Q.31 Explain importance of surface tension in glass making.
 - Q.32 Explain conveying of materials?
 - Q.33 Explain batch type furnace.
 - Q.34 Discuss pot furnace.
 - Q.35 List the purpose for uses of chimney draft.

SECTION-D

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

- Q.36 Describe about all the raw materials used for making glass batch.

Q.37 Explain construction and working of glass tank furnace used for making of glass.

Q.38 A batch is made by mixing 50kg of sand, 35kg of soda feldspar and 15kg of limestone. Calculate its chemical composition. (Take atomic weight of Si=28, O=16, Ca=40, Na=23, C=12, Al=27).

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

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Which of these is network formers oxide?

a) B_2O_3 b) SiO_2
c) Al_2O_3 d) Na_2O

Q.2 Which metal oxide gives blue colour to the glass?

a) Cobalt oxide b) Fire oxide
c) Iron oxide d) Zinc oxide

Q.3 In which country the glass was made earliest?

a) England b) Egypt
c) India d) US

Q.4 Broken glass pieces used in tank furnace for the manufacturing of glass is known as

a) Grog b) Wood
c) Pullet d) Cullet

Q.5 Melting of glass is carried out at temperature ranging from

a) 300°C to 600°C b) 130°C to 160°C
c) 1300°C to 1600°C d) 1900°C to 2600°C

- Q.6 Which of the following furnace is used for melting of glass_____.
- Kiln
 - Dryier
 - Tank
 - None
- Q.7 How does the addition of magnesia and alumina affect soda lime glass?
- Enhances mechanical strength
 - Reduces porosity
 - Increases Softening temperature
 - Improves chemical durability
- Q.8 What is the chemical formula of phosphorous pentoxide?
- P_2O_5
 - PO
 - P_3O_4
 - PO_4
- Q.9 The refractive index of a particular type of glass depends on its_____.
- Colour
 - Composition and on the wavelength of the light
 - Texture
 - Critical point
- Q.10 As a consequence, light energy travels through glass instead of being absorbed and reflected, so that glass is
- Bend
 - Opaque
 - Transparent
 - Weak

SECTION-B

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

- Q.11 Waste glass and broken and bad wares are known as cullet. (True/False)
- Q.12 Glass is _____ cooled material.
- Q.13 Alumina increases devitrification tendency of glass. (True/False)
- Q.14 Crown of tank furnace is made up of silica brick. (True/False)
- Q.15 The bottom surface of the pot has elliptical shape. (True/False)
- Q.16 Increase in soda in glass decreases the viscosity of glass. (True/False)
- Q.17 The capacity of tank is 180 tans of glass per day. (True/False)
- Q.18 Refining is achieved by adding chemical refining agents such as _____.
- Q.19 The melting temperature are controlled by pyrometers. (True/False)
- Q.20 Hardness of glass can be measured by _____.

SECTION-C

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

Q.21 Explain Discuss removal of iron from glass sand.

Q.22 List the physical properties of glass.