

- Q.23 Explain chimney draft.
 - Q.24 Explain thermal expansion.
 - Q.25 Explain optical properties of glass.
 - Q.26 Explain Empirical formula.
 - Q.27 Explain importance of density in glass melting.
 - Q.28 List the uses of floaters in glass making.
 - Q.29 Explain impact strength of glass.
 - Q.30 Explain the function of glass making oxides.
 - Q.31 Explain how temperature of glass melting furnace is controlled.
 - Q.32 Differentiate between regenerators and recuperators
 - Q.33 Explain thermal expansion of glass.
 - Q.34 Discuss in brief origin of glass.
 - Q.35 Explain bending test.

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4th Sem / Ceramic
Subject:- Glass Technology - I

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 Primary components of glass is _____

a) Crystal b) Sand

c) Silica d) Limestone

Q.2 Which of the following furnace is used for melting of glass-

a) kiln b) dryier

c) crown d) pot

Q.3 Which of the following is chemical refining agents?

a) Al_2O_3 b) AS_2O_3

c) Na_2O d) None

Q.4 Tank furnace is used to make _____

a) Steel b) iron

c) glass d) tile

- Q.5 The viscosity of glass, as measured in centimetre-gram-second units known as
 a) coise b) poise
 c) celcius d) kg/m
- Q.6 What is the melting temperature of fused quartz?
 a) 1112°C b) 1328°C
 c) 1525°C d) 1723°C
- Q.7 Mention three network modifiers of oxide glasses:
 a) $\text{Na}_2\text{O}, \text{CaO}, \text{B}_2\text{O}_3$ b) $\text{K}_2\text{O}, \text{Al}_2\text{O}_3, \text{Li}_2\text{O}$
 c) $\text{K}_2\text{O}, \text{CaO}, \text{Na}_2\text{O}$ d) $\text{B}_2\text{O}_3, \text{Na}_2\text{O}, \text{SiO}_2$
- Q.8 The weight percentage of external cullet in raw materials batches
 a) 25-50% b) Can be as high as 90%
 c) 10% d) 90%
- Q.9 The primary difference between a ceramic and a glass is based on its _____
 a) Solubility b) Crystallinity
 c) Conductivity d) Permeability
- Q.10 Which metal oxide gives red colour to the glass
 a) Cuprous oxide b) Iron oxide
 c) Fire oxide d) Antimony oxide

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SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Formula of lithium oxide is _____.
- Q.12 Melting of glass is carried out in _____ furnace and _____ furnace.
- Q.13 Increase in soda in glass decreases the viscosity of glass .(True/False)
- Q.14 The working temp depend on viscosity (10^4 poise) of glass and size of ware to be made. (True/False)
- Q.15 Soda is glass former. (True/False)
- Q.16 Ferrous oxide imparts _____ colour to glass.
- Q.17 Raw material must be reliable to supply glass forming oxide for which it is used. (True/False)
- Q.18 Lithia is more powerful _____ then soda and potash.
- Q.19 Non-oxide formers are arsenious sulphate (As_2S_3), berilium fluoride (BeF_2), Zinc chloride (ZnCl_2) (True/False)
- Q.20 Glass is brittle. (True/False)

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 List the composition of any glass.
- Q.22 Explain network modifier.

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