

- Q.24 Discuss preparation of chromite refractory.
- Q.25 Explain fusion cast refractories.
- Q.26 Explain Fire clay.
- Q.27 Explain Quartzite.
- Q.28 Explain Permanent linear change.
- Q.29 Explain phase diagram.
- Q.30 List the composition of chromite refractory.
- Q.31 List the uses of carbon refractory.
- Q.32 Differentiate between true porosity and apparent porosity.
- Q.33 Explain Mullite.
- Q.34 Discuss Permeability.
- Q.35 Explain Magnesium-Chrome refractories.

#### SECTION-D

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

- Q.36 List the factors affecting of selection of refractories raw material. Describe occurrence of raw material and manufacturing units in India.
- Q.37 Describe the MgO-SiO<sub>2</sub> phase diagram with help of neat sketch.
- Q.38 Describe the testing method of determination of cold crushing strength of a given sample of refractory.

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**4th Sem.**

**Branch : Ceramic**

**Sub. : Ceramic Refractory Technology-I**

**Time : 3 Hrs.**

**M.M. : 100**

#### SECTION-A

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

- Q.1 Refractories material can withstand \_\_\_\_\_.  
 a) Low temperature  
 b) Very low temperature  
 c) High temperature  
 d) None
- Q.2 Which of the following is Basic refractory?  
 a) Fire clay refractory  
 b) Silica refractory  
 c) Alumina refractory  
 d) Magnesite refractory
- Q.3 Porosity deals with \_\_\_\_\_.  
 a) Pores  
 b) Grogs  
 c) Silica  
 d) Alumina
- Q.4 In which test we observe the strength of refractory  
 a) Permeability  
 b) PCE  
 c) CCS  
 d) Bulk Density

- Q.5 RUL stands for \_\_\_\_\_.  
 a) Refractories Under Load  
 b) Refractoriness under Load  
 c) Retractoriness Un Load  
 d) Refractoriness Upsr Load
- Q.6 Insulation is related with \_\_\_\_\_.  
 a) High density  
 b) High specific gravity  
 c) High porosity  
 d) None
- Q.7 Thermal conductivity is related with \_\_\_\_\_.  
 a) High density                      b) High specific gravity  
 c) High porosity                      d) None
- Q.8 Acid refractories are attacked by  
 a) Basic Slag                      b) Acid slag  
 c) Alumina                      d) None
- Q.9 Zirconium found in Kerala as \_\_\_\_\_.  
 a) Beach sand                      b) Quartzite  
 c) Silica sand                      d) None
- Q.10 The percentage of Alumina in fused alumina refractory is \_\_\_\_\_.  
 a) 20-30%                      b) 40-50%  
 c) 0-10%                      d) 85-90%

## SECTION-B

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

- Q.11  $\text{MgCo}_3$  is formula of \_\_\_\_\_
- Q.12 Dolomite refractories are basic in nature. (True/False)
- Q.13 Drying of refractories are done in hot chamber. (True/False)
- Q.14 Spray test determines the \_\_\_\_\_ of refractories.
- Q.15 \_\_\_\_\_ is a neutral refractory.
- Q.16 Drum test determines the \_\_\_\_\_ of refractories.
- Q.17 Magnesia content in dolomite refractory can be \_\_\_\_\_ percent.
- Q.18 Porosity of insulating refractory brick should be low. (True/False)
- Q.19 Refractoriness of carbon bricks is about \_\_\_\_\_ °C.
- Q.20 The main purpose of using Refractory materials to retain heat in furnace.

## SECTION-C

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

- Q.21 Classify the fire clay refractories.
- Q.22 Explain density.
- Q.23 Explain basic refractories.