

- Q.23 Explain acid refractories.  
 Q.24 Explain bulk density.  
 Q.25 Explain Permeability.  
 Q.26 Explain zircon.  
 Q.27 Explain Silimanite.  
 Q.28 List the uses of dolomite refractory.  
 Q.29 Explain phase diagram.  
 Q.30 List the composition of silica refractory  
 Q.31 Explain Grog.  
 Q.32 Differentiate between acid refractories and basic refractories.  
 Q.33 Explain chromite.  
 Q.34 Discuss bauxite.  
 Q.35 Explain special refractories.

#### **SECTION-D**

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Explain the manufacturing process of Carbon refractory and also list the properties and uses of it.  
 Q.37 Describe the  $\text{Al}_2\text{O}_3$ - $\text{SiO}_2$  phase diagram with help of neat sketch.  
 Q.38 Describe the testing method of determination of refractoriness of a given sample of refractory.

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#### **4th Sem / Ceramic Subject:- Ceramic Refractory Technology - I**

Time : 3Hrs.      M.M. : 100

#### **SECTION-A**

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

- Q.1 The refractory are neither attacked by acid slag nor by basic slag is called  
 a) Acid refractory      b) Basic refractory  
 c) Neutral refractory      d) None
- Q.2 Examples of Neutral refractory is \_\_\_\_\_  
 a) Fire clay refractory      b) Silica refractory  
 c) Magnesite refractory      d) Carbon refractory
- Q.3 \_\_\_\_\_ is the volume of air or gas which will pass through a cubic centimeter of the material under a pressure of 1 cm of water in one second.  
 a) Permeability      b) PCE  
 c) CCS      d) Bulk Density
- Q.4 Examples of special refractory is \_\_\_\_\_  
 a) Dolomite refractory  
 b) Quartz refractory

- c) Zirconia refractory  
d) Mag-chrom refractory
- Q.5** PCE stands for \_\_\_\_\_.  
 a) Pyrometric cone equivalent  
 b) Pyrometric cylinder equivalent  
 c) Pyrometric card equivalent  
 d) Pyrometric care equivalent
- Q.6** Silicon Carbide has chemical formula  
 a) CaO                          b) SiB  
 c) SiC                            d) HCl
- Q.7** In PCE est the shape of sample cone is  
 a) Prism                        b) Tetrahedron  
 c) Square                      d) Sphere
- Q.8** The B.D. stands for  
 a) Bend Density                b) Bulk Density  
 c) Density                     d) None
- Q.9** Sillimanite occurs in Travancore in  
 a) Kerala                      b) Bihar  
 c) Jharkhand                  d) Haryana
- Q.10** The porosity of insulating refractory is  
 a) 80%                        b) 10-12%  
 c) 20%                        d) 2-5 %

## **SECTION-B**

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11** Weight per unit volume of refractory is known as \_\_\_\_\_.
- Q.12** Dolomite refractories are basic in nature. (T/F)
- Q.13** Firing of refractories are done in tunnel kiln. (T/F)
- Q.14** Capacity of a refractory brick to resist the rubbing action by moving charge is called as \_\_\_\_\_.
- Q.15** \_\_\_\_\_ is a acidic refractory.
- Q.16** RUL test determines the \_\_\_\_\_ of refractories.
- Q.17** Silica content in silica refractory can be as high as \_\_\_\_\_ percent.
- Q.18** Price of refractory brick should be low. (T/F)
- Q.19** Slag resistance is one of the important properties of refractories. (T/F)
- Q.20** Temperature inside the kiln may be measured with the help of thermometer. (T/F)

## **SECTION-C**

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21** Explain refractory.
- Q.22** Explain apparent porosity.