

- Q.25 Explain monolithi.
- Q.26 List two refractories used in blast furnace.
- Q.27 Explain soaking pits.
- Q.28 Explain composite material.
- Q.29 List two refractories used in cement plant.
- Q.30 Write the uses of abrasives.
- Q.31 Tell about ladle.
- Q.32 Discuss coke oven.
- Q.33 Explain hot metal mixer.
- Q.34 Discuss insulating bricks.
- Q.35 Explain sintering.

Section-D

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

- Q.36 Describe the production, properties and uses of magnesia bricks.
- Q.37 Explain the refractories used in blast furnace in detail.
- Q.38 Describe the production, properties and uses of refractory bricks used rotary kiln in lime and cement plant.

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5th Sem., Branch : Ceramic
Subject : Ceramic Refractory Technology - II

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Carbon refractories are exclusively used in the
- Hearth of blast furnace
 - Side wall of soaking pits
 - Regenerators of coke oven
 - Walls of coke oven
- Q.2 High density refractory bricks have lower
- Spalling resistance
 - Slag penetration resistance
 - Fusion point
 - Thermal conductivity
- Q.3 Carbon has fusion point of
- | | |
|------------------------|------------------------|
| a) 3600 ⁰ c | b) 600 ⁰ c |
| c) 1600 ⁰ c | d) 1200 ⁰ c |
- Q.4 Refractory castables are used for
- Producing monolithic linings
 - Patch work
 - Both A & B
 - None

- Q.5 RUL stands for _____.
- Refractories under load
 - Refractoriness under load
 - Refractores upload
 - None
- Q.6 Which of the following is an example of special refractory?
- Alumina
 - Thoria
 - Fire clay
 - Silica
- Q.7 Insulating refractories having
- Low thermal conductivity
 - High thermal conductivity
 - Medium conductivity
 - None
- Q.8 $3\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2$ is
- Alumina
 - Ball clay
 - Mullite
 - Dolomite
- Q.9 The largest consumer of refractories is the-
- Cement plant
 - Power plant
 - Metallurgical plant
 - Fertiliser plant
- Q.10 Cermets are used in the
- Hearth of the blast furnace
 - Nuclear reactors, missiles & space crafts
 - Insulation of high temperature furnaces
 - Roof of electric furnaces

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Section-B

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

- Q.11 PCE test determines the _____ of refractories.
- Q.12 Maximum alumina content in high alumina refractory can be as high as _____ percent.
- Q.13 Refractoriness of a typical silica brick corresponds to Segar cone number, '32' which is equivalent to a temperature of _____ °C.
- Q.14 Softening point of zirconia bricks is about _____ °C.
- Q.15 Refractory bricks having lower porosity have good strength. (True/False)
- Q.16 SiC refractories are used in making of cutting wheels. (True/False)
- Q.17 CaO content in dolomite refractory can be _____ percent.
- Q.18 Porosity of insulating refractory brick should be high. (True/False)
- Q.19 TSR stands for _____.
- Q.20 Chromite refractories are _____ refractory.

Section-C

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

- Q.21 List the uses of glass wool.
- Q.22 List the properties of zirconia.
- Q.23 List the uses of crucible.
- Q.24 Discuss preparation of saggars.

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