

- Q25 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 laddle.
 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
 - a) Hearth of blast furnace
 - b) Side wall of soaking pits
 - c) Regenerators of coke oven
 - d) Walls of coke oven
 Q.2 High density refractory bricks have lower
 - a) Spalling resistance
 - b) Slag penetration resistance
 - c) Fusion point
 - d) Thermal conductivity
 Q.3 Carbon has fusion point of
 - a) 3600°C
 - b) 600°C
 - c) 1600°C
 - d) 1200°C
 Q.4 Refractory castables are used for
 - a) Producing monolithic linings
 - b) Patch work
 - c) Both A & B
 - d) None

Q.5 RUL stands for _____.

- a) Refractories under load
- b) Refractoriness under load
- c) Refractories upload
- d) None

Q.6 Which of the following is an example of special refractory?

- a) Alumina b) Thoria
- c) Fire clay d) Silica

Q.7 Insulating refractories having

- a) Low thermal conductivity
- b) High thermal conductivity
- c) Medium conductivity
- d) None

Q.8 $3\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2$ is

- a) Alumina b) Ball clay
- c) Mullite d) Dolomite

Q.9 The largest consumer of refractories is the-

- a) Cement plant b) Power plant
- c) Metallurgical plant d) Fertiliser plant

Q.10 Cermets are used in the

- a) Hearth of the blast furnace
- b) Nuclear reactors, missiles & pace crafts
- c) Insulation of high temperature furnaces
- d) Roof of electric furnaces

Section-B

Note: Objective type questions. All questions are compulsory. $(10 \times 1 = 10)$

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 _____ $^{\circ}\text{C}$.

Q.14 Softening point of zirconia bricks is about _____ $^{\circ}\text{C}$.

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. $(12 \times 5 = 60)$

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 saggers.