- Q.30 Discuss kiln used in lime industries.
- Q.31 Explain crucible
- Q.32 Discuss hot metal mixure.
- Q.33 Explain soaking pits.
- Q.34 Discuss castables.
- Q.35 Explain Silicon nitride.

SECTION-D

- **Note:** Long answer type questions. Attempt any two questions out of three questions. 2x10=20
- Q.36 Describe the production, properties and uses of magnesia bricks.
- Q.37 Discuss the refractories used in construction of nuclear reactor in nuclear power plant in detail.
- Q.38 Describe the production, properties and uses of refractory bricks used in Blast furnace.

(4)

No. of Printed Pages : 4

Time : 3 Hrs.

5th SEM / CERAMIC ENGG

Subject : Ceramic Refractory Technology - II

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are c o m p u l s o r y . (10x1=10)

- Q.1 The main raw material for manufacture of silicon carbide refractories is_____
 - a) Corundum b) Carborundum
 - c) Bauxite d) Periclase
- 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

(1)

- Q.4 Refractory castables are used for
 - a) Producing monolithic linings
 - b) Patch work
 - c) Both (a) and (b)
 - d) None
- Q.5 RUL stands for _____.
 - a) Refractories under load

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- b) Refractoriness under load
- c) Refractores 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 $3AI_2O_3$. $_2SiO_2$ 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 & space crafts
 - c) insulation of high temperature furnaces
 - d) roof of electric furnaces

SECTION-B

- **Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Silica refractory is used in Glass tank furnace. (T/F)
- Q.12 _____ furnace is used to make iron. (Blast / Glass)

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- Q.13 _____ is a furnace to make glass.
- Q.14 _____ refractory is used in coke oven.
- Q.15 Sintering is densification of shaped refractory bricks.(true/false)
- Q.16 Titania refractories are _____ refractory.
- Q.17 Monolithics means single layer refractor. (true/false).
- Q.18 Spalling resisistance is also called as thermal shock resistance. (true/false)
- Q.19 Capacity of a refractory brick to with stand-sudden changes in temperature is denoted by the property called TSR. (true/false)
- Q.20 Chemical formula of ZIRCONIA is _____.

SECTION-C

- **Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Explain the sintering process of refractories.
- Q.22 Explain magnesia refractory with examples.
- Q.23 Explain open hearth furnace
- Q.24 Discuss refractories used in iron and steel plant.
- Q.25 Discuss monolithic castable
- Q.26 Discuss coke oven.
- Q.27 Explain thoria refractory brick.
- Q.28 Discuss preparation of saggars.
- Q.29 Discuss refractories used in nuclear power plant.

(3)

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