

- Q.27 Write about caustic embrittlement.
- Q.28 Write about important terms for steam.
- Q.29 discuss about ion exchange method for water treatment.
- Q.30 Write the difference between priming and forming with digram.
- Q.31 Classify refrigerant with its characteristics and properties.
- Q.32 Discuss about H-S diagram of water and steam.
- Q.33 Write about insulation and its types.
- Q.34 Write about Zeolite process with diagram.
- Q.35 Write about the properties and uses for refractories?

Section-D

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

- Q.36 With diagram, explain the anyone type of cooling tower with advantages and disadvantages.
- Q.37 Discuss the construction and working of Cochran boiler with uses.
- Q.38 Write short note on any three:-
- 1) Oil burner
 - 2) Failure of refractories
 - 3) Cold lime soda process
 - 4) Steam generation

No. of Printed Pages : 4

180561/120561/30561

Roll No.....

6th Sem / Chemical Engg./Chemical Engg Subject : Process Plant Utilities

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Classification of refractories
- a) Acid
 - b) Basis
 - c) Neutral
 - b) All of above
- Q.2 The permanent hardness of water cannot be removed by
- a) Lime soda process
 - b) Permutit process
 - c) Boiling
 - d) Demineralization Process
- Q.3 Fuel types are
- a) Solid
 - b) Liquid
 - c) Gaseous
 - d) All of above
- Q.4 Bucket and expansion are the type of
- a) Steam ejector
 - b) Preheater
 - c) Steam trap
 - d) Economizer

- Q.5 Which of the following type of fuel does not contain ash?
- a) Coal b) Fuel oil
c) Gaseous fuel d) Synthetic fuel
- Q.6 Hard water is not suitable for used in boilers because
- a) It has a higher boiling point
b) It leads to scale formation in the boiler
c) It consumes more fuel in steam generation
d) The quality of steam generated is not good.
- Q.7 Insulation material used for lining combustion chamber
- a) Refractories b) Cooling tower
c) Boiler d) All of above
- Q.8 The most commonly used unit to express hardness is
- a) Degree French b) Degree Clarke
c) ppm d) Grains/gallon
- Q.9 BOD is
- a) Biological oxygen demand
b) Biological over depth
c) Both A & B
d) None of above
- Q.10 The scales decrease the efficiency of boiler and chances of explosions are also there.
- a) True b) False

Section B

Note: Objective types Questions. All Questions are compulsory. (10x1=10)

- Q.11 Define insulation?
- Q.12 What is demineralized water?
- Q.13 Write full form of RO.
- Q.14 What is dryness fraction?
- Q.15 What is enthalpy?
- Q.16 Write one examples of safety valve in daily life.
- Q.17 Define saturated steam.
- Q.18 What is preheater.
- Q.19 Write one advantage of soft water.
- Q.20 Name different processes of water softening.

Section-C

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

- Q.21 Write about anyone water softening methods with examples.
- Q.22 Write about boiler corrosion.
- Q.23 Difference between colloidal conditioning and carbonate conditioning?
- Q.24 Discuss about bucket type steam trap.
- Q.25 Describe about formation of steam with diagram.
- Q.26 Explain about sources of water and impurities of water.