

Question Bank (G scheme)

Name of subject: Plant Utilities

Subject code:17425

Semester: Fourth

Unit Test 1

Course: CH

Chapter 1-Water (20marks)

3 marks question

1. Define temporary hardness and permanent hardness of water.
2. Define the following units of hardness a)ppm b)mg/l
3. Give any 3 functions of lime in lime soda process.
4. Give the functions of soda ash in lime soda process.
5. Define osmosis and reverse osmosis
6. What are zeolites. Give 1 eg of natural zeolite
7. How foaming can be avoided in boilers.
8. How priming can be avoided in boilers

4 marks question

9. Compare permutit process and lime soda process based on the following points
a) residual hardness b) Na salts c)water containing suspended matter d) treatment of acidic water.
10. Explain hot lime soda process.
11. Explain reverse osmosis for desalination of water.
12. Explain methods for removing scales.
13. Explain boiler corrosion caused by dissolved oxygen.
14. How dissolved oxygen can be removed from water?

Chapter 2 Steam and steam generation (30marks)

3 marks question

15. Define wet steam and dry steam.
16. Define dryness fraction and superheated steam.
17. Compare fire tube and water tube boiler based on the following points
a) furnace position b)drum size c)heating area utilization d)use of fuel
18. Explain boiler act with respect to duties of inspector.

4 marks question

- 19 Give the function of water level indicator and air preheater in a boiler
20. Explain working of fluidized boiler.
- 21 Draw the diagram of Cochran boiler and mark the parts
22. Give the classification of boiler based on tube contents and explain them
23. Give the function of steam trap and economizer in a boiler.
24. Explain working of water level indicator.
25. Draw the diagram of air preheater and mark the parts.