

Question Bank (I scheme)

Name of subject: Plant Utility
Subject code: 22311

Semester: Third
Course: CH

Unit Test 1

Unit 1-Industrial Water (16 marks)

3 marks question

1. Define temporary hardness and permanent hardness of water.
2. Define the following units of hardness a) ppm b)mg/l c) Degrees French.
3. Give any 3 functions of lime in lime soda process.
4. Explain how priming can be avoided in boilers.
5. Explain how caustic embrittlement can be avoided in boilers.

4 marks question

6. Differentiate between 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.
7. Explain hot lime soda process.
8. Explain internal treatment method by phosphate conditioning for prevention of scales formation.
9. Explain methods for removing scales.
10. Explain boiler corrosion caused by dissolved oxygen.
11. Explain how dissolved oxygen can be removed from water?

Chapter 2 Steam and steam generation (20marks)

3 marks question

12. Define wet steam and dry steam.
13. Define dryness fraction and superheated steam.
14. Differentiate between 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
15. Explain boiler act with respect to duties of inspector.
16. Give the function of air preheater.
17. Explain the property of any one thermic fluid

4 marks question

18. Explain working of fluidized boiler.
19. Draw the diagram of Babcock and Wilcox boiler and mark the parts.
20. Give the classification of boiler based on tube contents and furnace position and explain them.
21. Explain working of water level indicator.
22. Draw the diagram of air preheater and mark the parts.
23. Give the function of superheater.
24. Give 4 advantages of thermic fluid over steam
25. Explain the working of thermic fluid heater.