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Question Paper Code: 39516

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Elective

Electronics and Instrumentation Engineering

01UEI916 - INSTRUMENTATION FOR POWER PLANTS

(Regulation 2013)

Duration: 1:45 hour

Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any ten of the following questions)

1. What factors to be considered for power plant performance?
2. Mention the renewable and non-renewable source of energy.
3. What do you mean by 'swelling' and 'shrinking' in a boiler drum?
4. What is the use of dust monitor?
5. List the selection criteria for carrier gas in chromatography.
6. Define pH.
7. What is furnace draft?
8. What are the various methods used for steam temperature control?
9. Why speed control is required in a turbine?
10. List the different methods of dry cooling.
11. Mention the renewable and non-renewable source of energy.
12. Sketch the P & I diagram of boiler.

13. List the parameters involved in measuring electrical measurements in power plants.
14. What is the use of dust monitor?
15. List the selection criteria for carrier gas in chromatography.

PART – B (3 x 10= 30 Marks)

(Answer any three of the following questions)

16. Draw the schematic layout of modern thermal power plant and explain in detail. (10)
17. Explain the operation of smoke and dust monitor. (10)
18. Discuss the important analytical measurements carried out in flue gas with neat diagram. (10)
19. Draw and explain the different levels of DCS with different buses for power plant automation. (10)
20. Discuss the cooling systems operating in turbo alternator process with neat diagram. (10)