

D 50570

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Name

Reg

**SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, NOVEMBER 2013**

AI 09 706 L 17—POWER PLANT INSTRUMENTATION AND CONTROL

Time : Three Hours

Maximum : 70 Marks



Part A

I. Answer *all* questions :

1. What is once through boiler ?
2. Define Nuclear Fission.
3. How is correction factor for temperature accounted during measurement of steam flow ?
4. What is deaerator ?
5. Why is vibration control important ?

(5 × 2 = 10 marks)

Part B

II. Answer any *four* questions :

6. How is steam temperature monitored in a power plant ?
7. List out applications of super heaters.
8. Explain furnace draft control system.
9. Write short notes on flue gas analyser.
10. Enumerate different types of pollution monitoring instruments used in a thermal power plant.
11. What are condensers ?

(4 × 5 = 20 marks)

Part C

III. Answer *all* questions :

12. Explain process of converting solar energy into electrical energy.

Or

13. Discuss in detail about water tube boiler with a neat sketch.
14. Explain the working principle of a dissolved oxygen analyser.

Or

15. Explain in detail about radiation detectors.

Turn over



16. Explain in detail about three element drum level control with a neat sketch.

Or

17. Explain the features of main steam, reheat steam and super heater based temperature control.

18. Explain in detail about Nuclear power generation with a neat sketch.

Or

19. Explain briefly about the lubricant oil temperature control scheme with a neat sketch.

(4 × 10 = 40 marks)