



C 44473

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Name.....

Reg. No.....

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

AI 09 L17—POWER PLANT INSTRUMENTATION AND CONTROL

(2009 Scheme – Supplementary)

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.

- I. 1 What are condensers ?
2 Distinguish between two element drum level control and three element drum level control.
3 Define pH.
4 List out advantages of distributed control in power plants.
5 What is nuclear fission ?

(5 × 2 = 10 marks)

Part B

Answer any four questions.

- II. 6 How will you generate power from wind ?
7 Explain the method of measuring flow of feed water in power plant.
8 Discuss the working principle of a flue gas analyzer.
9 Mention the functions of combustion control
10 Why should the pressure of steam be raised in boiler and turbine ?
11 How will you automate a thermal power plant using SCADA ?

(4 × 5 = 20 marks)

Part C

Answer all questions.

- 12 Explain in detail about various types of boilers.

Or

- 13 Explain the operation of a thermal power plant with a neat block diagram.

- 14 Explain dust monitors with a neat sketch.

Or

- 15 Explain the working principle of pH meter.

- 16 Explain in detail about parallel position control system for combustion control.

Or

Turn over

- 17 With a neat block diagram explain the functions of a distributed control system for power plant.
- 18 Explain briefly about cooling system in a power plant.

Or

- 19 Explain in detail about hydroelectric power generation with a neat sketch.

(4 × 10 = 40 marks)