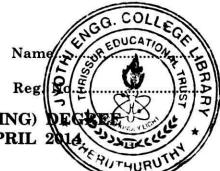
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SEVENTH SEMESTER B.TECH. (ENGINEERING) [SUPPLEMENTARY] EXAMINATION, APRIL

(2009 Scheme)

AI 09 706 L17—POWER PLANT INSTRUMENTATION AND CONTROL

Time: Three Hours

Maximum: 70 Marks

Part A

- I. Answer all questions. Each question carries 2 marks:
 - 1 Name commonly used moderators in nuclear power plants.
 - 2 Define once through boiler.
 - 3 Specify device used for measuring current and voltage is a power plant.
 - 4 State the principle of ionization smoke detector.
 - 5 What is deaerator?

 $(5 \times 2 = 10 \text{ marks})$

Part B

- II. Answer any four questions. Each question carries 5 marks:
 - 6 Explain tracking control mode of boiler system.
 - 7 List out the junctions of superheater.
 - 8 Discuss about shell temperature monitoring and control.
 - 9 Explain the wind power generation with a neat block diagram.
 - 10 Explain about dust monitors with a neat sketch.
 - 11 Explain working principle of a pH meter.

 $(4 \times 5 = 20 \text{ marks})$

Part C

- III. Answer all questions. Each question carries 10 marks:
 - 12 Explain various types of condensers.

(10 marks)

Or

13 Explain building blocks of a thermal power plant with a neat sketch.

(10 marks)

14. Write short notes on radiation detectors.

(10 marks)

Or

15. Explain measurement of flow of steam with correction factor for temperature is a power plant.

(10 marks)

16. Explain interlocks is boilers.

(10 marks)

Or

17. Explain the functions of a distributed control system is a power plant.

(10 marks)

18. Discuss in detail about lubrication system for a steam turbine with a neat sketch.

(10 marks)

Or

19. Discuss methods for monitoring speed and vibration is power plants.

(10 marks)

 $(4 \times 10 = 40 \text{ marks})$