C 44830

Name.....................................

Reg. No.................................

EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE [SUPPLEMENTARY] EXAMINATION, JUNE 2013

AI04 805 (F)—POWER PLANT INSTRUMENTATION AND CONTROL

(2004 Scheme)

Time : Three Hours

Maximum : 100 Marks

Part A

Answer **all** *questions.*

1. What are condensers ?
2. List out the non-renewable energy sources.
3. Explain the pollution monitoring instruments.
4. How will you measure dissolved oxygen content ?
5. What are superheaters ?
6. What do you mean by interlocks ?
7. Define the terms attenuation and dispersion.
8. List out the precautions to be taken care in a nuclear power plant.

(8 × 5 = 40 marks)

Part B

Answer one question from each module.

I. (a) Explain in detail about the basic building blocks. Of a thermal power plant. (15 marks)

Or

(b) Explain the different types of boilers. (15 marks)

II. (a) Explain the working of a flue gas analyzer in a power plant. (15 marks)

Or

(b) (i) Explain the principle of a working of a pH meter. (7 marks)

(ii) Write short notes on radiation detectors. (8 marks)

III. (a) Discuss the merits of employed distributed control systems in power plants. (15 marks)

Or

(b) Explain in detail about various control loops in boilers. (15 marks)

IV. (a) Explain the methods adopted to control the lubricant oil temperature. (15 marks)

Or

(b) Explain in detail the principle of hydro-electric power generation. (15 marks)

[4 × 15 = 60 marks]