TED (10) 5074
(Revision 2010)

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FIFTH SEMESTER DIPLOMA EXAMINATION IN INSTRUMENT TECHNOLOGY
OCTOBER- 2016
POWER PLANT INSTRUMENTATION

Maximum Marks : 100 Time : 3 Hrs

PART–A
(Maximum marks: 10)

I. Answer the following questions in one or two sentences. Each question carries 2 marks.

1 What are the non-conventional methods of power generation?
2 What is the use of spill ways in dam?
3 What is meant by a moderator?
4 What is meant by demineralisation?
5 What are major air pollutants? [5x2 =10]

PART - B
(maximum marks : 30)

II Answer any 5 of the following questions. Each question carries 6 marks.

1. List the stages of coal handling.
2. Explain the advantages and disadvantages of solar power.
3. Explain the importance of feed water treatment.
4. Explain Nuclear power generation.
5. Describe feed water flow measurement.
6. Describe differential pressure type level measurement in boiler.
7. What is Combustion control? State its requirement in furnace? [5x6 =30]

PART - C
(maximum marks : 60)
(Answer one full question from each unit. Each carries 15 marks)

UNIT I

III (a). With schematic diagram describe the working of Wind Power generation. [8]
(b) The advantages and disadvantages of steam power plant. [7]

OR

IV (a) With schematic diagram describe the working of Thermal Power Plant. [15]

UNIT II

V (a) Briefly explain the measurements (steam flow, steam pressure and steam temperature) in boiler. [15]

OR

VI (a) Describe demineralisation with block diagram. [8]
(b) Describe the working of any one type of turbine speed measuring device. [7]

UNIT III

VII (a) Explain five element boiler drum level control scheme. [7]
(b) Explain seven element boiler drum level control scheme. [8]

OR

VIII (a) List the differences between Impulse and Reaction Turbines. [8]
(b) List the interlocks associated with boiler operation. [7]

UNIT – IV

IX (a) Explain the working of smoke detector with diagram. [7]
(b) Explain the working of dust monitor with diagram. [8]

OR

X (a) Explain the working of a bag house filter with schematic. [8]
(b) Explain the action in an electrostatic precipitator with figure. [7]

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