Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

MMTP-201

M.E./M.Tech., II Semester

Examination, June 2017

Thermal Power Plant Engineering

Time : Three Hours

Maximum Marks : 70

Note : Attempt any five questions. All questions carry equal marks. Draw neat diagrams wherever required.

1. a) Compare super critical thermal power plants with conventional power plants.
   b) Name various performance curves and flow diagrams that are necessary for the thermal power plant. Draw and discuss any one flow diagram of your choice.

2. a) State the name of power plant components. Discuss fuel and ash handling.
   b) State the advantages of pulverised fuel and fluidized bed combustion.

3. a) How furnace is designed in thermal power plant? Discuss various considerations.
   b) Explain radiant super heaters and re-heaters used in thermal power plants.

4. a) Discuss mixed and dry cooling tower systems used in thermal power plant.
   b) Explain the working and operation of steam turbine driven feed pump.

5. a) State brief about distributed and centralised controls that are essential in thermal power plant.
   b) Draw a layout of ducting for air fuel and gases in thermal power plant.

6. a) Briefly discuss selection of piping and pipe flexibility analysis.
   b) Discuss acceptance tests for various components of newly commissioned power plants.

7. a) Discuss heat balance of items and entered thermal power plant.
   b) Discuss safety and seismic analysis related to thermal power plant.

8. Write short note on following (any two)
   a) Optimum insulation thickness.
   b) Various control valves.
   c) Pollution control in thermal power plant.
   d) Training of power plant personnel.

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