

Roll No .....

**MMTP - 201**  
**M.E./M.Tech., II Semester**  
Examination, June 2016  
**Thermal Power Plant Engineering**  
*Time : Three Hours*

*Maximum Marks : 70*

**Note :** Attempt any five questions. All questions carry equal marks.

1. a) Explain supercritical power plant and its working principles. 7  
b) Explain performance curve and flow diagram of supercritical power plant. 7
2. a) What is the function of cooling tower? Write its types. 7  
b) Discuss the material which are used for gas turbine and compressors. 7
3. a) Explain the working of steam turbine driven feed pump. 7  
b) Explain pneumatic and electro-mechanical transducers. 7
4. a) Prepare a heat balance sheet of different items and for entire thermal power plant and assume suitable data for illustration if necessary. 7

- b) What is the step of commissioning and various operational checks of thermal plant. 7
5. a) Discuss various types of control valves and actuators illustrate pipe flexibility analysis. 7  
b) What do you mean by optimum insulation thickness and cost? Discuss. 7
6. a) State advantages and limitations of super critical power plant. 7  
b) What are the step taken for thermal power plant management? 7
7. a) Write short notes about seismic analysis. 7  
b) Bring out the difference between the closed cycle and open cycle gas turbine power plant. 7
8. Write short notes on the following (any four) 14
  - a) Piping and Insulation
  - b) Ash handling
  - c) Ejector and vacuum pumps
  - d) Fluidized bed combustion
  - e) Pollution control in thermal power plant
  - f) Training of power plant personnel

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