

Q.P. Code : 1142

(3 Hours)

[ Total Marks : 100

- N.B. : (1) Question Number 1 is compulsory.  
 (2) Attempt any four questions out of remaining six.  
 (3) Figures to the right indicate full marks.

1. Attempt the following. 20  
 (a) Explain (i) Fluidized Bed Combustion (ii) Pulverized fuel firing.  
 (b) Explain ash handling plant in Steam Power Station.
2. (a) Explain the classification of Hydro Power Plants. 10  
 (b) Explain the Thermal Power Plant in detail with its neat block diagram. 10
3. (a) The maximum demand of power station is 96000kw. It has to supply the load as follows. 10
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|------------|-----|-----|------|-------|-------|-------|------|
| Time (Hrs) | 0-6 | 6-8 | 8-12 | 12-14 | 14-18 | 18-22 | 22-4 |
| Load(MW)   | 48  | 60  | 72   | 60    | 84    | 96    | 48   |
- (i) Draw load curve and load duration curve.  
 (ii) Calculate load factor.
- (b) Explain Nuclear Reactors in brief. 10
4. (a) Explain effects of fluctuating loads on operation and design of power plants. 10  
 (b) Explain the performance of Gas Turbine Power Plant. 10
5. (a) Explain the classification of Hydro Power Plants. 10  
 (b) Explain coal handling plant in Steam Power Station. 10
6. (a) Write short notes on load curve and load duration curve 10  
 (b) Explain pressurized water reactor. Mention its advantages and disadvantages. 10
7. Write short notes on: 20  
 (a) Solar Power Plant  
 (b) Geothermal Energy