

3

QP Code : 4554

(OLD COURSE)

(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. (a) Explain in brief base load and peak load plants. 5  
 (b) Define Demand Factor, Load Factor, Diversity Factor, Utilization Factor and Plant Capacity Factor. 5  
 (c) Explain in brief: 1) Hydrograph 2) Flow Duration Curve 5  
 (d) State and explain selection criterion of Thermal Power Plant. 5
2. (a) Explain the classification of Hydro Power Plants. 10  
 (b) Explain ash handling plant in Steam Power Station. 10
3. (a) The maximum demand of power station is 26000KW. It has to supply the load as follows. 10

Time (Hrs)	0-6	6-8	8-12	12-14	14-18	18-22	22-24
Load (MW)	48	60	72	60	84	96	48

  - (i) Draw load curve and load duration curve.
  - (ii) Calculate load factor.
- (b) Explain fission and fusion in the case of Nuclear Power Plant. 10
4. (a) Explain pressurized water reactor. Mention its advantages and disadvantages. 10  
 (b) Explain effects of fluctuating loads on operation and design of power plants. 10
5. (a) Write short notes on Load curve and load duration curve 10  
 (b) Write short note on Solar Active and Passive Collectors. 10

[ TURN OVER

6. (a) Explain the operation of Diesel Power Plant and also explain the essential components. 10
- (b) Explain in brief factors affecting Economic of generation and distribution of electric power. 10
7. Write short notes on any two. 20
- (a) Solar Power Plant
- (b) Geothermal Energy
- (c) Gas Turbine Power Plant
-