

(3 Hours)

[Total Marks : 100

N.B. : (1) Question No. 1 is **compulsory**.(2) Attempt any **four** questions from remaining **six** questions.

1. (a) Explain in brief the solar active and passive collector. **5**
- (b) Explain in brief :- **5**
- (i) Hydrologic cycle
- (ii) Run-off
- (iii) Hydrograph.
- (c) Draw a typical load curve and load duration curve for a shopping mall. **5**
- (d) Compare Nuclear fission and fusion. **5**
2. (a) Explain 'Green House Effect'. Also discuss its effect on agriculture, water resources, sea, forest and climate. **10**
- (b) Explain the different methods of tariffs. **10**
3. (a) Explain advantages, disadvantages, layout and field of use of Diesel power plant. **10**
- (b) Explain "Fluidized Bed Combustion" in detail. **10**
4. (a) What are advantages and disadvantages of gas turbine power plant ? **10**
- (b) Explain in detail "structure of power industry". **10**
5. (a) State and explain criteria for selection of location for thermal power plant. **10**
- (b) Explain BWR with neat sketch. Compare the same with PWR. **10**
6. (a) Explain the various methods of meeting fluctuating load. **10**
- (b) A generating station has the following daily load cycle. **10**

Time (Hours)	0-6	6-10	10-12	12-16	16-20	20-24
Load (MW)	40	50	60	50	70	40

Draw the load curve and find maximum demand, units generated per day, average load and load factor.

7. Write short notes on :- **20**
- (a) Causes and effects of acid rains
- (b) Renewable energy sources
- (c) Storage river plant.