

Department of Electrical and Electronics Engineering

Subject: Electrical Power Generation

Subject Code: EE-318-F

1. Classify the conventional and non-conventional energy sources .
2. Define the terms Renewable sources of energy and Alternative sources of energy?
3. Mention the advantages of electrical energy over other forms of energy?
4. Describe the necessity of non-conventional energy sources.
5. Explain the solar power plant with neat sketch.
6. What is tidal energy, mention its advantage and limitations?
7. Explain the method of tidal power generation .
8. With neat diagram explain how can bio-mass generate electricity.
9. . What is the need of energy conservation and mention its benefits?
10. What are various methods of energy conservation?
11. Classify the renewable and non-renewable energy sources or conventional and non-conventional sources and What are the advantage and disadvantages of non-renewable energy sources.
12. Define the load factors, diversity factor, maximum demand, plant capacity factor and significance of load factors and draw the load curves explain its importance.
13. Define the three-part tariff and list out the different types of tariffs
14. What is the function of the moderator in nuclear power plant. And What is the use of pre-heater in thermal power plant? And What is the function of the surge tank in hydel-power plant and Explain the economiser and cooling tower in thermal plant.
15. What is the use of energy Audit and What is co-generation? What is the energy management? What is the need of energy conservation and mention its benefits and What are the methods of the energy conservation.
16. The Overall efficiency of a thermal station is 30%. The calorific value of the coal used is 6800 Kcal/kg find the consumption of coal per unit?
17. Explain the working of nuclear, hydraulic, and thermal power plants their block diagrams and their merits and demerits and explain about site selection of all power plants and Derive the hydel power equation. Explain briefly about the reactor controls Explain base load and peak load power plant in power system.
18. Determine the number of units to be consumed by a company having a maximum demand of 50 KW, so that the annual bill is same for both two-part and Flat rate tariffs for the following data. 1. Two-part tariff – Rs. 1500 per kW of maximum demand per annum plus Rs. 2.50 per unit. 2. Flat rate tariff – Rs. 3.25 per unit.

19. What is the need of energy conservation and mention its benefits and What are the methods of the energy conservation.
20. Define fission and fusion process in nuclear power plant
21. Mention the advantages of electrical energy over other forms of energy?
22. List out the fixed cost and running cost of the power generation.
23. A 60 MW power plant supplies loads having maximum demand of 20 MW, 17MW, 10MW and 9MW. The annual peak load on then power plant is 50MW the annual load factor of the plant is 55%. Determine (1) Energy supplied by the plant per year. (2) Diversity factor. (3) Demand factor.
24. Define the thermal efficiency and overall efficiency of the thermal power plant.
25. A Steam power station has an overall efficiency of 20% and 0.6 kg of coal is burnt per kWh of electrical energy generated Calculate the calorific value of fuel?