

Question Bank

Program: CH

Semester: Third

Name of course: Plant economics and energy management

Course code: 22312

Unit Test 1

Chapter 1-Energy and energy policy (16 marks)

2 marks question

1. Write the importance of energy policy document in industry.
2. List any four properties of fuel.
3. Define fire point and flash point.
4. Classify different types of fuels.
5. List the uses of coal and natural gas.

4 marks question

6. Write national energy policy.
7. Define calorific value and specific heat. Write their units.
8. Explain future energy system with solar energy as example.
9. A 10 kg water is heated from 40°C to 90 °C in a heater. Calculate total energy required to heat water.
10. A boiler is using furnace oil as a fuel. Calculate mass flow rate of fuel to produce 35 MW of heat. Calorific value of oil is 10500 Kcal/kg.

Chapter 2 Renewable and non renewable energy sources (10 marks)

2 marks question

11. Differentiate between renewable and non renewable energy sources.
12. Draw neat sketch of biogas plant.
13. Write advantages and disadvantages of hydropower.
14. Draw neat diagram of flat plate collector.

4 marks question

15. Explain construction and working of flat plate collector
16. Explain working of biogas plant
17. Explain concept of geothermal plant
18. Explain working of solar pond.

Chapter 3 Energy management and audit (14 marks)

2 marks question

19. State the importance of energy conservation
20. Classify sources of energy based on cost.

21. List the four instruments used for energy audit.

22. Write four duties of energy manager.

4 marks question

23. Explain the procedure of detailed energy audit.

24. Write salient features of energy conservation act 2001.

25. Explain importance of energy management program in chemical industry.