1.What is a super critical boiler?

2.What are binary cycles ? Give examples

3.Draw the P-V diagram of dual cycle.

4.What are the application of gas turbine power plants?

5.List the important components of nuclear reactor.

6.What are breeder reactor?

7.How are winds formed?

8.What is fuel cell?

9.Define utility factor?

10.What are chronological load curves?

11.Define compounding of steam turbines.

12. What is stoker? Classify it.

13.What are the application of disel engine power plants.

14. List the various porcess of brayton cycles.

15. What is the function of control rods in nuclear power plants.

16. What is the function of pressurizer in PWR?

17. What is fuel cell ? State the advantages

18. What is spillway.

19.What is fixed and operating cost?

20.List down the nuclear waste disposal methods.

21.Why majority of coal based thermal power plants are located near seashore?

22.Reason out why cogeneration is quite viable in sugar industries compared to that in other industries.

23.What is combined power cycles? Give examples

24.State how steam boilers classified.

25.List out the four important circuits of steam power plant.

26.What is ESP?State its use.

27.What is gas cooled neuclear reactor?

28.What do you understand by the term specific speed of Water turbine?

29.Under what circumstances will you recommend diesel power plants?

30.What are the types of ocean energy.

31.How does regeneration improve the thermal efficiency of gas turbine cycle?

32. Define diversity factor.

 Part B

UNIT -1

1. Layout of power plant with rankine cycle improvisation
2. Benson, Velox ,FBC Boiler
3. Coal handlind and ash handling
4. Condenser types
5. Draught types
6. Binary vapor cycle and cogeneration
7. Compounding of turbines
8. Rankine, Reheat, Regeneration problems

UNIT –II

1. Gas turbine power plant open cycle and closed cycle with improvisation.
2. Layout of Diesel engine power plants
3. Combined cycle GT-ST power plants
4. IGCC Power plant
5. Various thermodynamic cycles.
6. Diesel power plant engine cooling system and lubrication system
7. Otto, diesel, dual cycle problems mainly brayton and combined cycle problems

UNIT –III

1. Nuclear fission, chain reaction briefly
2. Nuclear reactor components
3. PWR, BWR
4. Candu
5. Metal cooled reactor , Gas cooled reactor
6. Nuclear safety measures

UNIT-IV

1. Hydro electric power plant & Hydraulic turbines
2. Solar photo voltaic and Solar thermal energy
3. Wind power plant
4. Tidal power plant
5. Geo thermal power plant
6. Biogas, fuel cell

UNIT –V

1. Explain economics of power plant problems on load curve and energy and cost methods
2. Mention the objectives and requirement of tariff
3. Define demand factor, load factor, diversity factor, reserve factor
4. Explain the methods of control pollution in thermal and nuclear power plants