**Question Bank (I- scheme)**

**Name of Course: ELECTRICAL POWER GENERATION**

**Unit Test: I**

**Course code: (22327) Course -EPG Semester:III Programme : EE**

**Chapter 1: Thermal Power Plants (13M)**

**2 Marks Questions:**

1) Define fission and fusion related to nuclear fuel.

**4 Marks Questions:**

2) Describe the term 'Nuclear shielding' in Nuclear Power Plant.

3) Enlist the nuclear fuels. Describe Nuclear Hazards and various ways of disposal of nuclear waste.

4) Compare fire tube and water tube boilers used in thermal power plants.

5) Draw schematic arrangement of diesel engine power station and important systems and essential components of diesel plant.

6) Explain with layout the working of typical thermal power plant with steam turbines and electric generators.

7) Describe the purpose of following components of a thermal power station: i) Economiser

ii) Air- preheater iii) Alternator iv) super-heater.

**Chapter 2: Hydro Electric Power Plant (16M)**

**2Marks Questions:**

8) Classify hydropower plant on the basis of water head and state turbine used for them.

9) Elaborate the function of penstock in Hydroelectric Plant.

10) State any two advantages of Kaplan turbine over Francis turbine.

11) Classify the hydro-electric plants according to the head and load basis.

12) List the types of turbine used in hydro power plant.

**4 Marks Questions:**

13) Draw schematic arrangement of hydroelectric power station and describe energy conversion process of hydro power plant.

14) Describe safe practices for hydro power plants.

15) Draw the layout of typical micro hydro scheme and describe potential locations of micro-hydro power plants in Maharashtra.

16) Explain with neat sketch the construction and working of pelton turbine used in hydro power plant.

17) With a neat diagram explain medium head hydro-electric power plants.

18) With a neat diagram explain pumped storage hydro power plant.

19) State the criteria for selection of site for hydroelectric power plants.

20) State any two advantages and any two disadvantages of Hydro-electric power station.

21) State the location and function of the following elements used in hydro plant. (i) Fore bay (ii) Spillway (iii) Penstock (iv) Tail Race v) Dam vi) Surge tank.

**Chapter 3: Solar and Biomass based Power Plants (08M)**

**2 Marks Questions:**

22) List different types of concentrating type solar collectors.

23) Why concentrating collectors are used in solar power plant.

**4 Marks Questions:**

24) Describe with layout the working of solar Photo Voltaic (PV) power plant.

25) Explain with layout, the working of parabolic trough collector concentrated solar power plants.

26) With a neat diagram explain solar power tower.

27) Classify different types of condensers used in thermal power plant and write their functions.

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