

- N.B: (1) Question No. **1** is compulsory.
(2) Attempt any **Three** questions from remaining.
(3) Figures to the right indicate full marks.

1. Answer the following:- [20]
 - (a) Explain condenser in thermal power plant.
 - (b) What are the advantages and disadvantages of concentrating collector over flat plate collector?
 - (c) Explain hydrology with respect to the selection of site for hydroelectric power plant.
 - (d) Explain advantages and disadvantages of boiling water reactor.

2. (a) Explain generation of electricity from bio-fuels. [10]
(b) Explain boiler interlocks and safety standards [10]

3. (a) Derive the expression for energy extraction from the wind using Betz Model. [10]
(b) Give the classification of water turbines and explain impulse turbine in detail. [10]

4. (a) Draw the schematic of a Nuclear power station and explain. [10]
(b) Compare Thermal, Nuclear and Hydro power plants. [10]

5. (a) Explain steam power plant with neat diagram. [10]
(b) Explain Solar PV technology with neat diagram. [10]

6. Write Short note on:- (Any Two) [20]
 - (a) Classification of energy resources.
 - (b) Horizontal Axis Wind Turbine
 - (c) Role of DCS in power plants.
