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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)**B.Tech II Year I Semester Regular & Supplementary Examinations March-2023****GENERATION OF ELECTRICAL POWER**

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

**UNIT-I**

- 1 Draw the schematic diagram of a modern steam power station and explain its operation? CO1 L1 12M
- OR
- 2 a What are the factors considered, while selecting the site for a Hydro power station? CO2 L1 6M
- b Explain the function of the following in thermal power plant? CO1 L2 6M
- i) Economizer                      ii) Electrostatic Precipitator                      iii) Condenser

**UNIT-II**

- 3 Draw the schematic diagram of a Nuclear Power Station and Discuss its Operation. CO3 L1 12M
- OR
- 4 Compare Thermal, Hydro and Nuclear Power Plants on the basis of technical, mechanical and economical aspects. CO3 L2 12M

**UNIT-III**

- 5 a Explain PV Cell Construction and Operation. CO4 L2 6M
- b List the Applications of Solar Energy. CO4 L1 6M
- OR
- 6 Explain Principle of Operation and Working of Wind Power Plant. CO4 L2 12M

**UNIT-IV**

- 7 a How is biogas plants classified? Explain them briefly. CO5 L1 6M
- b What is difference between Biomass and Biogas? CO5 L1 6M

OR

- 8 Draw schematic diagram of Geothermal System and Explain the Working Principle. CO5 L1 12M

**UNIT-V**

- 9 a What is the Load Curve? Explain the importance of Load Curve. CO6 L1 6M
- b What are the objectives of Tariff? CO6 L4 6M

OR

- 10 A annual peak load on a 30 MW power station is 25MW. The power station supplies loads having maximum demands of 10MW, 8.5MW, 5MW and 4.5Mw. The annual load factor is 45% Find i) Average load. ii) Energy supplied per year. iii) Demand factor. CO6 L4 12M

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