

BE Semester- 3 (Electrical Engineering) Question Bank

Electric Power Generation

All questions carry equal marks (10 marks)

Q.1	Draw Schematic layout of TPS/Coal fired power Station. Explain briefly four main circuit of the plant
Q.2	Write a short note : 1) Air Pre heater 2) Economizer 3) Super heater
Q.3	What are the factors and environmental aspect to be considered for selection and of site for the TPS?
Q.4	Write a short note: 1) Cooling towers 2) Condenser
Q.5	Write a Short note on Steam Turbines (Steam Prime Movers)
Q.6	Draw the Schematic diagram of Hydro Electric Power Station. State the different methods of classifying Hydro Electric Power Plant & Give the classification of HPS based on all three methods.
Q.7	Classify the water turbines and describe each turbine briefly.
Q.8	What are the factors of selection of the site for hydro electric stations?
Q.9	Explain the function of any following components of Hydro electric Power Plant. 1) Dam 2) Reservoir 3) Trash Rack 4) Forebay 5) Surge Tank 6) Spillway 7)Penstock
Q.10	Draw the schematic diagram of Nuclear Power Plant. State factors to be considered for selection and of site for the NPS
Q.11	Explain PWR (Pressurized water Reactor) and state its advantages and disadvantages
Q.12	Explain CANDU Reactor and state its advantages and disadvantages
Q.13	Draw the schematic diagram Diesel engine Power Plant and State various application of Diesel Engine Power Plant.
Q.14	List the essential component of Diesel Electric Power station and explain briefly function of each components.
Q.15	Explain different type of Engines used in Diesel Power Plant. Explain working of any one in detail.
Q.16	Draw Schematic diagram of simple gas turbine power plant. State various application of Gas turbine Power Plant.
Q.17	List out the various components of Gas Turbine Power Plant. Explain function of each component in brief.
Q.18	State the merits and demerits of Solar energy conversion and utilization. State various types of solar thermal collectors along with their advantages and disadvantages.
Q.19	Draw the schematic diagram of Solar Pond and explain its working.
Q.20	List various types of Solar Thermal Power Plants. Explain Medium Temperature Solar Thermal Power Plant.
Q.21	Write a short note on High Temperature Solar Power Plant
Q.22	Explain briefly types of winds. State the advantages and disadvantages of Wind Energy.
Q.23	List the various types of Wind Energy Conversion System (WECS). Explain Hybrid WECS System.

Q.24	Write a short note on 1)WECS for battery charging 2) Stand alone WECS system for AC and DC load
Q.25	Define Fuel Cell. Differentiate between Fuel Cell and Battery. Explain Principle of Operation of Fuel Cell.
Q.26	Give the detailed Classification of Fuel Cell and state the advantages of Fuel Cells over Conventional Power Plants.
Q.27	Explain briefly the various methods for Ocean Energy conversion and state its limitation.
Q.28	What is OTEC? Explain the Principle of Working of OTEC and state their advantages and disadvantages.
Q.29	List the various type of OTEC system and explain any one with help of schematic diagram.
Q.30	Explain working Principle of MHD. List the various types of MHD systems. State its advantages and disadvantages.
Q.31	List various process of Energy Conversion from Biomass. Explain any one process.
Q.32	Explain the principle of Biogas production from raw biomass and state its advantages.
Q.33	Explain various factors affecting production of Biogas
Q.34	Give details about tidal energy resources and potential in India and state the advantages and disadvantages of Tidal Energy.
Q.35	Explain working of Tidal power plant with necessary diagram.
Q.36	What is Geothermal Energy? Explain the Origin of Geothermal Energy resources and State its Applications.
Q.37	List out the various type of Geothermal Power Plants. Explain Liquid dominated geothermal power plant with necessary sketch.
Q.38	Compare Nuclear Power Plant with Thermal Power Plant.
Q.39	Compare Conventional Thermal Power Plant and Solar Thermal power plant.
Q.40	Explain Combined Cycle Generation.