

ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES

Department of Electrical & Electronics Engineering

III/IV B. Tech., Semester-II

ELECTRIC POWER GENERATION AND UTILIZATION

ASSIGNMENT-I

1	a	What are the differences between conventional and non-conventional energy sources? What are the factors affecting the selection of site for thermal power plant?	CO1
	b	Compare the merits and demerits of various energy sources.	CO1
2		Sketch the layout of modern steam power plant and explain the function of each part.	CO1
3		What is a condenser? Describe the operation with neat diagrams of (a) surface condenser (b) jet type condenser.	CO1
4	a	What is an electrostatic precipitator? Explain its operation and advantages over mechanical precipitator.	CO1
	b	Explain the governing of steam turbines.	CO1
5		What are the pumped storage plants? Discuss its operation with neat sketch.	CO1
6		What is water hammer? How it is overcome?	CO1
7		Explain the function of following components (i) spill ways (ii) fore bay (iii) surge tank (iv) draft tube.	CO1
8		Explain the operation of hydro power plant with neat schematic lay out.	CO1
9	a	On what factors do the choice of a site depends for a nuclear power plant?	CO2
	b	With the help of a neat diagram, explain the operation of a typical fast breeder nuclear reactor.	CO2
10		Explain the terms: fission, chain reaction, various control rods.	CO2
11	a	What are thermal reactors? Explain any one in detail with neat diagram.	CO2
	b	How is a moderator selected? Why does a breeder reactor require no moderator?	CO2
12	a	Explain the basic principle of operation of MHD power generation. What are its limitations?	CO2
	b	Explain operation of closed cycle and open cycle MHD power plants.	CO2
13		Describe a closed cycle gas turbine plant. What are its advantages?	CO2
14	a	Describe the combined operation of MHD and thermal power plant with neat diagram.	CO2
	b	Explain the layout of gas power plant with neat diagram.	CO2