

**ANURAG Engineering College****(An Autonomous Institution)****IV B. Tech II Semester Regular/Supplementary Examinations, April – 2024****POWER PLANT ENGINEERING****(CIVIL ENGINEERING)****Time: 3 Hours****Max.Marks:75****Section – A (Short Answer type questions)****(25 Marks)****Answer All Questions**

	<b>Course Outcome</b>	<b>B.T Level</b>	<b>Marks</b>
1. What are the two basic parameters required while planning for a power plant?	CO1	L1	2M
2. Summarize the resources available for power development in India?	CO1	L2	3M
3. What factors should be considered while selecting a site for a diesel power plant?	CO2	L1	2M
4. Outline the specific advantages and disadvantages of a gas turbine plant for a utility system.	CO2	L2	3M
5. Relate how a spillway is important element of a hydel power plant.	CO3	L1	2M
6. Outline the essential elements of a hydroelectric power plant.	CO3	L2	3M
7. What are fission fragments and fission products?	CO4	L1	2M
8. Explain the term 'Radioactivity'.	CO4	L2	3M
9. List the various non-conventional energy sources.	CO5	L1	2M
10. Define: load factor, utility factor and demand factor.	CO5	L1	3M

**Section B (Essay Questions)****Answer all questions, each question carries equal marks.****(5 X 10M = 10M)**

11. A) Build a layout of thermal power plant and explain its working in brief.	CO1	L3	10M
<b>OR</b>			
B) Enumerate and explain the steps involved in handling of the coal.	CO1	L3	10M
12. A) Construct a line diagram and explain the working of a diesel power plant.	CO2	L3	10M
<b>OR</b>			
B) Describe with a neat diagram a closed cycle gas turbine. Also state its merits and demerits.	CO2	L3	10M
13. A) Explain the method of drawing flow duration curves and explain their use in selecting the site for hydro-electric plant.	CO3	L2	10M
<b>OR</b>			
B) Analyze the working of a pumped storage plant. Where can such type of plants be installed?	CO3	L3	10M
14. A) Enumerate and explain essential components of a nuclear reactor.	CO4	L3	10M
<b>OR</b>			
B) Explore the different methods of disposal of nuclear wastes	CO4	L3	10M

15. A) Explicate with the help a neat sketch, the working of open cycle MHD system. CO5 L3 10M

**OR**

- B) A power station has to supply load as follows: CO5 L3 10M

Time (hours):	0-6	6-12	12-14	14-18	18-24
Load (MW):	45	135	90	150	75

- i) Draw the load curve. ii) Draw load duration curve.