

Code: 19A38AT

IV B.Tech. II Semester Regular Examinations April 2023

Power Plant Engineering
(Mechanical Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

		Marks	CO	BL
UNIT-I				
1.	a) List the various resources of power in India	4M	1	1
	b) What are different methods used for collection of the dust before sending the flue gas through chimney? Explain them with suitable diagrams.	10M	2	1
OR				
2.	a) List out the fuel and ash handling equipment's.	4M	2	1
	b) With the help of line diagram, explain the central pulverized fuel handling system.	10M	2	2
UNIT-II				
3.	a) Draw a neat diagram of cyclone burner and explain its outstanding features.	7M	2	4
	b) Explain the working of spreader stoker with neat sketch.	7M	2	2
OR				
4.	a) What is the function of cooling tower?	4M	2	1
	b) Explain the working of single retort stoker with neat sketch	10M	2	2
UNIT-III				
5.	a) Explain the working details of gas turbine power plant indicating all auxiliaries.	7M	3	2
	b) How inter cooling and regeneration help in improving thermal efficiency of the plant?	7M	3	2
OR				
6.	a) Draw a neat line diagram of a diesel power plant showing all the systems and explain the working.	8M	3	4
	b) Mention the advantages and disadvantages of diesel power plant over a gas turbine power plant?	6M	3	1
UNIT-IV				
7.	a) Compare and contrast between storage and pondage.	7M	4	2
	b) Explain the factors affecting the run-off in hydrological cycle.	7M	4	2
OR				
8.	a) What are the principal parts of a nuclear reactor? Explain the working of each part.	7M	4	2
	b) Draw the line diagram and explain the working of Gas cooled reactor.	7M	4	4
UNIT-V				
9.	The yearly duration curve of a certain plant can be considered as a straight line from 20 MW to 3 MW. To meet this load, three turbine generator units, two rated at 10 MW each and one at 5 MW are installed. Determine i) Installed capacity ii) Plant factor iii) Maximum demand iv) Load factor and v) Utilization factor.	14M	5	3
OR				
10.	a) Draw the general layout of tidal power plant and what are the limitations of that plant.	8M	5	4
	b) Discuss the latest pollution laws in existence.	6M	5	2

END

Hall Ticket Number :

R-19

Code: 19A18DT

IV B.Tech. II Semester Regular Examinations April 2023

Disaster Management

(Common to ME & CSE)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

Marks CO BL

UNIT-I

1. Discuss about the statement 'Disasters occurs when Hazard meets the Vulnerability' with the help of any flow chart. 14M CO1 L2

OR

2. a) Explain in detail about the vulnerability profile of India 7M CO1 L2
b) Define disaster management. Explain disaster management cycle? 7M CO1 L1

UNIT-II

3. a) Explain in brief about the vulnerability and damage caused by floods 7M CO2 L2
b) Explain in detail about the causes and types of droughts 7M CO2 L2

OR

4. a) What is earthquake? Explain terms related to earthquake? 7M CO2 L1
b) What the main steps that are involved in recording the disasters? Explain any case study recorded in India, related to earthquake. 7M CO2 L1

UNIT-III

5. Discuss the environmental, health, psycho-social impacts due to nuclear radiation and volcanoes taking suitable examples. 14M CO3 L2

OR

6. Discuss the ecological, social, economic impacts due to cyclones and drought taking suitable examples. 14M CO3 L2

UNIT-IV

7. a) Describe various organizations in India towards disaster management? 7M CO4 L2
b) Explain disaster mitigation mechanisms in India? 7M CO4 L2

OR

8. a) Explain the role of disaster mitigation agencies at different levels? 7M CO4 L2
b) Discuss in detail about the 'Disaster management' cycle and its phases? 7M CO4 L2

UNIT-V

9. What are the positive and negative impacts due to dam construction on both sides of dam? 14M CO5 L1

OR

10. Explain the methods to predict natural disasters and discuss the role of technology in disaster management. 14M CO5 L2

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