Q.P. Code: 16ME333 **R16**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech IV Year II Semester Regular Examinations September 2020

POWER PLANT ENGINEERING

(Mechanical Engineering)

Time: 3 hours Max. Marks: 60

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

UNIT-I

1	**a**	Explain the layout of gas turbine power plant.	**6M**
	b	What is the present position of power in India?	**6M**
		OR	
2	**a**	Describe the layout of diesel power plant with neat sketch	**6M**
	b	What is a nuclear power plant explain its layout with neat sketch.	**6M**
		UNIT-II	
3	a	Describe high pressure boilers and their advantages.	**6M**
	b	Explain Super Critical boilers and their advantages.	**6M**
		OR	
4	**a**	Discuss over feed fuel beds.	**6M**
	b	Describe underfeed fuel beds.	**6M**
		UNIT-III	
5	**a**	Describe a simple open cycle gas turbine plant with a simple line diagram.	**6M**
	b	Compare a closed cycle gas turbines with open cycle gas turbine.	**6M**
		OR	
6	**a**	How does inter cooling help in improving thermal efficiency of the gas power plant?	**6M**
	b	Explain the process of reheating and regeneration.	**6M**
		UNIT-IV	
7	**a**	Define drainage area and its characteristics.	**6M**
	b	Discuss hydrograph and flow duration curve and their use for hydro plants.	**6M**
		OR	
8	**a**	List out the hydroelectric power plant auxiliaries.	**6M**
	b	How to select prime movers for hydroelectric power plant.	**6M**
		UNIT-V	
9	**a**	What is nuclear fuel and list the advantages of nuclear energy?	**6M**
	b	Explain nuclear fission process.	**6M**
		OR	
10	**a**	Define radioactive waste. Necessity of its disposal.	**6M**
	b	Describe radioactive waste disposal methods.	**6M**

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