O.P.Code: 20ME0355	R20	H.T.No.									

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech III Year II Semester Regular Examinations August-2023

GENERAL MECHANICAL ENGINEERING
(Open Elective - II)

Time: 3 Hours **Max. Marks: 60**

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

UNIT-I

1		Discuss about the Mechanical Properties of Engineering Materials.	CO1	L2	12M
		OR			
2		Illustrate the material selection process with a flow chart.	CO1	L2	12M

UNIT-II

3	a	What is the Role of computers in manufacturing.	CO2	L1	6M
	b	Illustrate the conventional design process in product cycle.	CO2	L2	6M
		OR			
4		Elucidate various types of strategies used in Automation system.	CO2	L2	12M

UNIT-III

5	a	What is the need of Robots in Industry?	CO3	L1	6M
	b	Explain in brief about Asimov's laws of Robotics.	CO3	L2	6M
		OR			
6	a	List out various types of basic components used in NC machines.	CO3	L1	6M
	b	Compare the Traditional and NC machining.	CO3	L3	6M

UNIT-IV

7		Classify Internal Combustion engines and write a detail note on that.	CO4	L4	12M
		OR			
8	a	How diesel engine is different from petrol engine.	CO4	L2	6M
	b	Draw the Layout of an Automobile and explain it briefly.	CO4	L4	6M

UNIT-V

9	a	Write the working principle of Refrigeration with an example.	CO5	L2	6M
	b	List out the major applications of Refrigeration.	CO5	L1	6M
		OR			
10	a	Differentiate between Vapour Absorption system and Vapour Compression system.	CO5	L2	6M
	b	In an vapour absorption refrigeration system heating, cooling and refrigeration takes place at temp $100^{O}C$, $20^{O}C$, and $-10^{O}C$. Find out theoretical COP of the system.	CO5	L4	6M

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