O.P.Code:23HS0803	R23	H.T.No.									

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech. I Year I Semester Regular & Supplementary Examinations December/January-2025/2026

ENGINEERING CHEMISTRY

(Common to CE & ME)

Time: 3 Hours **Max. Marks: 70**

PART-A

(Answer all the Questions **10 x 2 = 20** Marks)

1	a	What do you mean Potable Water? Give an example.	CO1	L2	2M
	b	Define Reverse Osmosis process. Give one application of it.	CO1	L1	2M
	c	What is Galvanic corrosion. Give an example.	CO2	L1	2M
	d	Select any two methods to prevent corrosion of metals.	CO2	L2	2M
	e	Write a note cetane value.	CO4	L2	2M
	f	Identify the significance of ultimate analysis.	CO4	L3	2M
	g	Discuss any two properties of lubricating oils.	CO5	L2	2M
	h	Write any two engineering application of composite materials.	CO5	L3	2M
	i	Write any two applications of colloids.	CO6	L3	2M
	j	Write a short description about Langmuir adsorption isotherms.	CO4	L3	2M

PART-B

(Answer all Five Units **5 x 10 = 50** Marks)

UNIT-I

2		Describe the estimation of hardness by EDTA method.	CO1	L3	10M
		OR			
3		Briefly explain about any three boiler troubles and their treatment.	CO1	L2	10M

UNIT-II

4		Write a short notes on the following: a) Primary and Secondary battery b) Single electrode potential c) Pilling Bed worth ratio d) Fuel cell	CO2	L1	10M
		OR			
5		Explain about electrochemical theory of corrosion.	CO2	L3	10M

UNIT-III

6		Define the following i)Polymerization ii) Octane number iii) Cetane number iv) Monomer v) Biofuel	CO3	L1	10M
		OR			
7	a	Distinguish between Thermoplastics and Thermosetting plastics.	CO3	L4	5M
	b	Describe the preparation, properties and uses of Bakelite.	CO3	L4	5M

UNIT-IV

8		Give a conclusion about the following i) Composite ii) Refractories iii) Viscosity iv) Cement	CO5	L1	10M
		OR			
9		Write short notes on i) Flash and Fire point and ii) Cloud point and saponification	CO5	L1	10M

UNIT-V

10		Write the following i) Colloids ii) BET equation iii) Micelle iv)Stabilizing agents	CO6	L1	10M
		OR			
11		Give an account of chemical and electrochemical methods of preparation of nano metals.	CO6	L1	10M

***** END *****