O.P.Code: 19HS0801	R19	H.T.No.									

SIDDHARTHA INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech I Year I Semester Supplementary Examinations June-2024
APPLIED CHEMISTRY
(Common to EEE & ECE)

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

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

UNIT-I

1		Define Electrode Potential. Derive the Nernst equation for a single electrode potential and write its applications.	CO1	L3	12M
		OR			
2	a	What is secondary Battery ? Explain the Construction and working of Lead acid battery.	CO1	L2	7M
	b	Write a note on Lithium Ion rechargeable cell.	CO1	L2	5M

UNIT-II

3	a	Write the postulates of molecular orbital theory.	CO2	L2	6M
	b	Explain the application of Ψ and Ψ^2 to hydrogen atom.	CO2	L3	6M
		OR			
4		What is Crystal field theory? Explain the crystal field splitting in octahedral and tetrahedral complexes.	CO2	L2	12M

UNIT-III

5	a	Distinguish between Thermoplastics and thermosetting plastics.	CO3	L4	6M
	b	Describe the preparation, properties and uses of Bakelite.	CO3	L3	6M
		OR			
6		What are conducting polymers? How are they classified? Write the synthesis and Engineering applications of conducting polymers.	CO3	L3	12M

UNIT-IV

7		What is meant by Chromatography? Define the main parts of an High Performance Liquid Chromatography (HPLC).	CO4	L4	12M
		OR			
8		Give an account on principle and instrumentation of IR spectroscopy. Explain Stretching and bending vibrations.	CO4	L2	12M

UNIT-V

9	a	What is basic lock and key principle?	CO5	L1	6M
	b	Write a short note on Complementarity.	CO5	L2	6M
		OR			
10		Discuss about Super conductors and their applications.	CO5	L2	12M

***** END *****