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

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech I Year II Semester Supplementary Examinations February-2022

APPLIED CHEMISTRY

(Common to CSE & CSIT)

Time: 3 hours Max. Marks: 60

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

UNIT-I

1	a	What is Electrochemical cell? Give an example.	6M
	b	Define Primary Battery? Write a brief note on Zinc-Air battery.	6M
		OR	
2	a	Define Conductometric titrations. Discuss any two of Acid-Base Conductometric titrations.	8M
	b	Explain Hydrogen-Oxygen fuel cell.	4M
		UNIT-II	
3	a	Derive Schrodinger wave equation	8M
	b	Explain Planck's Quantum Theory	4M
		OR	
4	a	What is Crystal field theory? Explain the crystal field splitting in octahedral Complexes.	6M
	b	Discuss in brief about band theory of solids.	6M
		UNIT-III	
5	a	Describe the preparation, properties and uses of Nylon-6,6.	6M
	b	Write the differences between Thermoplastic and Thermosetting resin.	6M
		OR	
6	a	Outline the synthesis and Engineering applications of conducting polymers.	6M
	b	Explain the mechanism of Co-polymerization with example.	6M
		UNIT-IV	
7	a	Give an account on principle and instrumentation of IR spectroscopy.	8M
	b	What are the applications of Gas Chromatography?	4M
		OR	
8	a	Write a note on atomic absorption and molecular absorption.	6M
	b	Discuss in brief about High Performance Liquid Chromatography (HPLC).	6M
		UNIT-V	
9	a	Write a brief note on Carbon nano tubes.	6M
	b	What is basic lock and key principle?	6M
		OR	
10	a	Explain the applications of supramolecules in Molecular Switches.	6M
	b	What is meant by Nanomaterials? How are Nanomaterials Classified.	6M

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