Q.P. Code: 18HS0801 **R18**

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

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B Tech I Year I Semester Supplementary Examinations Feb-2021

CHEMISTRY

(Common to ECE, CSE & CSIT)

Time: 3 hours Max. Marks: 60

PART-A

(Answer all the Questions **5 x 2 = 10** Marks)

1	a	Why cannot thermosetting plastics be reused and restored?	2M
	b	Write schrodinger wave equation.	2M
	c	Define internal energy.	2M
	d	What is finger print region? Mention its importance.	2M
	e	Define sludges and scales.	2M

PART-B

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

UNIT-I

2	a	Explain the Pi - molecular orbitals of butadiene.	5M
	b	Effective nuclear charge & its calculation using slaters rule. Give any molecule calculations of EFNC.	5M

OR

3	a	Explain HSAB concept.	5M
	b	Give these molecules energy level diagram and explain its magnetic behavior of NO, CO.	5M

UNIT-II

4	a	Derive Nernst equation for the calculation of cell emf.	5M
	b	Write a note on solubility product.	5M

OR

5	a	What is electroplating?	2M
	b	Explain electroplating of Nickel and copper.	8M

UNIT-III

6	a	Write short notes on Break point Chlorination.	4M
	b	How water gets hardness. Distinguish between hard water and soft water.	6M

OR

7	a	Describe the Zeolite or permutit process for softening of water.	6M
	b	What are the advantages and disadvantages of zeolite process.	4M

UNIT-IV

8	a	Describe a fabrication method used for thermoplastics.	5M
	b	Give the preparation, properties & uses of Teflon, Nylon 6, 6.	5M

OR

9	a	Explain the synthesis of Paracetamol.	5M
	b	Explain oxidation and reduction reactions with examples.	5M

UNIT-V

10	a	Derive Lambert's law.	5M
	b	Explain principle, instrumentation of Fluorescence spectroscopy	5M

OR

11	a	Explain principle its applications of Scanning Electron microscopy (SEM).	5M
	b	Give applications of UV- visible Spectroscopy.	5M

END