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

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

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech I Year I Semester Supplementary Examinations December-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	Give any two difference between Bonding and anti bonding molecular orbitals	**2M**
	b	What is meant by corrosion	**2M**
	c	Define hard water and soft water	**2M**
	d	Define conducting polymers.	**2M**
	e	What is finger print region? Mention its importance.	**2M**

PART-B

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

UNIT-I

2		Write down the Schrodinger wave equation for the wave mechanical model of an atom. Give the significance of wave function.	**10M**

OR

3	a	Illustrate the postulates of crystal field theory	**2M**
	b	Explain the crystal field splitting of orbital's in octahedral, tetrahedral and square planar fields in complexes.	**8M**

UNIT-II

4		Define cell potential. Derive Nernst equation for the calculation of cell emf. What are its applications?	**10M**

OR

5		Define corrosion? Discuss in detail about chemical or dry corrosion.	**10M**

UNIT-III

6		Describe the estimation of hardness by EDTA method.	**10M**

OR

7		Write short notes on (i) Electrodialysis (ii) Reverse osmosis	**10M**

UNIT-IV

8	a	Distinguish between thermoplastics &thermosetting plastics.	**5M**
	b	Write the preparation, properties uses of Bakelite.	**5M**

OR

9	a	Define addition and Elimination reactions.	**4M**
	b	Explain the addition and elimination reactions with examples.	**6M**

UNIT-V

10		Explain principle and instrumentation of UV-visible spectroscopy	**10M**

OR

11		Explain principle, instrumentation and its applications of Scanning Electron microscopy (SEM)	**10M**

END