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

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

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech I Year I Semester Regular Examinations December 2018

CHEMISTRY

(Common to CSE, CSIT)

Time: 3 hours Max. Marks: 60

PART-A

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

1	**a**	Define effective nuclear charge?	2M
	b	Define cell potential?	2M
	c	Define brakish water? What type of methods used in purification?	2M
	d	Why benzene does does not undergo electrophilic substitution reactions?	2M
	e	What are the limitations of Beer-Lambert's law?	2M

PART-B

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

UNIT-I

2		Explain pi- molecular orbital's of benzene with neat sketch.	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 Entropy. Entropy changes in reversible and irreversible process.	10M

OR

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

UNIT-III

6		Describe the Lime soda process for softening of water? What are the advantages and disadvantages of lime soda process?	10M

OR

7	a	Explain Boiler corrosion.	7M
	b	How water gets hardness. Distinguish between hard water and soft water?	3M

UNIT-IV

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

OR

9	a	Define addition and Elimination reactions.	2M
	b	Explain different types of substitution reactions with examples.	8M

UNIT-V

10		Explain the working principle of atomic absorption spectrometer and How will you determine the nickel using by AAS?	10M

OR

11		Explain principle, instrumentation and its applications of Fluorescence spectroscopy	10M

END