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SIDDHARTH INSTITUTE OF ENGINEERING &amp; TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

BTECH I Year II Semester Supplementary Examinations May 2019

**ENGINEERING CHEMISTRY**

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)			
<b>UNIT-I</b>			
<b>1</b>	a	Write a note on Galvanic cell with suitable examples?	6M
	b	Explain in detail about Lithium ion batteries?	6M
<b>OR</b>			
2	a	Explain secondary battery? How $P_b-H_2SO_4$ storage cell works and give its significance?	12M
<b>UNIT-II</b>			
3	a	Describe the permutit process for softening of water. What are the advantages and disadvantages of permutit process?	12M
<b>OR</b>			
4	a	What is the principle of EDTA method? Describe the estimation of hardness by EDTA method.	12M
<b>UNIT-III</b>			
<b>5</b>	a	Define Calorific value.	2M
	b	Describe the method employed for the refining of petroleum with a neat sketch.	10M
<b>OR</b>			
<b>6</b>	a	Explain the manufacture of power alcohol.	5M
	b	Explain Bergius process for the manufacture of synthetic petrol.	7M
<b>UNIT-IV</b>			
<b>7</b>	a	Explain the preparation and uses of Bakelite.	6M
	b	Explain different types of Polymerization with suitable examples?	6M
<b>OR</b>			
<b>8</b>	a	Distinguish between Thermoplastics and thermosetting plastics?	6M
	b	Write the preparation, properties and uses of Buna-S rubber and Buna-N rubber.	6M
<b>UNIT-V</b>			
9	a	What are Refractories? Explain the classification, properties and failures of Refractories?	12M
<b>OR</b>			
<b>10</b>	a	Explain in detail about setting and hardening of Portland cement?	6M
	b	Write a short note on properties and applications of Fullerenes and carbon nanotubes.	6M

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