

**I B. Tech I Sem Supple & II Sem Regular Examinations, June, 2015**  
**Engineering Chemistry**  
**(Common to all Branches)**

Time: 3 hours

Max Marks: 70

**PART – A**

Answer ALL questions. All questions carry equal marks

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10 \* 2 Marks = 20 Marks

<b>1). a</b>	List out the requirements of Potable Water.	[2]
<b>b</b>	What is meant by Calgon Conditioning?	[2]
<b>c</b>	Write the possible chemical reactions occurs in H <sub>2</sub> -O <sub>2</sub> fuel cell.	[2]
<b>d</b>	Define Single Electrode Potential and mention its uses.	[2]
<b>e</b>	Give the classification of Ceramics.	[2]
<b>f</b>	Compare Cloud Point and Pour Point of a Lubricant.	[2]
<b>g</b>	Describe properties and uses of Butyl Rubber.	[2]
<b>h</b>	What are Liquid Crystal Polymers? Give example.	[2]
<b>i</b>	What is meant by Cracking? Illustrate.	[2]
<b>j</b>	Write the composition and uses of LPG and CNG.	[2]

**PART – B**

Answer any FIVE questions. All questions carry equal marks

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5 \* 10 Marks = 50 Marks

2. a) Explain ion-exchange method for Water Softening. [10]  
 b) Describe the process of treatment of Sea Water by Reverse Osmosis.
3. a) Define Corrosion. Explain the Theory of Chemical Corrosion. [10]  
 b) How do you minimize the Corrosion by sacrificial anode?
4. a) Describe the Setting and Hardening of Portland Cement. [10]  
 b) How do you classify Lubricants? Illustrate.
5. a) What is a Polymer? Explain the mechanism of addition Polymerisation. [10]  
 b) Describe the preparation of Pure Ge by Zone Refining Method.
6. a) Describe the ultimate analysis of Coal and give its significance. [10]  
 b) A sample of Coal has the following: C=85%; H=8 % ; S=1%;N=2%; ash= 4%.  
 Calculate the GCV and NCV.(Latent heat of steam= 587 cal/g )
7. a) Write notes on Boiler Corrosion. [10]  
 b) Differentiate Primary and Secondary Cells.

**SET - 2**

**GR 14**

**CODE: GR14A1008**

- 8.** a) What is meant by Vulcanization? Write its uses.  
b) Describe any industrial method of preparation of Synthetic Petrol.

**[10]**

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