

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-1<sup>st</sup> / 2<sup>nd</sup> EXAMINATION- WINTER 2015**

**Subject Code: 110001****Date: 22/12/2015****Subject Name: Chemistry****Time: 10:30am to 01:00pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks

- Q.1** (a) Explain Ion-exchange process with its advantages. **07**  
(b) Give the preparation, properties and uses of Bakelite and urea-formaldehyde. **07**
- Q.2** (a) Explain important internal conditioning treatment of water. **07**  
(b) Write a note on effect of atmospheric gases on Environment. **07**
- Q.3** (a) Define corrosion. Discuss the factors influencing corrosion. **07**  
(b) What is chromatography? Explain adsorption chromatography. **07**
- Q.4** (a) Explain pitting and water corrosion with suitable equation. **07**  
(b) Explain both the method for analysis of coal. **07**
- Q.5** (a) What is biogas? Discuss its manufacture from dung. **07**  
(b) How hydroelectricity is generated from water? Explain it by giving advantages and disadvantages. **07**
- Q.6** (a) Describe with a neat diagram how Portland cement is manufactured by wet process? **07**  
(b) Explain lime manufacturing process with its properties. **07**
- Q.7** (a) Explain Melt spinning and Wet spinning. **07**  
(b) Define biotechnology with suitable application. **07**

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