

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER- 1<sup>st</sup> / 2<sup>nd</sup> • EXAMINATION – SUMMER • 2014**

**Subject Code: 110001****Date: 21-06-2014****Subject Name: Chemistry****Time: 02:30 pm - 05:00 pm****Total Marks: 70****Instructions:**

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

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|-------------|---|----------|
| <b>Q.1</b>  | (a) Explain Zeolite process.  | <b>7</b> |
|             | (b) Give preparation and use of Nylon-6 6   | <b>4</b> |
|             | (c) Explain in brief Thermal Insulator  | <b>3</b> |
| <b>Q.2</b>  | (a) What do you mean by air pollution? Write note on Green House Effect.  | <b>7</b> |
|             | (b) What is hardness? Differentiate between temporary and permanent hardness. How can we remove temporary and permanent hardness? | <b>4</b> |
|             | (c) What do you mean by Chromatography? Give its principle. Give outline of classification of chromatography.                     | <b>3</b> |
| <b>Q.3</b>  | (a) Discuss Type of Polymerization Reaction with suitable examples.   | <b>7</b> |
|             | (b) Explain briefly Non Ferrous Alloy.  | <b>4</b> |
|             | (c) Write difference between scale and sludge.  | <b>3</b> |
| <b>Q.4</b>  | (a) Explain briefly Galvanic Corrosion.   | <b>7</b> |
|             | (b) Discuss type of fuel with suitable example.   | <b>4</b> |
|             | (c) What is Refractory? Give classification of refractory with suitable examples.   | <b>3</b> |
| <b>Q.5</b>  | (a) Discuss concept, advantages and uses of electro plating.  | <b>7</b> |
|             | (b) Give application of Biotechnology in following fields.<br>Agriculture, Medicine, Food quality                                 | <b>4</b> |
|             | (c) Write note on fibres made from natural sources with suitable examples.  | <b>3</b> |
| <b>Q. 6</b> | (a) Discuss physical properties of metal. Write note in detail on heat treatment of steel.  | <b>7</b> |
|             | (b) What are the characteristics of a good fuel? Give advantages of CNG over LPG.   | <b>4</b> |
|             | (c) Give classification of Lubricants with suitable examples.   | <b>3</b> |
| <b>Q.7</b>  | (a) Write note on Portland cement. Describe Wet process of manufacture of Portland cement with chemical reaction involved in it.  | <b>7</b> |
|             | (b) Explain in brief Waterline corrosion.   | <b>4</b> |
|             | (c) What are renewable and nonrenewable energy sources? Explain with suitable examples.   | <b>3</b> |

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