

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- I<sup>st</sup> /II<sup>nd</sup> SEMESTER-EXAMINATION – MAY/JUNE - 2012****Subject code: 110001****Date: 11/06/2012****Subject Name: Chemistry****Time: 10:30 am – 01:00 pm****Total Marks: 70****Instructions:**

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

- Q.1 Answer the following. 14**
- (a) Define corrosion. Write difference between Dry & wet corrosion. (7)
  - (b) Discuss soda-lime process. (3)
  - (c) Explain reverse osmosis in detail. (4)
- Q.2 Answer the following. 14**
- (a) What are constituents of paint? Give examples & write their functions. (7)
  - (b) Give process & advantages of electroless plating. (3)
  - (c) Write differences between temporary & permanent hardness. (4)
- Q.3 Answer the following. 14**
- (a) Write a note on special paints. (3)
  - (b) What is a refractory? Give different types of refractories. (4)
  - (c) Discuss galvanizing & Tinning. (7)
- Q.4 Answer the following. 14**
- (a) Define: flash point, fire point, pour point, cloud point. (4)
  - (b) What is ozone depletion? (3)
  - (c) What is air pollution? What are the factors responsible? Explain role of fuel in air pollution? (7)
- Q.5 Answer the following. 14**
- (a) Define polymer. What is degree of polymerization? (3)
  - (b) Discuss factors affecting corrosion. (4)
  - (c) What are metallic coating? Explain methods of cleaning base metal before electroplating. (7)
- Q. 6 Answer the following. 14**
- (a) Explain: What is sand blasting? (3)
  - (b) Write a note on Portland cement. (4)
  - (c) Discuss manufacture of ethyl alcohol from molasses by fermentation. (7)
- Q.7 Answer the following. 14**
- (a) What is chromatography? What are the types? Explain paper chromatography. (7)
  - (b) Draw instrumentation of UV-spectroscopy. (3)
  - (c) Discuss melt spinning of fibres. (4)

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