

GUJARAT TECHNOLOGICAL UNIVERSITY**BE SEM-IV Examination-Nov/Dec-2011****Subject code: 142801****Date: 25/11/2011****Subject Name: Manufacturing & Applications of Polymeric Materials****Time: 02.30 pm -5.00 pm****Total marks: 70****Instructions:**

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

- Q.1** (a) Discuss the textile applications of polyvinyl acetate. Discuss the chemistry, properties and in brief, the manufacturing process of Polysol. **07**
- (b) Justify the position of Polyvinyl chloride by discussing various important properties and applications. **07**

- Q.2** (a) Describe in brief the chemistry, manufacturing process and various applications of melamine formaldehyde resin. **07**
- (b) Discuss in detail the various types and chemistry of water repellent silicone finishes. **07**

OR

- (b) Describe various manufacturing processes of Urea formaldehyde precondensate. **07**

- Q.3** (a) Describe various techno-chemical aspects of silicone emulsions. **07**
- (b) Write short notes on: Silicone softeners and silicone antifoaming agents. **07**

OR

- Q.3** (a) Discuss the chemistry, properties and synthesis of DMDHEU **09**
- (b) Justify the position of coating and lamination in applying polymers with suitable examples. **05**

- Q.4** (a) Discuss the application of Polyacrylates in textile printing. **07**
- (b) Discuss the chemistry, properties, types and textile and non textile applications of polyethylene. **07**

OR

- Q.4** (a) Describe the process for synthesis of Polyvinyl alcohol. **07**
- (b) Discuss the textile applications of Polyvinyl alcohol. **07**

- Q.5** (a) Discuss the textile applications of Polyethoxylates and Polyethylene glycols. **07**
- (b) Describe the method for preparation of Polyethoxylates non ionic surfactant. **07**

OR

- Q.5** (a) Discuss the application of Polyacrylates as SAP. **07**
- (b) Describe the process of emulsion polymerization for preparation of poly methyl meth acrylate. **07**
