

Seat No.: _____
No. _____

Enrolment

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-IV • EXAMINATION – WINTER • 2014

Subject Code: 142801

Date: 22-12-2014

Subject Name: Manufacturing and Applications of Polymeric Material

Time: 02:30 pm - 05:00 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) Describe the manufacturing and applications of DMDHEU. **07**
(b) Elaborately discuss various techno-chemical aspects of silicone fluids. **07**

- Q.2** (a) Explain in detail the manufacturing processes of DMEU. **07**
(b) Describe various manufacturing processes of U.F. precondensate. **07**

OR

- (b) Justify the suitability of silicones as textile softeners and antifoaming agents. **07**

- Q.3** (a) Describe in brief the chemistry, manufacturing and applications of melamine formaldehyde resins. **09**
(b) Discuss applications of urea formaldehyde resins with its merits and demerits. **05**

OR

- Q.3** (a) Give detailed review on silicone water repellents. **07**
(b) Discuss the chemistry and properties of PVA and its commercial grades available. **07**

- Q.4** (a) Describe the method for preparation of acrylate binders. **07**
(b) Discuss the applications of Polyacrylates in textile sizing and finishing. **07**

OR

- Q.4** (a) Give the method for synthesis of Polyvinyl acetate for textile finishing application. **07**
(b) Explain the method for manufacturing of PVA and its use in textile finishing. **07**

- Q.5** (a) Describe the method for Preparation of PVC and discuss its application in textile coating. **07**
(b) Describe the process of bulk polymerization for the preparation of polyacrylic acid and its sodium salt. **07**

OR

- Q.5** (a) Discuss in brief the chemistry, properties and applications of PEGs. **07**
(b) Describe any one process for manufacturing of Polyethylene. **07**
Discuss
