GUJARAT TECHNOLOGICAL UNIVERSITY
B. E. - SEMESTER – VII • EXAMINATION – WINTER 2012

Subject code: 172301   **Date: 26/12/2012**
Subject Name: Advance Plastics Processing
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.**

Q.1 **(a)** Define Rotational Molding. Compare Rotational Molding Process with Blow Molding Process. **07**
  (b) Explain complete Calendaring Process with neat sketch. **07**

Q.2 **(a)** Explain manufacturing Process of 5000 lit. Overhead storage tank with neat sketch. **07**
  (b) Discuss: (1) Manufacturing Process of   PMMA sheet by casting. **07**
                (2) Various mold materials used for casting process.
OR
  (b) Define Encapsulation. Explain process with neat sketch. **07**

Q.3 **(a)** Define : (1) Cellular Plastics (2) Syntactic foam (3) Closed –cell foam **07**
                (4) Open-cell foam (5) K-factor (6) Blowing agent (7) Coating
  (b) List the characteristics required for polymer as coating powder. Explain Fluidized Bed method with neat sketch. **07**
OR
Q.3 **(a)** List the types of Coating used to prevent metal from outside Environment. List advantages and disadvantages of polymer coatings. **07**
  (b) Explain different types of roll arrangement of calendaring process with neat sketch. **07**

Q.4 **(a)** Define Reaction Injection Molding (RIM).List advantages and disadvantages of RIM. **07**
  (b) Short Note: (1) Flexography Printing (2) In-mold Decorating **07**
OR
Q.4 **(a)** Explain RIM process with neat sketch. **07**
  (b) Explain manufacturing process of multi-layer film with neat sketch. Also list application of multilayer film. **07**

Q.5 **(a)** Explain in brief with respect to plastics: **07**
        (1) Tapping (2) Sawing (3) Buffing & Polishing
  (b) Explain Low pressure structural foam molding process with neat sketch. **07**
OR
Q.5 **(a)** Classify foam with their application. Explain General Production Methods. **07**
  (b) Explain Vacuum metallizing process with neat sketch. **07**

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