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GUJARAT TECHNOLOGICAL UNIVERSITY M. E. - SEMESTER – I • EXAMINATION – WINTER • 2014

Subject code: 2712402 Date: 09-01-2015 **Subject Name: Plastics Processing Technology Total Marks: 70** Time: 02:30 pm - 05:00 pm **Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. **Q.1** (a) Draw Line diagram of Reciprocating Screw type Injection Molding machine & Label 07 its various parts. List & Explain process steps in brief for Injection molding process. Describe Compression moulding process. What are process variables influencing 07 **(b)** compression moulding process? **Q.2** Short note on: short shot, plasticising capacity **07** (a) Explain different types of transfer moulding (b) 07 **(b)** Explain Cavity Pressure Profile in Injection Moulding process **07** Q.3 Explain about factors to be considered while selecting the plastics processing (a) 07 techniques **(b)** Draw general purpose screw & explain its terminology **07** Give comparison between Single screw extruder (SSE) and Twin Screw extruder Q.307 (a) (TSE). Define Bulk factor. Explain importance of Preforms in compression moulding **07 (b)** Draw a line diagram of typical Blown film extrusion plant indicating the part details **Q.4** 07 (a) Explain the types of Twin Screw extruder & its relative merits & demerits **07** (b) OR **Q.4** Explain Extrusion stretch Blow moulding with neat diagram **07** (a) Explain the different types of Extrusion dies used for products: Film, Sheet & Pipe 07 (b) with the help of line sketch. What precautions to be taken while processing of PVC in an extruder? How does the **Q.5** 07 (a) Screw for PVC differ from other thermoplastics materials. Give difference between Compression and transfer moulding 07 **(b)** Explain any five defects, causes and remedies of injection molded product **Q.5** (a) 07 What is the significance of cup flow test & spiral flow tests for thermosetting **(b)** 07 material?
