

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. - SEMESTER – I • EXAMINATION – WINTER 2012****Subject code: 712402N****Date: 09-01-2013****Subject Name: Plastics Processing Technology****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) Discuss- Injection moulding machine screw with neat sketch. **07**
(b) Explain Transfer moulding operation in brief and give difference between compression and transfer moulding. **07**

- Q.2** (a) Which are the Clamping systems used in Injection moulding machine? Explain Toggle system in detail with neat sketch. **07**
(b) Define Cycle time and Explain Cavity Pressure Profile in Injection moulding process. **07**

OR

- (b) Explain Cup flow test and its significance for compression moulding process. **07**

- Q.3** (a) Write a short note on- Shrinkage and Warpage **07**
(b) Explain various process variables in Injection moulding machine and its effect on moulding quality. **07**

OR

- Q.3** (a) Explain Monofilament extrusion process with neat sketch. **07**
(b) List various types of screws used in Extrusion and explain each with neat sketch. **07**

- Q.4** (a) Short note-
(i) Breaker Plate and screen pack **04**
(ii) Melt fracture **03**
(b) Give causes and remedies for the following defects in Injection moulding- Delamination, Flash, Flow marks, Weld lines **07**

OR

- Q.4** (a) Give comparison between Single screw extruder (SSE) and Twin Screw extruder (TSE). **07**
Q.4 (b) Explain Bulk factor and Preforming in Compression moulding process. **07**

- Q.5** (a) Write a short note on “Parison programming” **07**
(b) Explain: Extrusion stretch Blow moulding **07**

OR

- Q.5** (a) Which types of dies are used in Blown film? Explain each with advantages and disadvantages. **07**
(b) Give processing parameters for processing of Nylon and PC. Discuss special precautions to be taken while processing of these materials. **07**
