

GUJARAT TECHNOLOGICAL UNIVERSITYB.E. Sem-Vth Examination December 2010**Subject code: 152301****Subject Name: Injection Moulding Technologies****Date: 13 /12 /2010****Time: 03.00 pm - 05.30 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) With the neat sketch describe Injection Moulding Process. **07**
 (b) With the neat sketch describe Gas Injection Moulding Process. **07**
- Q.2** (a) Draw General purpose screw & Explain its each terminology. **07**
 (b) Explain Reaction Injection Moulding Process. **07**
- OR**
- (b) List out Advantages & disadvantages of Injection Moulding process. **07**
- Q.3** (a) What is screw Tip? Explain following screw tip in detail **07**
 (a) For Heat sensitive material.
 (b) Ball type non-return valve.
 (b) Explain basic principle of Screw conveying. **07**
- OR**
- Q.3** (a) Define nozzle? With neat sketch explain standard nozzle. **07**
 (b) Explain double toggle clamp system with neat sketch. **07**
- Q.4** (a) 1. Define: (a) Screw (c) Cycle Time **04**
 (b) Gate (d) Purging
 2. An injection Moulding press with hydraulic clamp having **03**
 30 in. diameter clamping cylinder. In this press maximum
 working line pressure is 1000 psi. Calculate force
 generated by it.
 (b) Explain cavity pressure profile in Injection Moulding. **07**
- OR**
- Q.4** (a) Explain the Moulding cycle on pvT diagram. **07**
 (b) Explain causes & remedies for following problem. **07**
 (a) Flash.
 (b) Sink Mark.
- Q.5** (a) Explain Nitriding of screw & barrel in Injection Moulding. **07**
 (b) Give difference between Hydraulic & toggle clamp system. **07**
- OR**
- Q.5** (a) Define screw RPM & Back Pressure. Explain them in detail. **07**
 (b) Explain causes & remedies for following problem **07**
 (a) Short sort.
 (b) Bubbles in Moulding.
