

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.E SEM-V Examination-Nov/Dec.-2011**

**Subject code: 152301****Date: 22/11/2011****Subject Name: Injection Moulding Technologies****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) With neat sketch explain double toggle clamp system **07**  
 (b) Explain Standard nozzle in detail. **07**

- Q.2** (a) Explain RIM Process. **07**  
 (b) Draw General purpose screw & Explain its each terminology. **07**

**OR**

- (b) List out Advantages & disadvantages of Injection Moulding process. **07**

- Q.3** (a) Explain cavity pressure profile in Injection Moulding. **07**  
 (b) What is screw Tip? Explain following screw tip in detail **07**
- For Heat sensitive material.
  - Ball type non-return valve.

**OR**

- Q.3** (a) What is Gas Injection Moulding Process? Explain it in detail. **07**  
 (b) Explain Injection Moulding Process. **07**

- Q.4** (a) (a-1) Define:
- |               |                |
|---------------|----------------|
| (a) Gate      | (c) Cycle Time |
| (b) Screw Tip | (d) Surging    |
- 04**

- (a-2) An injection Moulding press with hydraulic clamp having 20 in. diameter clamping cylinder. In this press maximum working line pressure is 500 psi. Calculate force generated by it. **03**

- (b) Explain basic principle of Screw conveying. **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) In Injection Moulding machine what is Nitriding? Explain it. **07**  
 (b) Give difference between toggle & hydraulic 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.

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