

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-V • EXAMINATION – WINTER • 2014****Subject Code: 152301****Date: 26-11-2014****Subject Name: Injection moulding Technologies****Time: 10.30 am - 01.00 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) What is two stage plunger machine? Explain it in detail. **07**  
 (b) How you dry your plastic material before processing it in injection machine? **07**
- Q.2** (a) What is nozzle? Explain Needle type shut off nozzle & Nylon nozzle. **07**  
 (b) Explain basic principle of screw conveying. **07**
- OR**
- (b) Explain screw output in detail. **07**
- Q.3** (a) Explain following (A) Tip used for heat sensitive material, (B) Ring type non-return tip. **07**  
 (b) Provide types of clamping system. Explain Mono-toggle clamping system. **07**
- OR**
- Q.3** (a) What safety consideration must be follow in injection molding process? **07**  
 (b) Provide types of clamping system. Explain Lock & Block clamping system. **07**
- Q.4** (a) What is cavity pressure profile? Explain it in detail. **07**  
 (b) Explain close loop & open loop system. **07**
- OR**
- Q.4** (a) How you start up and close injection molding process explain it in detail. **07**  
 (b) Explain nitriding process done on different injection molding machine part. **07**
- Q.5** (a) Explain Tie-bar Less injection molding machine in detail. **07**  
 (b) Explain trouble shooting for following problem (1) Warp and (2) Flash **07**
- OR**
- Q.5** (a) Explain melting of plastic material occurs in injection molding screw. **07**  
 (b) Define Following **07**

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|--------------------|-----------------|------------------|
| 1. Balanced Runner | 2. Co-Injection | 3. Suck-back     |
| 4. Cavity          | 5. Drooling     | 6. Clamping Area |
| 7. Masterbatch     |                 |                  |

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