

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE – SEMESTER V • EXAMINATION – WINTER - 2012****Subject code: 152301****Date: 11-01-2013****Subject Name: Injection Moulding Technologies****Time: 02:30 pm to 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) Define cycle time. Explain various stages in a Injection moulding cycle . **07**
- (b) What are the advantages & disadvantages of Injection moulding **07**
- Q.2** (a) Draw a neat sketch of Standard nozzle .What are the types of nozzles **07**
- (b) Differentiate between Hydraulic and Toggle clamping systems **07**
- OR**
- (b) Compare between Hydraulic & Electrical drives **07**
- Q.3** (a) What are the process parameters in Injection Moulding and how do they influence quality of product **07**
- (b) Define : (i) Tonnage (ii) Drooling **07**  
(iii) Co-injection (iv) Feedsystem
- OR**
- Q.3** (a) Define : (i) Shot weight (ii) Back pressure **07**  
(iii) Suckback (iv) Plasticizing capacity
- (b) Write short notes on : **07**  
(i) Automation control of Injection Moulding machine  
(ii) Safety precautions in Injection Moulding
- Q.4** (a) Describe Gas assisted Injection Moulding process and its applications **07**
- (b) Write down causes & remedies for : **07**  
(i) Weld line (ii) Sink marks
- OR**
- Q.4** (a) Describe Reaction Injection Moulding process and its applications **07**
- Q.4** (b) Write down causes & remedies for : **07**  
(i) Warpage (ii) Burn marks
- Q.5** (a) What is Nitriding . List out its advantages & disadvantages . **07**
- (b) Explain PVT diagram in Injection Moulding **07**
- OR**
- Q.5** (a) Explain cavity pressure profile in Injection Moulding **07**
- (b) Explain different auxiliary machinery used in Injection Moulding **07**

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