

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER –III • EXAMINATION – WINTER- 2015

Subject Code: 3332305

Date: 11-12 - 2015

Subject Name: Technology for Injection molding

Time: 10:30 AM TO 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.
4. Use of programmable & Communication aids are strictly prohibited.
5. Use of only simple calculator is permitted in Mathematics.
6. English version is authentic.

- Q.1** Answer any seven out of ten. **14**
1. Define : (1)screw (2)flight
 2. List out types of screw used in injection molding machine.
 3. Write down function of hopper.
 4. List out various toggle system used in injection molding machine.
 5. How the cooling is done into the barrel?
 6. Write down full form of NRV.
 7. List out various auxiliary equipments used in injection molding machine.
 8. Define helix angle and write down its value.
 9. Define : (1)barrel (2)nozzle
 10. Write down any two disadvantage of toggle clamping system.
- Q.2** (a) List out various parts of injection molding machine. **03**
- OR
- (a) List out different process variable affecting in injection molding process. **03**
- (b) Draw the screw and label its parts. **03**
- OR
- (b) List out different types of injection molding machine. **03**
- (c) Write down any four specification of injection machine and explain the term. **04**
- OR
- (c) Write down advantages and disadvantages of injection molding process. **04**
- (d) Explain thermal seal nozzle. **04**
- OR
- (d) Draw and explain injection molding cycle diagram. **04**
- Q.3** (a) List out different types of nozzle used in injection molding machine. **03**
- OR
- (a) List out different defects occurred in product during injection molding process. **03**
- (b) Draw neat sketch of mechanical seal nozzle. **03**
- OR
- (b) Explain startup and shut down procedure of injection molding process. **03**

	(c) Short note:- Chilling plant	04
	OR	
	(c) Draw and explain single toggle system.	04
	(d) Write down importance of cooling tower.	04
	OR	
	(d) Draw and explain double toggle system.	04
Q.4	(a) Discuss hopper loader.	03
	OR	
	(a) List out any three post molding operations of injection molding process.	03
	(b) Draw injection molding machine and label its parts.	04
	OR	
	(b) Differentiate hydraulic and toggle clamping mechanism.	04
	(c) Explain injection molding process in details.	07
Q.5	(a) Short note:-Spring loaded nozzle.	04
	(b) Discuss screw tips.	04
	(c) List out various plastic materials used in injection molding process.	03
	(d) Short note: - Scrap grinder.	03
