Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V • EXAMINATION – SUMMER • 2014

Subject Code: 152301 **Date: 11-06-2014**

Subject Name: Injection Moulding Technology

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 single stage plunger machine? Explain it.	**07**
	(b)	With the help of graph explain Injection cycle.	**07**
Q.2	**(a)**	Explain Gas assisted Injection molding machine in detail.	**07**
	(b)	Why cylinders breakdown? Explain heating of cylinder and screw construction and maintenance.	**07**
		OR	
	(b)	Explain advantages and disadvantages of Injection Molding Process.	**07**
Q.3	**(a)**	How can you align the nozzle and control the temperature of nozzle.	**07**
	(b)	Explain Standard nozzle and Needle type shut off nozzle.	**07**
		OR	
Q.3	**(a)**	What is nitriding? Explain nitriding process on injection molding machine part.	**07**
	(b)	Explain injection molding machine start up and close up procedure in detail.	**07**
Q.4	**(a)**	Draw the screw and explain its each terminology.	**07**
	(b)	How melting of plastic occurs in screw? Explain in detail.	**07**
		OR	
Q.4	**(a)**	What is cavity pressure profile? Explain it in detail.	**07**
	(b)	What safety consideration must be follow in injection molding process?	**07**
Q.5	**(a)**	Explain Screw drive in brief and compare hydraulic and electrical drives.	**07**
	(b)	What is clamping system? Provide types of it? Compare both hydraulic and toggle system.	**07**
		OR	
Q.5	**(a)**	Defnine clamping system and explain Double-toggle clamping system.	**07**
	(b)	List the types of clamping system and explain Rapid type clamping system.	**07**

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