Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V (OLD) - EXAMINATION – SUMMER 2017

Subject Code: 152301 **Date: 05/05/2017**

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)**	Explain injection molding cycle time with proper diagram.	**07**
	(b)	Define Screw Output. What are the factors that can affect the screw output?	**07**
Q.2	**(a)**	Explain principle & working of any one hydraulic pump with Advantages and limitations.	**07**
	(b)	Compare Hydraulic and Toggle Clamping System.	**07**
		OR	
	(b)	Draw a General Purpose Styrene Screw and define its terminology.	**07**
Q.3	**(a)**	Explain different process variables that can affect our molded product.	**07**
	(b)	What is Troubleshooting? Explain Shrinkage, Warpage And Short Shots.	**07**
		OR	
Q.3	**(a)**	Differentiate thermoplastics and thermoset injection molding machine.	**07**
	(b)	Explain pressure profile curve in cavity.	**07**
Q.4	**(a)**	Explain temperature profile curve in cavity.	**07**
	(b)	What do you mean by directional control valve? Explain 3/3 direction control valve with hydraulic circuit to operate a cylinder.	**07**
		OR	
Q.4	**(a)**	What are the functions of pressure control valve? Explain pressure relief valve in detail.	**07**
	(b)	Define Daylight in injection molding. Explain different types of daylight.	**07**
Q.5	**(a)**	Explain pressure profile curve in Gas Assisted Injection Molding machine.	**07**
	(b)	What do you mean by Tie bar? Explain merits and demerits of Tie bar less injection molding machine.	**07**
		OR	
Q.5	**(a)**	Enlist post process operations in injection molding machine. Explain any one in detail.	**07**
	(b)	Explain different types of injection screw with its terminology.	**07**

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