Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V • EXAMINATION – WINTER • 2014

Subject Code: 153405 **Date: 08-12-2014**

Subject Name: Plastics Manufacturing 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)**	Explain about thermoset injection moulding process , parts and their respective functions with a neat sketch	**07**
	(b)	What is cycle time? Discuss the process variables and its effect on moulding cavity with suitable examples	**07**
Q.2	**(a)**	Explain the working of compression moulding process with neat sketch	**07**
	(b)	Describe the influence of process variables such as temperature, pressure, part size & configuration on quality and cycle time	**07**
		OR	
	(b)	Describe about the principle and operation of plunger transfer moulding and screw transfer moulding with suitable sketches	**07**
Q.3	**(a)**	Describe about the dies for producing products such as- film-blown film, cast film, co-extruded films with suitable sketches	**07**
	(b)	Explain the applications of extrusion in sheets, coextruded sheets, pipes, corrugated pipes with neat sketches	**07**
		OR	
Q.3	**(a)**	Describe twin screw extruder along with its merits and demerits with a neat sketch	**07**
	(b)	Explain vented barrel extruder operation with a neat sketch along with its applications	**07**
Q.4	**(a)**	Explain the principle and operation of extrusion blow moulding and its applications with a neat sketch	**07**
	(b)	Explain the construction and working of injection blow moulding along with its applications in a neat sketch	**07**
		OR	
Q.4	**(a)**	Describe about the materials and design factors affecting blow mould product	**07**
	(b)	Briefly explain PP/PEN stretch blow moulding and its application using a neat sketch	**07**
Q.5	**(a)**	Explain drape forming and plug assisted forming with suitable sketches	**07**
	(b)	Discuss about the principle and operation of snap back vacuum forming	**07**
		OR	
Q.5	**(a)**	Briefly explain the working operation of matched die forming and continuous forming with suitable sketches	**07**
	(b)	Discuss about the principle and operation of blow back vacuum forming with a suitable sketch	**07**

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