Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Sem-I Regular Examination January / February 2011

Subject code: 712402N

Subject Name: Plastics Processing Technology

Date: 01 /02 /2011 **Time: 02.30 pm – 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 the effect of polymer properties on processing behaviour of Thermoplastics.	**07**
	(b)	Describe the merits & demerits of Compression moulding process.	**07**
Q.2	**(a)**	What is L/D ratio & its significance to the Extrusion process?	**07**
	(b)	What is the difference between processing of Nylon & ABS on an Injection moulding process? Indicate typical process parameters of both materials.	**07**
		OR	
	(b)	List out different processing faults in Compression moulding process of thermosetting material & explain significance of preheating of material for compression moulding process.	**07**
Q.3	**(a)**	What are the types of Blow moulding? Explain in brief.	**07**
	(b)	Draw a line diagram of typical Blown film extrusion plant indicating the part details.	**07**
		OR	
Q.3	**(a)**	List out the selection criteria for selecting a particular capacity of Injection moulding machine for any Product.	**07**
	(b)	What precautions to be taken while processing of PVC in an extruder? How does the Screw for PVC differ from other thermoplastics materials?	**07**
Q.4	**(a)**	Explain the types of Twin Screw extruder & its relative merits & demerits.	**07**
	(b)	How does Thermosetting Injection moulding differ from Thermoplastics Injection moulding?	**07**
		OR	
Q.4	**(a)**	Explain the different types of Extrusion dies used for products such as Film, Sheet & Pipe with the help of line sketch.	**07**
	(b)	What is the significance of cup flow test & spiral flow tests for thermosetting material?	**07**
Q.5	**(a)**	How the theoretical shot weight is calculated in screw type Injection moulding machine?	**07**
	(b)	What is "parison programming" & its significance in Blow moulding process?	**07**
		OR	
Q.5	**(a)**	Describe different types of Clamping Systems used in injection moulding machine & their relative merits and demerits.	**07**
	(b)	Explain a complete moulding cycle of the Transfer moulding process.	**07**

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