Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – I • EXAMINATION – WINTER • 2013

Subject code: 712403N **Date: 03-01-2014**

Subject Name: Plastics Mould and Product Design

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)**	List various elements of two plate injection mold. Suggest mold material for each element.Also give the function of each part.	**07**
	(b)	Explain compression mould and its types with neat sketches.	**07**
Q.2	**(a)**	Explain plastic product design features of ribs and bosses with neat sketch.	**07**
	(b)	Define blow ratio, pinch off design and mould venting	**07**
		OR	
	(b)	Explain about the functions of finger cam actuation system with neat sketch	**07**
Q.3	**(a)**	Write the circuits recommended for cooling integer cavity plate. Explain any two cooling system with neat sketch	**07**
	(b)	Write the types of parting surface. Explain any two parting surfaces with neat sketch	**07**
		OR	
Q.3	**(a)**	Explain about split mould and sketch with suitable external undercut components	**07**
	(b)	Define ejection system and list various types of it. Explain any one with neat sketch	**07**
Q.4	**(a)**	Draw a typical plunger type transfer mould and its components	**07**
	(b)	Write the design parameters required for plastics in load bearing applications of gear and bearing.	**07**
		OR	
Q.4	**(a)**	Write short notes on shrinkage vs tolerance.	**07**
	(b)	Define runner and gate. What are the design considerations for designing gate?	**07**
Q.5	**(a)**	Explain injection blow moulds with suitable sketch.	**07**
	(b)	Write short notes about wall thickness and write any four suggested wall thickness for thermoplastic material.	**07**
		OR	
Q.5	**(a)**	Write short notes on surface treatments.	**07**
	(b)	Write short notes about mould venting, mould clamping and mould alignment for an injection mould.	**07**

****