Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma Engineering - SEMESTER – III • EXAMINATION – WINTER 2012

Subject code: 332303 **Date: 04/01/2013**

Subject Name: Design Fundamentals of Moulds

Time: 02.30 pm - 05.00 pm **Total Marks: 70**

Instructions:

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **English version is considered to be Authentic.**

Q.1	(a)	Draw sectional elevation and plan of a hand injection mould for a small tray type product.	**10**
	(b)	Define 'impression' of injection mould. Explain in brief about components of mould which form impression.	**04**
Q.2			
	(a)	Describe functions of guide pin and guide bush.	**07**
	(b)	Give various types of bolsters and explain any two types in detail with neat sketches.	**07**
		OR	
	(b)	What are different methods of incorporating core and cavity in an injection mould. Explain any one in brief.	**07**
Q.3			
	(a)	Write short note on locating ring.	**07**
	(b)	What are the different mechanisms used for returning ejector plate assembly. Explain any one with neat sketch.	**07**
		OR	
Q.3	(a)	List various components used in an ejector assembly. Explain constructional and functional details of any one with neat sketch.	**07**
	(b)	List and draw neat sketches of various ejector elements used in ejection techniques.	**07**
Q.4	(a)	Give classification of various types of parting surfaces used in injection moulds. Explain flat parting surface with neat sketches.	**07**
	(b)	Define all components of feed system and draw neat sketch of mould section showing complete feed system with nomenclature.	**07**
		OR	
Q. 4	(a)	Draw neat sketches of different runner layouts used in multi-impression injection moulds.	**07**
	(b)	List all the types of gates used in injection mould. Explain any one in brief with neat sketch.	**07**
Q.5	(a)	Explain integer cavity plate cooling with atleast one example by neat sketch.	**07**
	(b)	List various methods for cooling of deep or long core inserts and explain constructional/functional details of any one.	**07**
		OR	
Q.5	(a)	Explain integer core plate cooling with atleast one example by neat sketch.	**07**
	(b)	Describe cooling of circular cavity inserts by one method with neat sketch.	**07**

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