Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER–IV • EXAMINATION – SUMMER • 2014

Subject Code: 742401 **Date: 04-06-2014**

Subject Name: Advanced Mould Manufacturing Technology

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 factors to be considered for plastics product design.	**07**
	(b)	Explain the different systems of positioning dimensions in CNC programming with examples.	**07**
Q.2	**(a)**	What are the different Rapid Prototyping Methods? Explain about any one Rapid Prototyping Technology.	**07**
	(b)	Explain the various machines and machining processes involved in mould manufacturing	**07**
		OR	
	(b)	Explain the difference between the CAD mould design and conventional design along with its advantages and disadvantages	**07**
Q.3	**(a)**	Explain 3D printing and FDM.	**07**
	(b)	Explain the ball screw and nut mechanism in CNC machines.	**07**
		OR	
Q.3	**(a)**	Explain reverse engineering with an example.	**07**
	(b)	Explain the function of 3D scanner and its application in mould manufacturing.	**07**
Q.4	**(a)**	Explain Stereolithography with neat sketch.	**07**
	(b)	Explain the application of direct rapid tooling for injection moulds	**07**
		OR	
Q.4	**(a)**	Explain the types of milling cutters with neat sketches	**07**
Q.4	**(b)**	Explain the programmable axes of CNC vertical and horizontal spindle machining centres and CNC Turning centres with neat sketches.	**07**
Q.5	**(a)**	What are the different materials used for manufacturing of cutting Tools? Explain	**07**
	(b)	Explain Selective Laser Sintering with neat sketch.	**07**
Q.5	**(a)**	Explain about the tool compensation	**07**
	(b)	Explain the part programming structure with suitable example.	**07**

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