Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII EXAMINATION – SUMMER 2016

Subject Code:172302 **Date:07/05/2016**

Subject Name:Plastic Mould and Die Design - I

Time:02:30 PM to 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)**	What are the materials used for manufacturing core, guide pillar, ejector pins and spacer blocks of injection mould? Mention the reason.	**07**
	(b)	How a CNC milling machine is useful in mould manufacturing?	**07**
Q.2	**(a)**	Explain about different heat treatment processes used for hardening core & cavity of an injection moulds.	**07**
	(b)	Describe the electroforming process.	**07**
		OR	
	(b)	Explain about the EDM process. What is the application of EDM machine in mould manufacturing?	**07**
Q.3	**(a)**	What are the different types of injection moulds? Explain about any one with the help of a sketch.	**07**
	(b)	How to balance runner of an injection moulds for multi cavities? Explain.	**07**
		OR	
Q.3	**(a)**	Write a short note on Pin ejection and valve ejection.	**07**
	(b)	Why heating arrangement is required in injection moulds? Explain.	**07**
Q.4	**(a)**	Explain the extrusion die design procedure.	**07**
	(b)	What are the different parts of an extrusion die? Explain.	**07**
		OR	
Q.4	**(a)**	What is gate in injection moulds? Explain about any two types of gates?	**07**
	(b)	Explain the positioning of gate in injection moulds.	**07**
Q.5	**(a)**	Explain loading chamber design in compression moulds with a neat sketch.	**07**
	(b)	Describe Semi automatic, Semi positive compression mould with a sketch.	**07**
		OR	
Q.5	**(a)**	Explain various types of plunger transfer moulding with the help of sketches.	**07**
	(b)	How to calculate transfer pot of transfer moulds?	**07**

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