

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER- VII EXAMINATION-SUMMER 2023

Subject Code: 3172320

Date: 30/06/2023

Subject Name: Manufacturing of Molds for Plastic products.

Time: 10:30 AM TO 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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) List the basic process steps of proto typing.	03
	(b) What is Rapid proto typing? List the various methods of Rapid prototyping.	04
	(c) Define EDM process and Explain its working principle with neat sketch.	07
Q.2	(a) List the work holding device used for Lathe.	03
	(b) Short note: Cryogenic Heat treatment.	04
	(c) Explain part programming structure of CNC milling with examples.	07
	OR	
	(c) What is cutting tools? List the characteristic of ideal cutting tools.	07
Q.3	(a) Design the line diagram of job planning for mold making.	03
	(b) Explain about Role and Responsibility of mold designer.	04
	(c) Explain the components of CNC machines.	07
	OR	
Q.3	(a) List the non ferrous metals employed in the mold making. Explain about Zinc alloys.	03
	(b) List the reasons for non-metallic materials used for mold.	04
	(c) Explain mold assembly procedure in detail.	07
Q.4	(a) Explain about Case Hardening.	03
	(b) List the basic materials used polishing for the mold.	04
	(c) Compare: CNC machines with conventional machines.	07
	OR	
Q.4	(a) Define Heat Treatment. Explain about carburizing in brief.	03
	(b) List the properties of steel should possess for the mold construction.	04
	(c) Explain about elastomeric mold materials.	07
Q.5	(a) Short Note: CMM(Coordinate measuring machines)	03
	(b) In modern tool room which type of machining operation employed for making core and cavities?	04
	(c) What is Chemical Etching? what is the application of it in mold manufacturing?	07
	OR	
Q.5	(a) List the common alloying elements in the steel.	03
	(b) List the advantages of CNC milling machine.	04
	(c) Define Lathe. Explain in brief about Turning and Facing operation of Lathe.	07
