

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
Bachelor of Engineering - SEMESTER - IV EXAMINATION - WINTER 2025

Subject Code: 3142308

Date: 15-11-2025

Subject Name: Fundamentals of Mold Design

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.**
- 4. Simple and non-programmable scientific calculators are allowed.**

	Marks
Q.1 (a) List types of Gates.	03
(b) Define (1) Core (2) Register Ring (3) Sprue (4) Integer Cavity Plate.	04
(c) Define Bolster. List types of Bolster. Explain any one in detail.	07
Q.2 (a) Define (1) Guide Pin (2) Guide Bush (3) Sprue Puller.	03
(b) Explain in brief about Feed system.	04
(c) List types of Ejection Techniques. Explain Sleeve ejection in detail.	07
OR	
(c) What is Parting surfaces? Explain Flat parting in brief.	07
Q.3 (a) List types of Runner.	03
(b) Explain functions of Ejector Back Plate in brief.	04
(c) Explain Integer Cavity Plate with suitable example.	07
OR	
(a) Draw plan and sectional elevation of any product to be manufactured using Hand Injection Mold.	03
(b) Draw sectional elevation of Hand injection Mold of above selected product.	04
(c) Draw plan and Inverted plan of Hand Injection Mold for above selected product.	07
Q.4 (a) Define (1) Venting (2) Ejector retaining plate (3) Ejector Rod.	03
(b) Explain function and material of construction of Guide Pillars	04
(c) Explain about balancing of Runner with neat sketch	07
OR	
(a) Explain in brief about Inserts.	03
(b) Compare: Hand Injection Mold with Hand Compression Mold.	04
(c) Draw and Explain 6 and 8 impression runner layout.	07

- Q.5 (a)** List the factors to be consider while designing of Runner. **03**
- (b)** Discuss application of any Four Gates. **04**
- (c)** Explain Importance of cooling in mold design. **07**

OR

- (a)** List types of sprue puller. **03**
- (b)** Explain about Air Ejection in brief. **04**
- (c)** Explain 'U' type and 'Z' type cooling system with neat sketch. **07**
