

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– IV(NEW) EXAMINATION – SUMMER 2023****Subject Code:3142308****Date:11-07-2023****Subject Name:Fundamentals of Mold Design****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 types of Bolster Plate.	03
	(b) List out various types of Ejector system.	04
	(c) Explain about Runner balancing with different examples and neat sketch.	07
Q.2	(a) List types of Gate used in Mold Design.	03
	(b) Define Sprue bush. List design criteria for sprue bush.	04
	(c) List Types of Sprue Bush. Explain any two with neat sketch.	07
	OR	
	(c) For a Rectangular product of Polyacetal having length 100mm,width 50mm and height 25mm , wall thickness 2mm.Calculate the dimensions of rectangular edge gate.	07
Q.3	(a) Define: Maximum Day Light, Core and Cavity.	03
	(b) Define: Guide Pillar, Guide Bush, Ejector elements and Parting line	04
	(c) List and explain Basic Principles of Mold design.	07
	OR	
Q.3	(a) What is feed system? Enlist the various sections present in it.	03
	(b) What is ejector rod? Mention the purpose of ejector rod.	04
	(c) Discuss about cooling integer type cavity plate.	07
Q.4	(a) Compare between the parting line & parting surface.	03
	(b) What is day light opening? Explain in brief	04
	(c) Discuss about runner size and layout consideration during mold design.	07
	OR	
Q.4	(a) Explain sleeve ejection in detail.	03
	(b) Enlist and draw neat sketch of different runner cross-section shape preferred in mould design.	04
	(c) Explain importance of cooling channel and cooling lines in Mold design. List different types of cooling system.	07
Q.5	(a) Short notes on inserts used in mould.	03
	(b) What is ejector system? Explain its importance	04
	(c) Discuss Sprue Puller in detail.	07
	OR	
Q.5	(a) List the design criteria for Guide pillar.	03
	(b) Explain : solid bolster	04
	(c) Explain: Valve ejection in detail.	07
