

Seat No.: \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE- SEMESTER-IV (NEW) EXAMINATION – WINTER 2020****Subject Code: 3142308****Date: 11/02/2021****Subject Name: Fundamentals of Mold Design****Time: 02:30 PM TO 04:30 PM****Total Marks: 56****Instructions:**

1. Attempt any **FOUR** questions out of **EIGHT** questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

	MARKS
<b>Q.1</b> (a) Define: Core, Register Ring, Cavity	<b>03</b>
(b) Define: Sprue Bush, Runner and Gate, Guide Bush, Guide Pillars	<b>04</b>
(c) Explain about Integer cavity and Integer core plates with neat sketch.	<b>07</b>
<b>Q.2</b> (a) Explain in brief about Inserts	<b>03</b>
(b) Comparison between Ejector & Retaining Plate.	<b>04</b>
(c) Explain about shape and type of Inserts with neat sketch.	<b>07</b>
<b>Q.3</b> (a) Define Parting surface of mold. List out various types of Parting surface.	<b>03</b>
(b) Explain in brief about Locating Ring	<b>04</b>
(c) Sketch any four types of Guide pins used in Mold design.	<b>07</b>
<b>Q.4</b> (a) List types of Bolster Plate.	<b>03</b>
List out various types of Ejector system	
(b) State importance of cooling in mold design.	<b>04</b>
(c) Explain about Sprue Puller in detail.	<b>07</b>
<b>Q.5</b> (a) Choose any product produced in Hand Injection Molding machine.	<b>03</b>
Draw plan & sectional Elevation of the selected product.	
(b) Draw sectional Elevation of Hand Injection mold for above selected product.	<b>04</b>
(c) Draw plan & Inverted Plan of Hand Injection mold for above selected product.	<b>07</b>
<b>Q.6</b> (a) For a Rectangular product of Polyacetal having length 100mm, width 50mm and height 25mm, wall thickness 2mm through. Calculate the dimensions of rectangular edge gate.	<b>03</b>
(b) Calculate the shot capacity of an injection molding machine if a product weight 20 gms is to be moulded in ABS and a 8 impression mold is desired.	<b>04</b>
Assume: Bulk factor of PS=1.9 Bulk factor of ABS=1.8 Specific gravity of PS=1.04 Specific gravity of ABS=1.0	
(c) Discuss Sleeve Ejection in detail.	<b>07</b>

- Q.7** (a) List types of Runner. **03**  
(b) List the factors govern the size of Runner. **04**  
(c) Explain about Runner balancing with different examples and neat sketch. **07**
- Q.8** (a) List types of Gate used in Mold Design. **03**  
(b) Discuss the application of any four Gate. **04**  
(c) Explain about Film Gate in detail with neat sketch. **07**

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