

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2022****Subject Code:3163408****Date:10/06/2022****Subject Name:Plastic Mould and Die 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) Explain material selection for cavity, core and back plates.	03
	(b) Explain basic principles of mould design.	04
	(c) What are the methods used for fabrication of mold? Explain methodology for fabrication steps.	07
Q.2	(a) What is the principle of Electro Discharge Machine?	03
	(b) Explain honing operations used in Mold and Die making.	04
	(c) Discuss pin ejection used in injection system in detail.	07
OR		
	(c) Explain stripper pate ejection system with neat sketch.	07
Q.3	(a) How does position of gate define in designing mold?	03
	(b) List out important parts of Die and give any three's function.	04
	(c) Explain planning & shaping operations in mold manufacturing.	07
OR		
Q.3	(a) Classified different types of heat treatment processes carried out on metal.	03
	(b) Explain flash moulds in detail.	04
	(c) Explain blade and air ejection system.	07
Q.4	(a) How runner is balanced?	03
	(b) What are the functions of inserts, guide pins and bushes?	04
	(c) The density of the raw material is 1.52 g per cube centimeter. Diameter of the screw is 28 mm in injection moulding machine. Assuming short weight if 40.6 gms, calculate injection stroke or shot size.	07
OR		
Q.4	(a) Draw neat diagram of thermal pin cooling with nomenclatures.	03
	(b) Explain feed system in Transfer Molds.	04
	(c) Give the detail calculation procedure for transfer pot of transfer moulds.	07
Q.5	(a) Explain general Transfer Molding cycle with neat sketch.	03
	(b) Prepare bill of material by assuming any one mold design.	04
	(c) How to calculate transfer pot of transfer moulds?	07
OR		
Q.5	(a) What are the factors to be highlighted in sheet work of mould or dies?	03
	(b) Explain plunger type compression in short with sketch.	04
	(c) Describe semi automatic compression mould with a sketch.	07
