

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER- VII EXAMINATION-SUMMER 2023

Subject Code: 2173409

Date: 26/06/2023

Subject Name: Plastic mold & 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.

- Q.1 (a) Write principles of mold design. 03
(b) What are the economic considerations while designing die? 04
(c) Write different types of fabrication of mold and explain any one in detail. 07
- Q.2 (a) Explain ferrous & nonferrous material. 03
(b) Explain material selection for cavity, core and back plates. 04
(c) Explain stripper plate ejection system with neat sketch. 07
- OR**
- (c) What are the selection criteria of mold material? Explain in detail. 07
- Q.3 (a) Explain EDM with neat figure. 03
(b) Classify different types of heat treatment processes carried out on metal. 04
(c) Enlist different types of Grinding and explain any one in detail. 07
- OR**
- Q.3 (a) Write short note on Runner less molds. 03
(b) Explain Gate and Runner balancing with neat sketch. 04
(c) Explain different types of runners and their effectiveness with neat sketch. 07
- Q.4 (a) Give classification of die. 03
(b) Explain Rheological considerations in design of extrusion die. 04
(c) Explain design of semi positive and flash molds in detail along with examples. 07
- OR**
- Q.4 (a) Explain feed system in Transfer Molds. 03
(b) What are the functions of inserts, guide pins and bushes? 04
(c) Draw neat diagram of die showing its components and explain their functions in detail. 07
- Q.5 (a) Enlist different types of transfer molding and explain any one. 03
(b) Explain bill of material with example. 04
(c) Explain positive & semi-positive type of compression mold with a sketch. 07
- OR**
- Q.5 (a) Explain third angle method of projection. 03
(b) What are the factors to be highlighted in sheet work of mold or dies? 04
(c) Explain pot & plunger type of transfer mold with neat sketch. 07
