

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI(NEW) EXAMINATION – WINTER 2022****Subject Code:3163408****Date:17-12-2022****Subject Name:Plastic Mould and Die 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.

- Q.1** (a) Explain basic principles of mould design. **03**  
 (b) What are the economic considerations while designing die. **04**  
 (c) Explain stripper plate ejection system with neat sketch. **07**
- Q.2** (a) Explain ferrous & nonferrous material. **03**  
 (b) Explain material selection for cavity, core and back plates. **04**  
 (c) Write different types of fabrication of mould and explain any one in detail. **07**
- OR**
- (c) What are the selection criteria of mould material? Explain in detail. **07**
- Q.3** (a) Classified different types of heat treatment processes carried out on metal. **03**  
 (b) Explain drilling and honing with their difference. **04**  
 (c) Enlist different types of Grinding and explain any one in detail. **07**
- OR**
- Q.3** (a) Write short note on Runner less moulds. **03**  
 (b) What is importance of runner and gate system in injection moulding process? **04**  
 (c) Enlist different types of Ejection system and explain any one in detail. **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 moulds 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 moulding and explain any one. **03**  
 (b) Explain bill of material with example. **04**  
 (c) Describe semi-automatic compression mould 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 mould or dies? **04**  
 (c) How to calculate transfer pot of transfer moulds? **07**

\*\*\*\*\*