

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER- VI EXAMINATION – SUMMER 2026

Subject Code:3163408

Date:01-06-2026

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.

- Q.1***
- (a) Explain material selection for cavity, core and back plates. **03**
 - (b) What are the economic considerations while designing die. **04**
 - (c) Discuss pin ejection used in injection system in detail. **07**
- Q.2**
- (a) How runner is balanced? **03**
 - (b) What are the functions of inserts, guide pins and bushes? **04**
 - (c) Describe semi-automatic compression mould with a sketch. **07**
- OR**
- (c) How to calculate transfer pot of transfer moulds? **07**
- Q.3**
- (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) Give the detail calculation procedure for transfer pot of transfer moulds. **07**
- OR**
- Q.3**
- (a) What is importance of runner and gate system in injection moulding process? **03**
 - (b) Explain basic principles of mould design. **04**
 - (c) What are the selection criteria of mould material? Explain in detail. **07**
- Q.4**
- (a) Explain feed system in Transfer Molds. **03**
 - (b) Explain plunger type compression in short with sketch. **04**
 - (c) Prepare bill of material by assuming any one mold design. **07**
- OR**
- Q.4**
- (a) Draw neat diagram of thermal pin cooling with nomenclatures. **03**
 - (b) Explain design of semi positive and flash moulds in detail along with examples. **04**
 - (c) List out important parts of Die and give any three's function. **07**
- Q.5**
- (a) Describe semi-automatic compression mould. **03**
 - (b) Explain drilling and honing with their difference. **04**
 - (c) Explain stripper pate ejection system with neat sketch. **07**
- OR**
- Q.5**
- (a) Explain flash moulds in detail. **03**
 - (b) Draw neat diagram of thermal pin cooling with nomenclatures. **04**
 - (c) What are the methods used for fabrication of mold? Explain methodology for fabrication steps. **07**
