

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

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**ME SEMESTER – I EXAMINATION – SUMMER 2017**

**Subject Code: 2712408**

**Date:08/05/2017**

**Subject Name: Plastics Mould & Product Design Simulations**

**Time:02:30 p.m. to 05:00 p.m.**

**Total Marks: 70**

**Instructions:**

- 1. Attempt all questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**

- Q.1** (a) Write about (i) Mould Venting (ii) Mould Clamping. **07**  
(b) Write about external and internal undercuts. **07**
- Q.2** (a) Explain the methodical approach to design injection mould. **07**  
(b) Explain the classification of injection moulding machines. **07**
- OR**
- (b) Write about bolster, baffle and bubbler cooling. **07**
- Q.3** (a) Discuss about balancing of runner and gate. **07**  
(b) Explain the types of compression mould. **07**
- OR**
- Q.3** (a) Explain spring and hydraulic actuation systems with neat sketches. **07**  
(b) Explain the extrusion die design concept with suitable sketch. **07**
- Q.4** (a) Discuss about transfer pot and pressure pad design. **07**  
(b) Discuss about the importance of aesthetics and ergonomics for plastic products. **07**
- OR**
- Q.4** (a) Prepare a flow chart for plastic product development and explain the stages. **07**  
(b) Explain about moulded threads and moulded holes. **07**
- Q.5** (a) Explain the design considerations for press fit and snap fit. **07**  
(b) Discuss about tooling aspects on product design. **07**
- OR**
- Q.5** (a) Explain the role of engineering simulation in plastics product development. **07**  
(b) Discuss about product design limitations. **07**

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