

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V • EXAMINATION – WINTER 2013

Subject Code: 153404

Date: 02-12-2013

Subject Name: Mold Engineering

Time: 10.30 am - 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.

- Q.1** (a) Explain the working principle and physical process of Electrical Discharge Machine with neat sketch. Write any three applications of EDM in development of Mould. **07**
- (b) Draw a schematic diagram of Three Plate Injection Mould, mark its parts with suitable example. **07**
- Q.2** (a) Name any four cutting fluids. Write the uses and disadvantages of cutting fluid. **07**
- (b) Write the working principle and applications of Profile Grinding Machine in Mould development with sketch. **07**
- OR**
- (b) Draw a two dimensional Pantograph machine. Write the working principle and applications of Pantograph machine. **07**
- Q.3** (a) Write the principle of Electro forming processes, applications and advantages. **07**
- (b) How mould cavities are created with the help of Electro forming? Explain with an example. Write the materials used for Electro forming. **07**
- OR**
- Q.3** (a) Explain the Hopping process used for creating gears and its advantages. **07**
- (b) Write short notes about Hopping punch and Hopping presses. **07**
- Q.4** (a) Write the working principle of Electro deposition process to rectify in damaged Moulding surfaces with suitable example. **07**
- (b) Write short notes about surface texturing of Moulds. **07**
- OR**
- Q.4** (a) Define the term surface roughness, basics of polishing and write the effect of mould steel material on polishing. **07**
- (b) Write the types of Polishing tools. Explain about Electro sonic polishing. **07**
- Q.5** (a) Explain how Micrometer is used for measurement of Mould parts with sketch. Write the uses of angle plate in Mould Inspection. **07**
- (b) Write the working principle and uses of Vernier Height Gauge. Write the uses of surface plate. **07**
- OR**
- Q.5** (a) Explain how Tool Makers Microscope is used for measurements with sketch. **07**
- (b) Explain the working principle of Optical Profile Projector with sketch. **07**
