

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E –IIst SEMESTER–EXAMINATION – JULY- 2012

Subject code: 1722402

Date: 09/07/2012

Subject Name: Plastics Mould Manufacturing Technology

Time: 10:30 am – 13:00 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 mould design and mould making requirements. **07**
(b) What is heat treatment? Explain different surface treatment processes. **07**
- Q.2** (a) Explain any two taper turning methods. **07**
(b) Explain the principle and operation of CMM. **07**
- OR**
- (b) Write short notes about the alloys of **07**
(i) Zinc (ii) Aluminium (iii) Copper
- Q.3** (a) Write short notes about (i) Annealing (ii) Normalizing (iii) Tempering **07**
(b) Explain about the use of nonmetallic materials in mould construction. **07**
- OR**
- Q.3** (a) Explain different milling operations used for producing core and cavities. **07**
(b) Define Lathe and explain the operations that can be performed in CNC Lathe. **07**
- Q.4** (a) Explain the thread cutting operation in lathe. **07**
(b) What is milling? Explain the role of CNC Milling in mould manufacturing. **07**
- OR**
- Q.4** (a) Explain different milling cutters with neat sketches. **07**
(b) Explain the following with neat sketch. **07**
(i) Selective Laser Sintering (ii) 3D Printing
- Q.5** (a) Explain about tool room measuring instruments and their application in mould making. **07**
(b) Explain the procedure for estimating mould cost. **07**
- OR**
- Q.5** (a) Write about the inspection and quality control of moulds. **07**
(b) Explain the preventive maintenance and maintenance to be carried out for injection moulds. **07**
