

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. Sem. – IInd - Examination – June/July- 2011

Subject code:1722402

Subject Name: Plastics Mould Manufacturing Technology

Date:24/06/2011

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 significance of selection of steels for mould manufacturing. **05**
(b) What are the common steels used for mould manufacturing? **02**
(c) Explain about the application of non-ferrous metals for mould construction. **05**
(d) What are the applications of Be-Cu in mould making? **02**
- Q.2** (a) Write about the effects of alloying element in steel. **07**
(b) Write about the mould manufacturing requirements. **07**
- OR**
- (b) Write in detail about mould polishing techniques. **07**
- Q.3** (a) What is heat treatment? Explain different surface hardening processes. **07**
(b) Explain the construction and working principle of jig boring machine. **07**
- OR**
- Q.3** (a) Explain the following. **09**
(i) Cryogenic Heat Treatment (ii) Hard Chrome Plating (iii) Nickel Plating
(b) Explain Chemical Etching and its applications in mould manufacturing. **05**
- Q.4** (a) Define Lathe and explain the operations that can be performed in Lathe. **07**
(b) Explain the EDM process and its working principle with its applications. **07**
- OR**
- Q.4** (a) What is milling? Explain the role of CNC Milling in mould manufacturing. **07**
(b) Write about the inspection and quality control of moulds. **07**
- Q.5** (a) Prepare an estimation sheet and explain the procedure for estimating mould cost. **07**
(b) Identify the mould parts with a neat sketch and explain the processes involved in manufacturing those parts. **07**
- OR**
- Q.5** (a) Make an optimistic job planning for mould manufacturing and explain. **07**
(b) What is mould maintenance? Explain with its advantages. **07**
