

GUJARAT TECHNOLOGICAL UNIVERSITY**ME - SEMESTER-IV • EXAMINATION – SUMMER • 2014****Subject Code: 742401****Date: 04-06-2014****Subject Name: Advanced Mould Manufacturing Technology****Time: 02:30 pm - 05:00 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 factors to be considered for plastics product design. **07**
(b) Explain the different systems of positioning dimensions in CNC programming with examples. **07**
- Q.2** (a) What are the different Rapid Prototyping Methods? **07**
Explain about any one Rapid Prototyping Technology.
(b) Explain the various machines and machining processes involved in mould manufacturing **07**
- OR**
- (b) Explain the difference between the CAD mould design and conventional design along with its advantages and disadvantages **07**
- Q.3** (a) Explain 3D printing and FDM. **07**
(b) Explain the ball screw and nut mechanism in CNC machines. **07**
- OR**
- Q.3** (a) Explain reverse engineering with an example. **07**
(b) Explain the function of 3D scanner and its application in mould manufacturing. **07**
- Q.4** (a) Explain Stereolithography with neat sketch. **07**
(b) Explain the application of direct rapid tooling for injection moulds **07**
- OR**
- Q.4** (a) Explain the types of milling cutters with neat sketches **07**
Q.4 (b) Explain the programmable axes of CNC vertical and horizontal spindle machining centres and CNC Turning centres with neat sketches. **07**
- Q.5** (a) What are the different materials used for manufacturing of cutting Tools? Explain **07**
(b) Explain Selective Laser Sintering with neat sketch. **07**
- Q.5** (a) Explain about the tool compensation **07**
(b) Explain the part programming structure with suitable example. **07**
