

GUJARAT TECHNOLOGICAL UNIVERSITY**M.E -IVth SEMESTER-EXAMINATION – MAY- 2012****Subject code: 742401****Date: 12/05/2012****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) What are the differences between Polar Co-ordinate system & Rectangular co-ordinate system? **07**

(b) Describe the Programmable axis on CNC Vertical Spindle, Horizontal Spindle Machining Centers & CNC Turning center with the help of sketches. **07**

Q.2 (a) What are the different Systems of positioning dimensions in CNC programming? Explain with the help of suitable examples. **07**

(b) What is 'G' code & 'M' code? Give any five examples of G code & 'M' code. **07**

OR

(b) Explain about the Part Program structure for CNC Milling Machine. **07**

Q.3 (a) What are the different materials used for Manufacturing of cutting Tools? Explain. **07**

(b) Why coatings are applied on the cutting tools? Mention the applications of the different coatings. **07**

OR

Q.3 (a) Write short notes about End Mill cutters & End mill rigidity. **07**

(b) Discuss about Chip thickness with Milling cutters. **07**

Q.4 (a) Write the advantages of Machining by using CAM Tools. **07**

(b) What are the different Machines used for Manufacturing cavity for Moulds? Explain. **07**

OR

Q.4 (a) What are the advantages & disadvantages of using CAD tools for designing of the moulds? **07**

(b) What are the different Rapid Prototyping Methods? Explain about any one Rapid Prototyping Technology. **07**

Q.5 (a) Describe the Structure of the CNC Machining center **07**

(b) Explain about ball screw & nut mechanism used in the CNC Machines. **07**

OR

Q.5 (a) What are the different Equipments required for Assembly of the Moulds? Explain. **07**

(b) Explain about Linear Interpolation Program & Angular Interpolation Program. **07**
