

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI • EXAMINATION – SUMMER • 2014

Subject Code: 163404

Date: 28-05-2014

Subject Name: Tool Design

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) Draw a single point cutting tool and mark its parts. What is the importance of different angles in metal cutting? **07**
(b) Discuss the nomenclature of the drill. Write the different types of drills. **07**
- Q.2** (a) Describe progressive die with the help of neat sketch. **07**
(b) What is strip layout? How to find out strip layout with suitable example? **07**
- OR**
- (b) Write the different methods of punch holding. Explain about any one method with neat sketch. **07**
- Q.3** (a) What is spring back in bending method and how it can be prevented during operation? **07**
(b) Write short notes about bottoming dies and whipping dies. **07**
- OR**
- Q.3** (a) Describe about embossing die and coining die. **07**
(b) Write any five factors affecting in drawing operation. How do you determine blank size in drawing die? **07**
- Q.4** (a) Define the following: Fullering, Edging & Flattering **07**
(b) Describe the tools used for flash trimming and hole piercing in forging press. **07**
- OR**
- Q.4** (a) Write the various factors affecting in forging die design. Explain in brief about any two design factors. **07**
(b) Write short notes on reamers and broaches. **07**
- Q.5** (a) What are the difference between jigs and fixtures? **07**
(b) Describe the drilling jig's channel type jig and template type jig with suitable sketch. **07**
- OR**
- Q.5** (a) How many degrees of freedom are there for an object in space? Describe 3-2-1 principle of location. **07**
(b) Write the classification of Press. Explain about any one press with sketch. **07**
