

GUJARAT TECHNOLOGICAL UNIVERSITY
BE – SEMESTER – VI EXAMINATION – WINTER 2015

Subject Code:163404**Date:14/12/ 2015****Subject Name: Tool Design****Time:2:30pm to 5:00pm****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) Define Tool Design. Explain the procedure of Tool Design. **07**
(b) Explain the various elements of a single point cutting tool with the help of a neat diagram. **07**

- Q.2** (a) Differentiate between **07**
i) Cutting die and Forming die.
ii) Blanking die and Piercing die.
(b) Explain Orthogonal and Oblique cutting system with neat sketch. **07**

OR

- (b) Design of milling cutters. Explain **07**
Q.3 (a) Explain the Press working terminology with neat sketch. **07**
(b) Classify the press working dies. Explain any one of them. **07**

OR

- Q.3** (a) What are the various types of strippers? Explain their functions with the help of suitable sketches. **07**
(b) Write the name of press working operations. Explain any four with neat sketch. **07**
Q.4 (a) Classify the forging dies. Explain any one with neat sketch. **07**
(b) Explain the determination of stock size in closed & open die forging. **07**

OR

- Q.4** (a) Explain the forging die design factors. **07**
(b) What is meant by optimum clearance? What are the effects of inadequate clearance and excessive clearance upon die metal? **07**
Q.5 (a) Define and Differentiate Jig and Fixture with sketch. **07**
(b) Explain the principle of location. Or “3-2-1” principle. **07**

OR

- Q.5** (a) What are the various location devices? Explain these with the aid of suitable sketches. **07**
(b) List and explain the types of drill bushes. **07**
