

**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**

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