GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI • EXAMINATION - SUMMER 2013 Subject Code: 163404 Date: 29-05-2013 **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. 0.1 (a) Explain in brief about Progressive Die with neat sketch. Explain about nomenclature of a single point cutting tool with help of sketch. 0.2 Define piercing, notching and shaving operations with simple sketch. (a) Classify press. Explain about Open Back Inclinable press with simple sketch. **(b)** Describe Combination Die with neat sketch. (a) Write the classification of Milling fixture. What is the importance of location in **Q.3** fixture? **(b)** What is the purpose of clamping and explain about various clamping devices. Write the types of drilling jigs. Write the design principles for drill bushings. Q.3(a) (b) Explain the design principles common to jigs and fixtures. 0.4 Write short notes about V-bending, Air bending and spring back. (a) Write the design principle of bend radius and bend allowance. **(b)**

Distinguish between bending die and drawing die.

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Write the various types of forming dies. Explain about any one die. **(b)**

Q.5 (a) Write the classification of forging dies. Explain about any one die. 07 **07**

(b) Write the factors to be considered for forging design.

(a) How to determine the stock size in closed and open die forging? 07 **Q.5 07**

(b) Write short notes about flash trimming and hole piercing.

0.4

(a)
