

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – WINTER 2013****Subject Code: 162503****Date: 06-12-2013****Subject Name: Metal Forming Processes****Time: 02:30 pm to 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) Classify the metal forming processes. With its merits, demerits and application. **07**
(b) Differentiate the Hot and Cold Working Processes. **07**
- Q.2** (a) Define Recrystallization and describe its importance in hot working. **07**
(b) Explain the Mode and Types of fractures and its influence in service life of parts. **07**
- OR**
- (b) Explain the fatigue tests of material and method to improve fatigue Resistance. **07**
- Q.3** (a) What is strain rate? Briefly explain factors affecting strain rate. **07**
(b) Define Creep. Explain factors affecting creep resistance. **07**
- OR**
- Q.3** (a) Explain the Fatigue. How is the fatigue test performed? **07**
(b) Explain the defects of rolled products. **07**
- Q.4** (a) Discuss the arrangement of rolls in rolling mills giving reasons for each arrangement. **07**
(b) Write the Principal of forging process. Explain Open and Close Die Forging Processes. **07**
- OR**
- Q.4** (a) Explain the Force Analysis in forging with neat sketch. **07**
(b) Explain the defects of rolled products. **07**
- Q.5** (a) Explain the process of Extrusion. Explain the process of tube extrusion. **07**
(b) Explain Drawing process. Explain in brief deep drawing process. **07**
- OR**
- Q.5** (a) Explain the process of Hydrostatic Extrusion. **07**
(b) Write a short note on metal spinning with its Advantages and disadvantages. **07**
