

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. - SEMESTER – VI • EXAMINATION – WINTER 2012****Subject code: 162503****Date: 05/01/2013****Subject Name: Metal Forming Processes****Time: 02.30 pm - 05.00 pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** Classify the metal forming process. Write its advantages, disadvantages and applications. **07**
- (b)** Differentiate Hot working and Cold working of metal with example and its effects on metal properties. **07**
- Q.2 (a)** Define Creep. Explain factors affecting creep resistance. **07**
- (b)** Define Fatigue. How is the fatigue test performed in the laboratory? **07**
- OR**
- (b)** Define Recrystallization and describe its importance in hot working. **07**
- Q.3 (a)** Discuss the arrangement of rolls in rolling mills giving reasons for each arrangement. **07**
- (b)** Explain the procedure of roll pass design. **07**
- OR**
- Q.3 (a)** Explain the defects of rolled products. **07**
- (b)** Explain the process of ring rolling. **07**
- Q.4 (a)** Define Forging process. Explain the methods of forging. **07**
- (b)** Write about forging defect in detail. **07**
- OR**
- Q.4 (a)** Define the process of Extrusion. Explain the process of tube extrusion. **07**
- Q.4 (b)** Explain the process of Hydrostatic Extrusion. **07**
- Q.5 (a)** Define Drawing process. State advantages of cold drawing process. Explain in brief deep drawing process. **07**
- (b)** Explain the analysis of wire drawing process. **07**
- OR**
- Q.5 (a)** Explain the process of metal spinning with neat sketch. Write its merits and demerits. **07**
- (b)** Explain the High Velocity forming of metals **07**
