

GUJARAT TECHNOLOGICAL UNIVERSITY
B.E. - SEMESTER – VIII EXAMINATION – OCTOBER 2012

Subject code: 182101**Date: 27/10/2012****Subject Name: Metal Working Processes****Time: 02.30pm - 05.00pm****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) What do you understand by hot working, cold working and warm working? Compare them. **07**

(b) What is the need of annealing after cold working? Explain annealing process. **07**

Q.2 (a) What is forging? Differentiate between open die and close die forging. **07**

(b) Enlist of common defects in forging. Explain forging defects, their causes and remedial measures. **07**

OR

(b) Explain different forging operations with neat sketch. **07**

Q.3 (a) Discuss common rolling defects with their causes and remedies. **07**

(b) What are different rolling variables? Explain them. **07**

OR

Q.3 (a) Derive equations for forces and geometrical relationship in rolling. **07**

(b) With neat sketch explain different rolling mill arrangement. **07**

Q.4 (a) Discuss extrusion defects with causes and remedies with necessary sketches. **07**

(b) What is different type of extrusion process? Discuss role of lubricant in extrusion process. **07**

OR

Q.4 (a) Discuss the variable influencing the force required to cause extrusion. **07**

(b) Write a note on superplasticity. **07**

Q.5 (a) With neat sketch explain different sheet metal working processes. **07**

(b) Write a note on high energy rate forming. **07**

OR

Q.5 (a) Explain variables and defects in wire drawing operation. **07**

(b) Explain different types of pyrometers. **07**
