

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII • EXAMINATION – WINTER 2013****Subject Code: 172103****Date: 07-12-2013****Subject Name: Metal Joining Processes****Time: 10:30 TO 01:00****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) List metal joining processes. Explain their importance. **07**
(b) What is Arc welding? Explain SMAW with neat sketch. **07**
- Q.2** (a) Discuss different types of gas welding flames with neat sketch. **07**
(b) Explain edge preparation and weld joints with sketches. **07**
- OR**
- (b) Explain mode of metal transfer in arc welding. **07**
- Q.3** (a) Explain characteristics of welding arc. **07**
(b) Discuss principle and working of resistance welding. **07**
- OR**
- Q.3** (a) Explain briefly submerged arc welding. **07**
(b) Define weldability. Explain factors affecting weldability. **07**
- Q.4** (a) What is brazing? How it differs from welding. List brazing techniques and explain any one technique. **07**
(b) Discuss Metal Inert Gas (MIG) welding. **07**
- OR**
- Q.4** (a) Discuss soldering process. **07**
(b) Discuss Tungsten Inert Gas (TIG) welding. **07**
- Q.5** (a) List welding defects. Explain their causes and remedies. **07**
(b) Explain laser beam welding. **07**
- OR**
- Q.5** (a) Write a note on ultrasonic welding. **07**
(b) Explain Electron Beam welding with figure. **07**
