

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII • EXAMINATION – SUMMER • 2014****Subject Code: 172103****Date: 05-06-2014****Subject Name: Metal Joining Processes****Time: 02:30 pm - 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 metal joining processes? Discuss importance of welding over other fabrication processes. **07**
- (b) Explain different joint design and edge preparation with neat sketch **07**
- Q.2** (a) What is Arc welding? Explain SMAW with neat sketch **07**
- (b) Explain mode of metal transfer in arc welding **07**
- OR**
- (b) Discuss different types of gas welding flames with neat sketch **07**
- Q.3** (a) With necessary diagram show welding arc and discuss its characteristics **07**
- (b) Discuss common defects in welding with their causes and remedies. **07**
- OR**
- Q.3** (a) What are the functions of flux in submerge arc welding and explain it in detail. **07**
- (b) Explain how gas-metal and slag-metal reactions takes place in welding **07**
- Q.4** (a) Compare Metal Inert Gas welding process and Tungsten Inert Gas welding. **07**
- (b) Explain solid phase welding process in detail **07**
- OR**
- Q.4** (a) What do you mean by plasma? Explain plasma welding with a neat sketch. **07**
- (b) Define weldability and explain the test for weldability **07**
- Q.5** (a) Discuss explosive welding process in detail **07**
- (b) What is electroslog welding? Explain its operation in detail **07**
- OR**
- Q.5** (a) Define soldering and discuss it with different type of soldering materials **07**
- (b) What is brazing process? Discuss different brazing Techniques in detail **07**
