

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- VIIth SEMESTER-EXAMINATION – MAY/JUNE- 2012

Subject code: 172103

Date: 09/06/2012

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) With neat sketch explain various defects in welding with their causes and remedies. **07**

(b) Explain different types of gas welding flames. **07**

Q.2 (a) Classify metal joining processes? Discuss importance of welding over other fabrication processes. **07**

(b) Discuss electron beam welding process with its advantages and limitations. **07**

OR

(b) With diagram show welding arc and discuss its characteristics. **07**

Q.3 (a) Explain different modes of metal transfer in welding process. **07**

(b) Explain electro slag welding process. **07**

OR

Q.3 (a) What is submerge arc welding? Explain the process and give its advantages. **07**

(b) Explain LASER beam welding process. **07**

Q.4 (a) Compare Metal Inert Gas welding process and Tungsten Inert Gas welding. **07**

(b) What is brazing process? Discuss it and give different brazing materials. **07**

OR

Q.4 (a) What is soldering? Explain soldering process and alloys. **07**

(b) Explain solid phase welding process in detail. **07**

Q.5 (a) With neat sketch show different joint design and edge preparation. **07**

(b) Explain plasma welding process its advantages and limitations. **07**

OR

Q.5 (a) Define weldability and explain the test for weldability. **07**

(b) Write note on ultrasonic welding and explosive welding. **07**
