

**GUJARAT TECHNOLOGICAL UNIVERSITY****B E Sem-VI Examination May 2011****Subject code: 162502****Subject Name: Welding Technology****Date: 17/05/2011****Time: 10.30 am – 01.00 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) Define: Welding and give their classification. **07**  
(b) With neat sketch explain types of flames of gas welding. **07**
- Q.2** (a) Discuss working principle of arc welding with neat figure. **07**  
(b) Explain Ultrasonic inspection test for weld joint. **07**
- OR**
- (b) With neat sketches define terminology of weld joints and types of joints. **07**
- Q.3** (a) Explain following variables for resistance welding. **07**  
[1] Welding Time (T) [2] Current (I)  
[3] Resistances (R) [4] Electrode Pressure  
(b) Give comparison between GTAW and GMAW. **07**
- OR**
- Q.3** (a) Describe sub merged arc welding. **07**  
(b) Give comparison between spot and seam welding. **07**
- Q.4** (a) With neat sketch discuss thermit welding process. **07**  
(b) Discuss different welding defects with their causes and remedies. **07**
- OR**
- Q.4** (a) Explain mechanism of Cold welding and Diffusion welding. **07**  
(b) Discuss hydrostatic pressure testing and hydraulic pressure testing for leakage of weld joint. **07**
- Q.5** (a) List out the gas welding equipments and give their unique functions and explain different gas welding techniques. **07**  
(b) What are the functions of flux and filler material at different welding processes? **07**
- OR**
- Q.5** (a) What are the selection factors for arc welding electrodes? **07**  
(b) Differentiate between soldering and brazing. **07**

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