

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Diploma Engineering Semester –III Examination Dec. 2011**

**Subject code: 335503****Date: 27/12/2011****Subject Name: Welding Technology-I****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.
4. English version is considered Authentic.

- Q.1** (a) Need of attitude require for shop floor supervisor in welding industry **07**  
 (b) Explain factor affecting selection of welding process. **07**
- Q.2** (a) Explain factor affecting selection of power sources **07**  
 (b) Classification of D.C. power sources. Explain D.C. generator set. **07**
- OR**
- (b) Explain static characteristics curve with neat sketch. **07**
- Q.3** (a) Explain in brief following welding terminology (Any 4) **07**  
 1. Current rating  
 2. O.C. voltage  
 3. Short circuit current  
 4. Duty cycle  
 5. Insulation  
 (b) Explain selection of following consumables. **07**  
 Cellulosic , Rutile , Oxidizing , Iron oxide
- OR**
- Q.3** (a) Give classification and coding of electrode as per 'ISO' with example **07**  
 (b) Explain factor affecting selection of types of edge preparation. **07**
- Q.4** (a) Explain classification of Welding defects with neat sketch. **07**  
 (b) Give safety requirement in SMAW. **07**
- OR**
- Q. 4** (a) Explain working principle of SAW with neat sketch **07**  
 (b) Explain principle of operation in ESW process with neat sketch. **07**
- Q.5** (a) Draw an arc structure in arc welding. **07**  
 (b) Define and explain the term metal transfer & its types **07**
- OR**
- Q.5** (a) Definition of WPQ, WPS & PQR as per ASME sec IX. Explain types of variables. **07**  
 (b) Explain in brief QW – 401 to QW - 410 **07**

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