

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Diploma Engineering - SEMESTER – IV • EXAMINATION – WINTER 2012**

**Subject code: 345504****Date: 28/12/2012****Subject Name: Welding Technology - II****Time: 02.30 pm - 05.00 pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic.

- Q.1** (a) Define the term 'Welding'. State Meaning, Necessity, Procedure and application of PWHT. **07**
- (b) Calculate Rate of Heat In-put for the following data : **07**
- (1) Welding Current=110 Amps.  
 (2) Arc Voltage=25 Volts.  
 (3) Travel Speed= 1.5 Meters per Hour.
- Q.2**
- (a) Draw neat sketch and explain working of GTAW. **07**
- (b) Describe PAW operation with neat sketch. **07**
- OR**
- (b) Explain effects of .different Parameters of PAW. **07**
- Q.3**
- (a) Draw neat sketch and write Causes and Remedies of Seven Welding Defects. **07**
- (b) Draw neat sketch and explain working of GMAW Welding Torch. **07**
- OR**
- Q.3** (a) Draw neat sketch and explain working of GMAW. **07**
- (b) Draw neat sketch of FCAW and State its Advantages and Limitations. **07**
- Q.4**
- (a) Define LBM. Describe its working Principle with neat sketch. **07**
- (b) Draw neat sketch and explain working of EBW. **07**
- OR**
- Q.4** (a) Define 'Ultrasonic Welding'. Describe its working Principle with neat sketch. **07**
- (b) Draw neat sketch and explain working of Explosive Welding. **07**
- Q.5**
- (a) State Meaning and Importance of WPS, WPQ and PQR as per ASME Sec. IX. **07**
- (b) Justify Need and Scope of Welding Safety as per OHSAS and EHS standards. **07**
- OR**
- Q.5** (a) Describe FOUR modes of Welding with their Merits and Limitations. **07**
- (b) Describe Meaning of 'F', 'P' and 'A' Numbers as per ASME Sec. IX giving suitable examples. **07**

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