

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

# GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma Engineering Sem. - V - Examination – June- 2011

Subject code: 355505

Subject Name: Welding Inspection & Testing.

Date: 27/06/2011

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.
4. English version is Authentic

- Q.1** (a) Explain briefly the knowledge of destructive and non-destructive testing Methods is essential for a fabrication engineer. **07**  
(b) Explain briefly the ethical and essential requirements of a Welding Inspector. **07**
- Q.2** (a) Explain with neat sketch Ten types of weld defects its causes and remedies. **07**  
(b) Define the terms 'WPS', 'WPQ' and 'PQR.' and explain with suitable examples. **07**
- OR**
- (b) Explain briefly the factors affecting selection of non-destructive testing methods **07**
- Q.3** (a) Write short note on "Visual Inspection." **07**  
(b) Explain with neat sketches working principle, procedure and applications of "Dye Penetrant Test" as per ASME Sec.-V. **07**
- OR**
- Q.3** (a) Explain with neat sketches working principle, procedure and applications of "Eddy Current Test" as per ASME Sec.-V. **07**  
(b) Explain with neat sketches working principle, procedure and application of "Tensile Test" as per ASME Sec.-V. **07**
- Q.4** (a) Explain with neat sketches working principle, procedure and application of "Ultrasonic Test" as per ASME Sec.-V. **07**  
(b) Explain with neat sketches working principle, procedure and applications of "Radio Graphic Test" as per ASME Sec.-V. **07**
- OR**
- Q. 4** (a) Explain with neat sketches working principle, procedure and applications of "Acoustic Emission Test" as per ASME Sec.-V. **07**  
(b) Discuss the 'Izod Impact' and 'Charpy Bend' testing of welds as per ASME Sec. **07**
- Q.5** (a) Explain with suitable examples 'Quality Assurance Plan' and 'Quality Control Plan' **07**  
(b) Write a short note on 'Leak Testing' of a pressure vessel. **07**
- OR**
- Q.5** (a) Differentiate between "Destructive and Non-Destructive" testing methods. **07**  
(b) Explain briefly with example latest advances in Non- Destructive testing methods. **07**

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