

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA ENGINEERING – SEMESTER – V • EXAMINATION – SUMMER 2015**

**Subject Code: 3355505**

**Date: 15- 05- 2015**

**Subject Name: W I & T**

**Time: 02:30 PM TO 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.
5. Write your seat no. and enrolment no. in the above given space.
6. Answer with neat sketch/charts and to the point.

**Q.1**

- (a) Describe with neat sketch various Welding Inspection Operation. **07**
- (b) Compare the “DT and NDT “ Testing methods.

**Q.2**

- (a) Describe the procedure for LPT as per ASME Sec-V & their Related Standards of LPT. **07**
- (b) List out the various types D.T. test used in Fabrication/Welding Industries. Describe with neat sketch Impact Test.

**OR**

- (b) Define the term NDT Methods? **07**  
Describe the various types’ selection criteria of NDT methods?

**Q.3**

- (a) Describe the typical example of welding procedure specification? **07**
- (b) Describe in brief: - Ethical and essential requirement for the welding inspections. **07**

**OR**

- Q.3** (a) Describe in brief with reference to UT : **07**  
1. Standard Test Block      2. Evaluation of flow size
- (b) Describe in brief with reference to RT **07**  
1. Exposure Time      2. SFD calculation      3. Safety calculation

**Cont. Pg.2**

**Q.4** (a) Compare between 'X- RAY' and 'r-RAY, Radio Grapy For Welding Inspection? **07**

(b) List out the different types of bend test? **07**  
Describe in brief with neat sketch: - Equipment, Specimen preparation procedure as per codes & standard for bend test.

**OR**

**Q.4** (a) Describe the Ultrasonic Thickness measurement. **07**  
State the advantages, Limitations and Applications of UT

(b) Define the term Magnetic particle test and state its principal. **07**  
Describe in brief the different Magnetizing Techniques W.I

**Q.5** (a) List out the various types of Leak testing methods? **07**  
Describe with neat sketch Helium leak detection TEST.

(b) Describe with neat sketch Preheating and Post Weld heat Treatment? **07**

**OR**

**Q.5** (a) List out the different types Well-meant related discontinuities. **07**  
Describe in brief their causes

(b) Describe in brief General Classification of discontinuities? **07**

THE END  
BEST OF LUCK  
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