

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING - SEMESTER-V • EXAMINATION – WINTER 2013

Subject Code: 355505**Date: 07-12-2013****Subject Name: Welding Inspection and Testing****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.
5. Answer with neat sketch and to the point.

- Q.1** (a) Explain in brief : The selection criteria of NDT Methods **07**
 (b) List out the various types of records, reports and formats used by TPI. **07**
 Explain any one format with typical example
- Q.2** (a) Differentiate between: “ Non-destructive and Destructive ” testing methods **07**
 (b) List out the various types of special testing methods . **07**
 Explain any one in brief with neat sketch.
- OR**
- (b) Differentiate between x-ray & (γ)Gamma rays. **07**
 List out the various types of image quality indicator [IQI]
 Explain any one in brief with neat sketch.
- Q.3** (a) Explain in brief : **07**
 The precautions, advantages, limitations & sensitivity of LPT
 (b) Explain in brief : the basic principle of visual inspection **07**
 List out the various types of defects identified during visual inspections
 states its remedies’.
- OR**
- Q.3** (a) Describe the acceptance , criteria of LPT as per ASME Sec - VIII **07**
 (b) Describe the concept of root cause analysis of weld defects with typical **07**
 format.
- Q.4** (a) Define the Term ‘Acoustic emission ‘? **07**
 Explain in brief : principal of Acoustic emission with neat sketch.
 (b) Explain in brief with Ref. to x-rays **07**
 1. Exposure time 2. SFD calculation 3. Safety calculation
- OR**
- Q.4** (a) Explain in brief with neat sketches drawing reading for inspection. **07**
 (b) Explain in brief: 1. Standard test block 2. Evaluation flow size **07**
- Q.5** (a) Explain with neat sketch, principal, equipment, procedure, specimen as per **07**
 codes & standard of Bend test.
 (b) Describe in brief : The related inspection standard of MPT **07**
- OR**
- Q.5** (a) List out the different magnetizing techniques **07**
 Explain any one types of method in brief with neat sketch the process
 magnetizations for materials /job to be inspected.
 (b) Describe in brief : the technique of ECT with neat sketches. **07**