

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII(NEW) EXAMINATION – SUMMER 2019****Subject Code:2181927****Date:13/05/2019****Subject Name:Advance Welding Technology****Time:10:30 AM TO 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.

- Q:1** (a) Enlist different variables which affect the quality of Resistance Welding. **03**
 (b) What is API standard & ASTM standard? **04**
 (c) Explain factors affecting changes in microstructure and mechanical properties of HAZ of steel. **07**
- Q:2** (a) Explain different types of Welding Positions. **03**
 (b) Discuss effects of Welding parameters on Weld structure. **04**
 (c) Discuss with neat sketch shielded metal arc welding process; state the advantages, limitations and applications. **07**
- OR**
- (c) Discuss about various types of flames commonly used in gas welding process with specific application of each types. **07**
- Q:3** (a) Write down different steps involved in Soldering process. **03**
 (b) Write down difference between Destructive and Non Destructive testing.. **04**
 (c) Distinguish between welding, brazing and soldering process. **07**
- OR**
- Q:3** (a) Write down difference between Friction Welding & Inertia Welding. **03**
 (b) Explain Stud welding process with advantages and limitations. **04**
 (c) Explain working principle of eddy current testing method, list out various coils used in this methods with neat sketch. **07**
- Q:4** (a) Give detail classification of welding processes. **03**
 (b) Draw Fe-C & CC-T diagram. **04**
 (c) Why leak testing is required? Explain procedure of leak testing method with neat sketch. **07**
- OR**
- Q:4** (a) Explain design Guide lines for sound welding joint. **03**
 (b) Explain TIG welding with neat sketch. **04**
 (c) Explain ASME Code for Boiler and Pressure Vessel. **07**
- Q:5** (a) Discuss the Factors affecting the selection of welding joint. **03**
 (b) Explain Friction Welding with neat sketch. State its benefits and limitations. **04**
 (c) Enlist various NDT methods and explain Radiographic inspection method. **07**
- OR**
- Q:5** (a) Explain construction of welding symbols with neat sketch. **03**
 (b) Explain Thermit welding. **04**
 (c) Explain Ultrasonic Inspection method for Weldment with neat sketch. **07**

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