

GUJARAT TECHNOLOGICAL UNIVERSITY
BE – SEMESTER -VIII (NEW) - EXAMINATION- SUMMER 2018

Subject Code: 2181927**Date: 02/05/2018****Subject Name: Advance Welding Technology****Time: 10:30AM To 1:00PM****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) Define Weldability and draw primary Welding symbols. **03**
 (b) Write down difference between Destructive and Non Destructive testing. **04**
 (c) Explain Flux Cored Arc Welding process with neat sketch. **07**
- Q.2** (a) Explain different types of Welding Positions. **03**
 (b) Explain Plasma Arc Welding Process. **04**
 (c) Explain ASME code for Boiler and Pressure Vessels. **07**
- OR**
- (c) Enlist various NDT methods and explain Radiographic Inspection method. **07**
- Q.3** (a) Write down difference between Soldering & Brazing. **03**
 (b) Draw Fe-C and CC-T diagram. **04**
 (c) Discuss in detail about different Metallurgical issues in Weld Joint. **07**
- OR**
- Q.3** (a) Write down different steps involved in Soldering process. **03**
 (b) Discuss effects of Welding parameters on Weld structure. **04**
 (c) Draw and explain TTT diagram. **07**
- Q.4** (a) List out various coils used in Eddy current testing method and draw a sketch of any one. **03**
 (b) Write down steps involved in Dye Penetrant test. **04**
 (c) Explain the process of Flash Welding with neat sketch. **07**
- OR**
- Q.4** (a) List out different steps involved in inspection of Pressure Vessel. **03**
 (b) What is API standard and ASTM standard? **04**
 (c) Explain working principle of Laser beam Welding process with neat sketch. **07**
- Q.5** (a) Write down difference between Friction Welding & Inertia Welding. **03**
 (b) Discuss Pre and Post Weld heating treatments. **04**
 (c) Explain working principle of Friction Stir Welding Process with neat sketch and also write down its advantages and disadvantages. **07**
- OR**
- Q.5** (a) Enlist different variables which affect the quality of Resistance Welding. **03**
 (b) Explain different steps of Weld joint preparation. **04**
 (c) Explain principle of operation of Resistance Seam Welding process with its advantages and disadvantages. **07**
