Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

Su	bject	BE - SEMESTER-VII EXAMINATION – SUMMER 2016 Code:172103 Date:10/05/201 Name:Metal Joining Processes	
	tructio	Attempt all questions. Make suitable assumptions wherever necessary.	70
Q.1	(a)	Discuss needs of Metal Joining Processes, also list types of Metal joining Processes.	07
	(b)	What are the Types of joints in welding? What are the different modes of edge preparation?	07
Q.2	(a)	With reference to manual metal arc welding, explain how to (i) grip the electrode, (ii) strike the arc, (iii) maintain the arc, (iv) Break the arc, & (v) restrike the arc to continue the welding.	07
	(b)	List & Explain parameters affecting metal transfer. OR	07
	(b)	Explain with neat sketch different flames in gas welding.	07
Q.3	(a) (b)	Explain submerge arc welding process with neat sketch. List types of electrode coating. Explain at least three with its applications. OR	07 07
Q.3	(a) (b)	List operations in Gas Tungsten Arc Welding. Explain any one method of arc maintenance for stability of arc. Explain advantages of GMAW over GTAW. Also list applications of GMAW.	07
Q.4	(a) (b)	Explain LASER beam welding process Explain advantages and limitations of plasma welding process. OR	07 07
Q.4	(a)	Explain basic principle of resistance welding processes. Also explain spot welding cycle with the help of current v/s time phases & force v/s time phases diagram.	07
	(b)	List different welding variables for Resistance welding processes and Explain any three in detail.	07
Q.5	(a) (b)	Compare soldering, Brazing and Adhesive bonding. Define weldability and explain the test for weldability. OR	07 07
Q.5	(a) (b)	List welding defects. Explain their causes and remedies. Write a note on ultrasonic welding.	07 07
