Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-VII(OLD) • EXAMINATION – WINTER 2016

Subject Code: 172103 Date: 23/11/2016

**Subject Name: Metal Joining Processes** 

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)	Classify Metal Joining processes? Discuss importance of welding over other fabrication processes.	07
	<b>(b)</b>	Explain Physics of Arc in detail with figure	07
Q.2	(a) (b)	Classify various Modes of metal transfer and explain any one in detail Differentiate between CC and CV characteristics in detail OR	07 07
	<b>(b)</b>	Explain different joint design and edge preparation with neat sketch	07
Q.3	(a) (b)	Explain how gas-metal and slag-metal reactions take place in welding.  What are the functions of flux in submerge arc welding and explain it in detail.  OR	07 07
Q.3	(a) (b)	What is Arc welding? Explain SMAW with neat sketch Compare Metal Inert Gas welding process and Tungsten Inert Gas welding	07 07
Q.4	(a) (b)	What do you mean by plasma? Explain plasma welding with a neat sketch. List the types of resistance welding. Differentiate resistance butt and flash butt welding.	07 07
		OR	
Q.4	(a) (b)	Write short note on Electro Beam Welding Define Weldability. Explain factors affecting weldability.	07 07
Q.5	(a) (b)	What is brazing process? Discuss different brazing Techniques in detail Write short note on Laser Beam Welding  OR	07 07
Q.5	(a) (b)	Discuss common defects in welding with their causes and remedies  Explain the phenomena of weld cracking.	07 07

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