Seat No.:		Enrolment No	Enrolment No	
		GUJARAT TECHNOLOGICAL UNIVERSITY		
	BE - SEMESTER-VII (OLD) - EXAMINATION – SUMMER 20			
Subject Code: 172103 Dat		Code: 172103 Date: 04/0	te: 04/05/2017	
Sul	bject	Name: Metal Joining Processes		
Time: 02:30 PM to 05:00 PM		2:30 PM to 05:00 PM Total Mai	Total Marks: 70	
Inst	ructio	ns:		
	1.	Attempt all questions.		
		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.	02+05	
	(b)	Explain edge preparation and weld joints with sketches.	07	
Q.2	(a)	Describe briefly weld pool solidification.	02+05	
	(b)	What is Arc welding? Explain SMAW with neat sketch.	07	
		OR		
	(b)	With neat sketch explain various defects in welding with their causes and remedies	07	
Q.3	(a)	With necessary diagram show welding arc and discuss its characteristics.	07	
	(b)	Discuss different types of gas welding flames with neat sketch	07	
		OR		
Q.3	(a)	What the functions of flux are in submerge arc welding and explain it in detail.	03+04	
	(b)	List the types of resistance welding. Compare resistance butt and flash butt welding	07	
Q.4	(a) (b)	List different methods for arc initiation. Explain FCAW process Write a short note on: 1. Electron Beam Welding 2. Ultrasonic welding	02+05 07	

What is brazing process? Discuss it and give different brazing materials

OR

What is weldability? Explain in brief about weldability of Stainless Steels

03+04

02+05

02+05

02+05

02+05

02+05

What is hydrogen embrittlement? How does it occur?

Explain Laser welding process its advantages and limitations.

What is Electroslag welding? Explain its operation in detail.

What is soldering? Explain soldering process and alloys

Q.4

Q.5

Q.5

(a)

(b)

(a)

(b)

(a)

(b)