Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – WINTER 2012

Subject code: 1722802 **Date: 31-21-2012**

Subject Name: Advance Welding Technique

Time: 10.30 am – 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)**	Which are the factors affecting metal transfer.	**07**
	(b)	Discuss various types of electrode codes and their critical evaluation.	**07**
Q.2	**(a)**	Write down welding procedure for plain carbon steel.	**07**
	(b)	Discuss the selection factors for power sources.	**07**
		OR	
	(b)	Narrate methods for welding of cast iron.	**07**
Q.3	**(a)**	Write down procedure for determination of preheat temperature.	**07**
	(b)	What is the use of schaeffler's diagram.	**07**
		OR	
Q.3	**(a)**	Elaborate typical residual stresses in weldments.	**07**
	(b)	Discuss welding parameters on heat distribution.	**07**
Q.4	**(a)**	Which are the process parameters in automated welding?	**07**
	(b)	How can we calculate cooling rate in welding?	**07**
		OR	
Q.4	**(a)**	Discuss Arc characteristics.	**07**
Q.4	**(b)**	Write various types of fluxes with its effect on welding.	**07**
Q.5	**(a)**	Electron beam welding	**07**
	(b)	Quality assurance in welding	**07**
		OR	
Q.5	**(a)**	Laser beam welding	**07**
	(b)	Write down methods of weldability testing.	**07**

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