Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V EXAMINATION – WINTER 2015

Subject Code: 153403 **Date:08/12/2015**

Subject Name: Foundry and 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)**	Write the difference between "Welding" and "Casting".	**07**
	(b)	Briefly Explain the Different Steps to make Casting Product.	**07**
Q.2	**(a)**	Enlist "Allowance" Provided in the Pattern and briefly explain any three of them with Neat Sketch.	**07**
	(b)	Explain the function of Runner, Riser, Pouring Basin and Gate in Casting Process.	**07**
		OR	
	(b)	Enlist different types of Advance Casting Process. Explain Investment Casting with neat Sketch.	**07**
Q.3	**(a)**	Define "Welding". Classify the welding Processes.	**07**
	(b)	Explain different Types of Flames of Gas Welding with neat sketch.	**07**
		OR	
Q.3	**(a)**	Briefly Explain the "Manual Metal Arc Welding (MMAW)" working with Principle with neat sketch, Advantage, Applications.	**07**
	(b)	Briefly Explain the Thermit Welding with Working Principle with neat sketch, Advantage, Applications.	**07**
Q.4	**(a)**	Write Shot-note on "Spot Welding" with neat sketch.	**07**
	(b)	Enlist different types of Advance welding Processes. Explain Laser Beam Welding with Neat Sketch.	**07**
		OR	
Q.4	**(a)**	Differentiate TIG (GTAW) and MIG (GMAW) welding.	**07**
	(b)	Enlist the types of Power Supply used for Welding Processes. Explain the DCSP (Direct Current Straight Polarity) and DCRP (Direct Current Reverse Polarity) with neat Sketch.	**07**
Q.5	**(a)**	Explain the function of Flux, Electrode, Electrode Holder, Shielding Gas, Gas Torch, Transformer and Filler Rod.	**07**
	(b)	Enlist different Defects occur in the Casting Process. Explain any Three of them with Neat Sketch.	**07**
		OR	
Q.5	**(a)**	Enlist different Defects occur in the Weldments. Explain any Three of them with Neat Sketch.	**07**
	(b)	Enlist different Non Destructive Testing. Explain any one of them with neat sketch.	**07**

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