Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V (NEW) EXAMINATION – SUMMER 2019

Subject Code: 2152506 Date: 06/06/2019

Subject Name: Foundry Technology

Time: 02:30 PM TO 05:00 PM Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

			MARKS
Q.1	**(a)**	Write basic steps of casting process.	**03**
	(b)	Compare casting process with metal joining process.	**04**
	(c)	Explain the pattern allowance in brief.	**07**
Q.2	**(a)**	Discuss about pollution control in foundry.	**03**
	(b)	Write short note on pattern materials.	**04**
	(c)	Explain any seven casting defect with causes and its remedies.	**07**
		OR	
	(c)	Explain inspection of casting and explain any two non-destructives testing of casting.	**07**
Q.3	**(a)**	Draw any six patterns.	**03**
	(b)	Discuss any four required properties of molding sand.	**04**
	(c)	Explain directional solidification with neat sketch.	**07**
		OR	
Q.3	**(a)**	Define following terms:- permeability, Green compressive strength, mould hardness	**03**
	(b)	Write basic steps of Permanent Mold Casting Technique.	**04**
	(c)	Explain hand moulding tools with sketch.	**07**
Q.4	**(a)**	Draw schematic diagram of induction furnace.	**03**
	(b)	Write a short note on cupola furnace.	**04**
	(c)	Write a brief about riser location and design.	**07**
		OR	
Q.4	**(a)**	Draw schematic diagram of electric arc furnace.	**03**
	(b)	Explain the principle of electric arc furnace.	**04**
	(c)	Explain Gating System with its elements with neat sketch.	**07**
Q.5	**(a)**	Write basic steps involved in the sand casting process.	**03**
	(b)	Discuss slush casting.	**04**
	(c)	Write a short note on Annealing and Normalizing heat treatment process.	**07**
		OR	
Q.5	**(a)**	Write basic steps involved in the investment casting process.	**03**
	(b)	Explain the gravity die casting.	**04**
	(c)	Write a short note on Hardening and Tempering heat treatment process.	**07**

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