Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V(New) • EXAMINATION – WINTER 2016

Subject Code:2152506 Date:24/11/2016

Subject Name:Foundry Technology

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.**

			MARKS
Q.1		**Short Questions**	**14**
	1	Which sand is utilized in Shell Molding?	
	2	Which Material is used as pattern in investment casting?	
	3	Which casting method is used for making flywheel?	
	4	Name any three pattern allowances.	
	5	Name any three molding sand.	
	6	Name any three sand properties.	
	7	Name any two molding methods.	
	8	Name any three types of cores.	
	9	Name any two additives & binders.	
	10	Name any three gating system elements.	
	11	Name any three foundry furnaces.	
	12	Name any two tasting methods of casting.	
	13	Name any three casting defects.	
	14	Name any three hand molding tools.	
Q.2	**(a)**	Explain any two types of patterns in detail.	**03**
	(b)	Explain any two pattern materials.	**04**
	(c)	Explain shell molding process in detail.	**07**
		OR	
	(c)	Explain investment casting process in detail.	**07**
Q.3	**(a)**	Differentiate green and dry molding sand.	**03**
	(b)	Differentiate hand and machine molding.	**04**
	(c)	Explain various sand properties.	**07**
		OR	
Q.3	**(a)**	Explain riser functions in detail.	**03**
	(b)	Differentiate open and blind risers.	**04**
	(c)	Explain elements of gating system in detail.	**07**
Q.4	**(a)**	Explain various casting defects in brief.	**03**
	(b)	Explain reasons for casting defects and its remedies.	**04**
	(c)	Explain various methods of tasting for finding defects.	**07**
		OR	
Q.4	**(a)**	Write principle and working of induction furnace.	**03**
	(b)	Explain annealing heat treatment of casting.	**04**
	(c)	Explain modernization of foundry.	**07**
Q.5	**(a)**	How sand is reclaimed in foundry?	**03**
	(b)	Explain sand preparation for molding.	**04**
	(c)	Explain centrifugal casting technique in detail.	**07**
		OR	
Q.5	**(a)**	Write principle of electric arc furnace.	**03**
	(b)	Explain stages of combustion in cupola furnace.	**04**
	(c)	Explain Die Casting technique in detail.	**07**