Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER–V • EXAMINATION – SUMMER • 2015

Subject Code: 650013 **Date: 11-05-2015**

Subject Name: Geographical Information System

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.**

Q.1	**(a)**	What is GIS? Explain the Method for representing geographic space.	**07**
	(b)	Write short note on Grid System. Explain different types with example.	**07**
Q.2	**(a)**	What is spatial measurement level? Explain different type of it with example.	**07**
	(b)	Explain Metadata and Metadata standard with all its categories.	**07**
		OR	
	(b)	Write short note on Nonlinear interpolation in detail.	**07**
Q.3	**(a)**	Explain DB structures for managing data.	**07**
	(b)	What is alpha index and beta index? Explain Gravity Model with suitable example.	**07**
		OR	
Q.3	**(a)**	Explain Higher level Line object with its different types of network.	**07**
	(b)	How to calculate Perimeter and Length of Polygons?	**07**
Q.4	**(a)**	Explain High pass filter and low pass filter.	**07**
	(b)	Explain different types of buffers of reclassification process.	**07**
		OR	
Q.4	**(a)**	Write short note on kriging and semivariogram.	**07**
	(b)	Explain sliver polygons and wired polygons and Tiling.	**07**
Q.5	**(a)**	Describe point, line, polygon overlay on polygon in both raster and vector system.	**07**
	(b)	Discuss Connectivity and circuitry of Linear Objects.	**07**
		OR	
Q.5	**(a)**	Explain Inductive and Deductive Modeling.	**07**
	(b)	Write short note on Map Design control in GIS output.	**07**

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