Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER–V • EXAMINATION – WINTER • 2014

Subject Code: 2650013 **Date: 08-12-2014**

Subject Name: Geographical Information System

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)**	Explain Various Geographic Data Collection methods.	**07**
	(b)	Describe UTM grid system.	**07**
Q.2	**(a)**	Explain Entity error with reference to island pseudo node, dangling node, sliver polygon, weird polygon.	**07**
	(b)	Write a note on remote sensing as a special case of raster data input.	**07**
		OR	
	(b)	Explain various methods of raster input.	**07**
Q.3	**(a)**	Explain high level area object in context to types of regions with its diagram.	**07**
	(b)	How will you measure complexity of network with the help of gamma index and alpha index?	**07**
		OR	
Q.3	**(a)**	Explain how you will measure polygon shape with context to Euler number and convexity index.	**07**
	(b)	Explain cartographic model with its types.	**07**
Q.4	**(a)**	How is reclassification performed in raster as well as in vector data?	**07**
	(b)	Explain various methods of non linear interpolation.	**07**
		OR	
Q.4	**(a)**	How will you find directionality of linear and areal objects?	**07**
	(b)	Explain various types vector overlay.	**07**
Q.5	**(a)**	Explain cartographic output.	**07**
	(b)	How will you carry out user requirements with JAD?	**07**
		OR	
Q.5	**(a)**	Explain Map Design Controls.	**07**
	(b)	Write steps involves in conceptual data modeling.	**07**

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