Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER II– EXAMINATION – WINTER - 2016

Subject Code: 2724803 **Date: 19/11/ 2016**

Subject Name: Geospatial Techniques and Planning

Time: 2:30 pm to 5:00 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 the key components of GIS.	**07**
	(b)	What are the three views in GIS? Explain each in brief.	**07**
Q.2	**(a)**	GIS is an information infrastructure. Justify the statement.	**07**
	(b)	Enlist the functions and applications of GIS.	**07**
		OR	
	(b)	Enlist functional requirements of GIS.	**07**
Q.3	**(a)**	Explain the concept of database, DBMS and RDBMS.	**07**
	(b)	What are the data models in GIS? Explain with example.	**07**
		OR	
Q.3	**(a)**	What is the role of metadata in GIS?	**07**
	(b)	Differentiate between field-based and object-based raster mode.	**07**
Q.4	**(a)**	Explain various data compression techniques.	**07**
	(b)	Explain encoding of vector data.	**07**
		OR	
Q.4	**(a)**	Define the terms in context of a map: (1) orientation, (2) scale, (3) detail, (4) accuracy, and (5) resolution.	**07**
	(b)	Explain the classification of map projection.	**07**
Q.5	**(a)**	Define the terms in context of remote sensing: (1) electromagnetic radiation, (2) absorption, (3) scattering, (4) refraction, and (5) reflection.	**07**
	(b)	Discuss about orbital characteristics of a satellite.	**07**
		OR	
Q.5	**(a)**	Classify the resolutions in context of remote sensed images.	**07**
	(b)	Prepare a detailed note on GNSS.	**07**

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