Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V • EXAMINATION – WINTER • 2014

Subject Code: 150606 **Date: 08-12-2014**

Subject Name: Disaster Assessment using Geospatial Techniques

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)**	How can geospatial assessment technique be helpful for minimizing the impact of an earthquake?	**07**
	(b)	Explain the role of GIS and RS in assessing the impact of floods.	**07**
Q.2	**(a)**	Explain basic concept of Metadata? Mention its importance in GIS in detail.	**07**
	(b)	Explain the function of DBMS.	**07**
		OR	
	(b)	Describe imaging with microwave radar.	**07**
Q.3	**(a)**	Explain different resolutions with their significance.	**07**
	(b)	Explain 'vector data model' and 'raster data model' in GIS?	**07**
		OR	
Q.3	**(a)**	What do you mean by image enhancement in digital image processing? Write in detail about contrast enhancement	**07**
	(b)	Explain how adjusting brightness and contrast helps in revealing more details in an image.	**07**
Q.4	**(a)**	Explain Synthetic Aperture Radar (SAR).	**07**
	(b)	Write short notes on: 1. Graphic representation of GIS data 2. GPS receivers	**07**
		OR	
Q.4	**(a)**	Why is it necessary to find out errors of GPS? Explain atmospheric error and Satellite clock error in detail.	**07**
	(b)	Enlist the various spatial and non spatial data that need to be collected for GIS analysis for land slide studies in a hilly area and for damage caused due to floods. Explain how each parameter is helpful in doing the study	**07**
Q.5	**(a)**	What do you understand by 'map'? Differentiate between topographic and thematic map.	**07**
	(b)	What is Sensor? Describe Air Born and Space Born sensors.	**07**
		OR	
Q.5	**(a)**	Give a brief idea about GSLV and PSLV.	**07**
	(b)	Explain platforms of remote sensing.	**07**

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