GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER– VII (New) EXAMINATION – WINTER 2019

Subject Code: 2170606   **Date: 23/11/2019**

Subject Name: Application of Geoinformatics in Civil Engineering

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.

Q1	(a)	What are the atmospheric windows?	03
	(b)	Enlist the various key components of GIS.	04
	(c)	Differentiate between raster and vector models.	07
Q2	(a)	Explain the functions of Geographic Information System.	03
	(b)	Explain the term Digital Image.	04
	(c)	Explain: i) Spatial resolution. ii) Spectral resolution and iii) Temporal resolution.	07
		OR	
	(c)	Discuss the use of remote sensing in land use and land cover mapping.	07
Q3	(a)	Explain how does GPS works.	03
	(b)	What is Remote Sensing? Explain in brief.	04
	(c)	Differentiate between active and passive remote sensing.	07
		OR	
Q3	(a)	Define and explain flight planning.	03
	(b)	Compare aerial photograph and satellite image.	04
	(c)	Write short note on electromagnetic spectrum.	07
Q4	(a)	What is Geospatial analysis?	03
	(b)	Draw the neat sketch of ideal remote sensing system.	04
	(c)	Discuss the use of remote sensing in disaster management.	07
		OR	
Q4	(a)	What is DGPS? Explain in brief.	03
	(b)	Write short note on Image Enhancement.	04
	(c)	Discuss spatial data and Attribute data of GIS.	07
Q5	(a)	What is spectral reflectance curve?	03
	(b)	Explain aerial Photogrammetry in brief.	04
	(c)	What are the elements of Visual Image Interpretation?	07
		OR	
Q5	(a)	Sketch the spectral reflectance curves for vegetation and clear water.	03
	(b)	What are the different types of photos used in Photogrammetry?	04
	(c)	Write various applications of Geo informatics in Civil Engineering	07