Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE- SEMESTER–V (NEW) EXAMINATION – WINTER 2020

Subject Code:3151308   **Date:03/02/2021**
Subject Name:Basics of Remote Sensing & GIS
Time:10:30 AM TO 12:30 PM   **Total Marks: 56**
Instructions:
   1. **Attempt any FOUR questions out of EIGHT questions.**
   2. **Make suitable assumptions wherever necessary.**
   3. **Figures to the right indicate full marks.**

			MARKS
Q.1	(a)	Define: (i)Remote sensing, (ii)Atmospheric window, (iii)digital image.	03
	(b)	What are the advantages and limitations of remote sensing?	04
	(c)	Explain various interactions of incident EM energy with the atmosphere.	07
Q.2	(a)	What are the procedures of deriving scale of photograph?	03
	(b)	What are the sensors developed by India for remote sensing?	04
	(c)	Discuss about the types of camera used in remote sensing?	07
Q.3	(a)	Explain the parameters of ground truthing.	03
	(b)	Explain the factors that affect spectral measurements?	04
	(c)	Enlist and explain the segments of GPS?	07
Q.4	(a)	List out the purpose of ground truth data collection.	03
	(b)	What is ground truth data? List out its essential things to Carry While Going for Data Collection?	04
	(c)	What are the errors introduced in GPS? Explain in brief.	07
Q.5	(a)	What is visual image interpretation?	03
	(b)	What are the advantages and limitations of visual image interpretation and digital image interpretation?	04
	(c)	What is interpretation key? Explain with example.	07
Q.6	(a)	Compare the thermal properties of water and land.	03
	(b)	Explain the role of tone/color in visual image interpretation.	04
	(c)	Briefly explain remote sensing process.	07
Q.7	(a)	What is GIS?	03
	(b)	Explain role of remote sensing to monitor land –use changes	04
	(c)	Explain the key components of GIS.	07
Q.8	(a)	GIS as a science and technology. Justify.	03
	(b)	What are the applications of GIS?	04
	(c)	Explain the application of remote sensing in hydrological science.	07

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