U.S.N.										

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

July 2023 Semester End Main Examinations

Programme: B.E.   Semester: VI
Branch: Civil Engineering   Duration: 3 hrs.
Course Code: 20CV6PEGSS   Max Marks: 100
Course: Geospatial Surveying   Date: 19.07.2023

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

<div style="writing-mode: vertical-lr">**Important Note:** Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.</div>

			UNIT - I	CO	PO	Marks
1	a)		Illustrate Electro-Magnetic Radiation (EMR) Spectrum. Explain various regions of the EMR spectrum available for remote sensing and their applications.	CO1	PO1	**10**
	b)		Differentiate between an ideal and a real remote sensing system.	CO1	PO1	**10**
			OR			
2	a)		Describe various sensor resolutions with reference to remote sensing.	CO1	PO1	**10**
	b)		Classify remote sensing based on the platform, type of energy, wavelength regions used and the number of bands.	CO1	PO1	**10**
			UNIT - II			
3	a)		Explain the importance of geometric and atmospheric corrections in digital image processing. List various atmospheric corrections commonly applied in satellite image processing.	CO2	PO1	**10**
	b)		Explain the term contrast enhancement with reference to digital image processing. Illustrate any two methods of contrast enhancement.	CO2	PO1	**10**
			UNIT - III			
4	a)		Differentiate between supervised classification and unsupervised classification, stating their advantages and drawbacks.	CO2	PO1	**10**
	b)		Define the following terms:- i) NDVI ii) Band ratio iii) User accuracy iv) Producer accuracy v) Overall accuracy	CO2	PO1	**10**

			UNIT - IV			
5	a)		Discuss the functional capabilities of GIS.	*CO3*	*PO1*	**10**
	b)		Compare raster and vector data models. Discuss their advantages and drawbacks.	*CO3*	*PO1*	**10**
			UNIT - V			
6	a)		Explain various types of vector data queries possible in GIS.	*CO3*	*PO1*	**06**
	b)		Discuss buffering operations and its importance in GIS analysis.	*CO3*	*PO1*	**06**
	c)		Compare cylindrical, conical and azimuth projections for maps.	*CO3*	*PO1*	**08**

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