U.S.N.										

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

Autonomous Institute Affiliated to VTU

August 2024 Supplementary Examinations

Programme: B.E. **Semester: VI**
Branch: Civil Engineering **Duration: 3 hrs.**
Course Code: 20CV6PEGSS **Max Marks: 100**
Course: Geo Spatial Surveying

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

UNIT - I

1	a)	Illustrate Electro-Magnetic Radiation (EMR) Spectrum. Explain various regions of the EMR spectrum available for remote sensing and their applications.	**10**
	b)	Explain with a neat sketch the interaction of electromagnetic radiation on Earth's surface.	**10**

OR

2	a)	Classify and explain different types of remote sensing based on platforms and sensors.	**12**
	b)	Discuss the characteristics of Indian Remote Sensing Satellites based on resolutions and orbital period.	**08**

UNIT - II

3	a)	Explain the process of geometric corrections for image rectification.	**10**
	b)	Explain the use of contrast enhancement in image processing. Differentiate between maximum-minimum linear contrast stretching and histogram equalization methods of image enhancement.	**10**

UNIT - III

4	a)	Explain the different types of digital image classification techniques in remote sensing	**10**
	b)	Define the following terms:- i) Vegetation indices ii) Band ratio iii) User accuracy iv) Producer accuracy v) Overall accuracy	**10**

UNIT - IV

5	a)	Explain the components of GIS and the role of each one of them.	**06**
	b)	List the advantages and disadvantages of raster and vector data models used in GIS.	**08**

	c)	Explain the structure and advantages of network data model in GIS	**06**

UNIT - V

6	a)	Explain the different types of maps with appropriate examples.	**06**
	b)	Differentiate between raster and vector overaly operations.	**06**
	c)	Differentiate between UTM projection and Geographic Coordinate Systems.	**08**

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