

Code: 20CE4701C

**IV B.Tech - I Semester – Regular / Supplementary Examinations
OCTOBER 2024****REMOTE SENSING AND GEOGRAPHIC
INFORMATION SYSTEMS
(CIVIL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.

2. All parts of Question must be answered in one place.

BL – Blooms Level

CO – Course Outcome

			BL	CO	Max. Marks
UNIT-I					
1	a)	Explain with neat sketches the components of Remote Sensing systems.	L1	CO2	10 M
	b)	List the advantages and Disadvantages of Remote Sensing.	L1	CO2	4 M
OR					
2	a)	Explain the interaction of Electromagnetic energy with earth surface features in terms of reflected transmitted and absorbed energy.	L1	CO2	10 M
	b)	Enumerate the Remote Sensing applications in various fields.	L1	CO2	4 M

UNIT-II					
3	a)	Write detailed notes on Spatial and Non-Spatial data.	L2	CO2	7 M
	b)	Explain the basic components of GIS.	L2	CO2	7 M
OR					
4	a)	What are the different types of attribute? Explain in detail.	L2	CO3	10 M
	b)	What are the various raster overlay operations used in GIS.	L2	CO3	4 M
UNIT-III					
5	Define briefly the following terms: i) Image restoration, ii) Compression, iii) Segmentation, iv) Image Enhancement		L3	CO2	14 M
OR					
6	a)	Explain the difference between Supervised and Unsupervised classification in GIS image processing?	L3	CO2	10 M
	b)	Discuss the role of digital image processing in GIS applications?	L3	CO2	4 M
UNIT-IV					
7	a)	Write the difference between the Raster and Vector data Model.	L4	CO2	7 M
	b)	Explain the concept of buffering in GIS. How is buffering used to analyze spatial relationships in GIS datasets?	L4	CO3	7 M

OR							
8	Define raster GIS and its fundamental characteristics. Provide the examples of real-world applications where raster data is essential.			L4	CO2	14 M	
UNIT-V							
9	Develop a case study of GIS application in the field of traffic management.			L5	CO6	14 M	
OR							
10	a)	Using a flow chart, discuss how GIS can be used to monitor the Land uses and Land cover (LULC) changes in urban areas.			L5	CO3	10 M
	b)	What role do base maps play in supporting urban planning and development decisions?			L5	CO4	4 M