



Fifth Semester B.E./B.Tech. Degree Examination, June/July 2025

## Remote Sensing and GIS

Time

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.*

*2. M : Marks , L: Bloom's level , C: Course outcomes.*

Module – 1			M	L	C
Q.1	a.	Define Remote Sensing? Explain the components and working principle of Remote sensing with a neat sketch.	10	L1	CO1
	b.	Briefly discuss the key elements of visual interpretation.	10	L1	CO1
<b>OR</b>					
Q.2	a.	What is Spectral Reflectance curve? Indicate the spectral reflectances for water, soil and green leaves explaining its significance.	10	L2	CO2
	b.	With a neat diagram discuss electromagnetic spectrum. Explain atmospheric windows and their significance in Remote sensing.	10	L2	CO2
<b>Module – 2</b>					
Q.3	a.	What is photogrammetry? List the different types of photogrammetry with an example each with reference to civil engineering.	10	L1	CO1
	b.	Compare advantages of aerial photogrammetry over traditional ground surveying techniques.	10	L1	CO1
<b>OR</b>					
Q.4	a.	Discuss the applications of photogrammetry in civil engineering projects.	10	L2	CO2
	b.	What is flight planning in photogrammetry? Describe the key elements involved in flight planning.	10	L2	CO2
<b>Module – 3</b>					
Q.5	a.	What are the major functions of a Geographic Information System (GIS) and how these functions are helpful in decision making process? Give examples to justify your answer.	10	L3	CO3
	b.	What are the advantages of GIS (Geographic Information System). Explain with real world applications.	10	L3	CO3
<b>OR</b>					
Q.6	a.	What is Spatial Data Analysis? With examples explain overlay analysis and network analysis.	10	L3	CO3
	b.	Explain how outputs are generated in GIS and discuss about map outputs and its advantages.	10	L2	CO2

**Module – 4**

Q.7	Explain how GIS, Remote sensing and GPS technologies can be used to prioritize river basin for watershed management in a drought prone region. Describe the data collection, spatial analysis and GIS integration processes involved in this.	20	L3	CO3
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**OR**

Q.8	A city is experiencing increased traffic congestion and accidents along its main routes. As a transportation planner outline how using GIS, Remote sensing and GPS techniques to analyze and optimize the routes/transportation network in the city.	20	L3	CO3
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**Module – 5**

Q.9	Explain how GIS, Remote sensing and GPS techniques help in mapping forest fire extent by highlighting the usage of these techniques in disaster response.	20	L3	CO3
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**OR**

Q.10	Outline the approach to plan for sustainable urban growth using GIS, GPS and RS. Use and list the data required (spatial) land use analysis and traffic management techniques.	20	L3	CO4
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