Code No: R203101B **R20** SET - 1

III B. Tech I Semester Regular/Supplementary Examinations, December – 2023

REMOTE SENSING AND GIS

(Common to CE, MIN)

Time: 3 hours Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**

All Questions Carry Equal Marks

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UNIT-I

1.	a)	Give explanation about various types of sensors based on i) Energy source ii) Orbit iii) Data capture	[7M]
	b)	Explain in detail about electromagnetic spectrum.	[7M]
		(OR)	
2.	a)	Briefly discuss about IRS and LANDSAT.	[7M]
	b)	Explain in detail about the concept of resolution and discuss in detail spatial and radiometric resolutions.	[7M]

UNIT-II

3.	a)	Explain about different spatial filtering techniques applied in image processing?	[7M]
	b)	Differentiate between supervised learning and unsupervised learning?	[7M]
		(OR)	
4.	a)	Write about the various elements of visual interpretations in image analysis.	[7M]
	b)	Explain the following image enhancement techniques i) image reduction & magnification ii) contrast enhancement	[7M]

UNIT-III

5.	a)	What are the advantages and disadvantages of raster model?	[7M]
	b)	What are the various major application areas of GIS?	[7M]
		(OR)	
6.	a)	Mention any four applications of GIS in detail.	[7M]
	b)	What do you understand by data entry and data preparation in GIS elaborate in detail.	[7M]

UNIT-IV

7.	a)	Write about conditional expressions in spatial data analysis.	[7M]
	b)	Differentiate between network allocation and network tracing.	[7M]
		(OR)	
8.	a)	Differentiate between vector and raster overlay operation.	[7M]
	b)	Explain in detail about arithmetic and logical operation.	[7M]

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UNIT-V

9.	a)	What is the methodology that can be adopted for flood forecasting?	[7M]
	b)	Write the applications of remote sensing in transportation?	[7M]
		(OR)	
10.	a)	Explain in detail about RS applications in groundwater potential recharge zones.	[7M]
	b)	Discuss how GIS is useful in watershed management	[7M]

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