Code No:**R1641014** **R16** **Set No. 1**

IV B.Tech I Semester Supplementary Examinations, February- 2020

REMOTE SENSING AND GIS APPLICATIONS

(Civil Engineering)

Time: 3 hours **Max. Marks: 70**

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any FOUR questions from Part-B
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PART–A *(14 Marks)*

1.	a)	Differentiate between Active and Passive Remote Sensing.	[2]
	b)	What is Digital Image Processing?	[3]
	c)	What is Ground Control Point(GCP)?	[3]
	d)	What is Non-Spatial data & give examples?	[2]
	e)	How Remote Sending and GIS is used in Agriculture?	[2]
	f)	What are the phases of Disaster management cycle?	[2]

PART–B *(4x14 = 56 Marks)*

2.	a)	Explain the Energy Balance Equation of the Electromagnetic Radiation in terms of Reflectance, Absorbance and Transmittance.	[7]
	b)	Explain LANDSAT-8 Satellite sensors with its Specifications.	[7]
3.	a)	What is an Image Interpretation and Explain the Visual Image Interpretation elements to identify the Water Bodies in a Satellite image.	[7]
	b)	What is Training Site? Explain different algorithms to perform Supervised Classification.	[7]
4.	a)	What is Map Projection? Explain the types of distortions occurred in the process of Map projection.	[7]
	b)	Why do we need Digitization? Explain the Heads-Up Digitization Process.	[7]
5.	a)	Explain the process of Shortest Path Finding in Network analysis.	[7]
	b)	What is Spatial analysis? Explain the types of Vector data overlay operations.	[7]
6.		What is the methodology that can be adopted for Urban planning using Remote Sensing and GIS?	[14]
7.		Explain the application of Remote Sensing for flood mapping with a case study.	[14]

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