Code No: **R41014** **R10** **Set No. 1**

IV B.Tech I Semester Supplementary Examinations, February/March - 2018

REMOTE SENSING AND GIS APPLICATIONS

(Civil Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
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1	a)	Define Remote Sensing and explain components with sketch.	[8]
	b)	What is spectral signature? Explain spectral signature curves with reference to water, soil and vegetation?	[7]
2	a)	Write the classification of sensors based on energy sources, bands and wavelength in remote sensing.	[8]
	b)	Define the term resolution. Explain types of resolutions with Examples.	[7]
3	a)	What is Digital Number in satellite image? Write about image enhancement techniques in digital image processing	[8]
	b)	Write a brief note on radiometric corrections and geometric corrections in image pre-processing.	[7]
4	a)	What is cylindrical projection and explain the distortions occurred in process of map projection?	[8]
	b)	How do you take decisions using GIS in Civil Engineering Applications?	[7]
5	a)	What are the different types compressing methods of raster data and explain?	[8]
	b)	Explain spatial data and non-spatial data with examples and list out the input devices for spatial data.	[7]
6	a)	What is network analysis and explain different methods involved in network analysis?	[8]
	b)	With neat sketches and examples explain algorithm used for point- in polygon overlaying and Line –in-line overlaying.	[7]
7		What are the applications of Digital Elevation Model (DEM) in surveying and geomorphology	[15]
8		Explain the methodology for assessing crop damage due to flood using remote sensing and GIS.	[15]