M.E. Fourth Semester (Civil (Environmental Engineering)) (CBS)

13412 : Elective : Remote Sensing and GIS in Environmental Engineering

4 SCEE 3

P. Pages : 1

Time : Three Hours

AW - 3673

Max. Marks : 80

Notes : 1. All question carry equal marks.
2. Answer **Three** question from Section A and **Three** question from Section B.
3. Due credit will be given to neatness and adequate dimensions.
4. Assume suitable data wherever necessary.

SECTION – A

1.	a)	Write principal and basic concept of remote sensing.	6
	b)	What is GIS? What are the various steps involved in GIS analysis Explain with diagram.	7
2.	a)	Write a short note on electromagnetic spectrum.	7
	b)	Explain in details "Spectrum signature".	7
3.	a)	Explain the electromagnetic remote sensing process.	6
	b)	Write the different resolutions of all the sensors of any Indian remote sensing satellite.	7
4.	a)	Explain in details spectral signature curve.	7
	b)	Differentiate between Histogram and scatter plot with respect to their use.	6
5.		Why image registration is necessary for digital analysis? Explain in details the various steps and procedure involved in supervised certificate.	13

SECTION – B

6.		What is GIS? What are various steps involved in GIS analysis? Explain with diagram.	13
7.	a)	Write short note on Digital data format and RS data.	7
	b)	How integrated approach of RS and GIS employed for watershed management and land use/land cover studies?	7
8.		Differentiate between raster and vector data. Describe data management and analysis procedure in GIS.	13
9.	a)	Outline the digital image processing techniques.	6
	b)	Explain the methods of monitoring of floods and droughts.	7
10.		Explain the classification of satellites and discuss Indian remote sensing satellites.	13

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