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MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

II SEMESTER M.TECH. (ENVIRONMENTAL ENGINEERING)

END SEMESTER EXAMINATIONS, MAY/JUNE-2019

SUBJECT: REMOTE SENSING AND GIS IN ENVIRONMENTAL ENGINEERING [CIE- 5248]

REVISED CREDIT SYSTEM

(29-04- 2019)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer ALL the questions.
- ❖ Missing data may be suitable assumed.

1A.	Define 'Spectral Reflectance' and 'Spectral Signature'. Discuss the significance of these in Remote Sensing(RS). Explain spectral reflectance curves for vegetation and water with sketches.	04	CO1
1B.	Write an explanatory note on scattering and its types. What are the adverse effects of scattering?	03	CO1
1C.	Give an account of Multi Spectral Scanning (MSS) with different types.	03	CO1
2A.	What is image interpretation? What are the different types? Give a comparative study of these different types.	06	CO2
2B.	Explain contrast manipulation. What is the purpose of this operation? Discuss the different types of contrast manipulation.	04	CO3
3A.	What is supervised classification? How is it different from unsupervised classification? Discuss the different stages of supervised classification.	06	CO3
3B.	Give a descriptive note of Ground Truth Analysis.	04	CO3
4A.	Discuss the different data sources in Geographic Information System(GIS). Explain how GIS is different from other databases.	06	CO4
4B.	Explain the spatial data types and formats.	04	CO4
5A.	Explain the application of Remote Sensing and GIS in disaster management with a case study.	06	CO5
5B.	Write short note on the followings. a) Advantages of vector geo-processing. b) Overlay Analysis	04	CO5