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MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
A Constituent Institution of Manipal University

II SEMESTER M.TECH. (ENVIRONMENTAL ENGINEERING)

END SEMESTER EXAMINATIONS, MAY/JUNE-2017

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

**REVISED CREDIT SYSTEM
(25-04-2017)**

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer ALL the questions.
- ❖ Missing data may be suitable assumed.
- ❖ Draw the explanatory sketches wherever required.

1A.	What are the various processes involved in satellite remote sensing? Explain.	05
1B.	What do you mean by 'Resolution'? What are the different types of resolutions? Explain.	05
2A.	Explain: i) Spectral Signature ii) Multi Spectral Scanning	2.5×2 =5
2B.	Bring out the advantages and disadvantages of Visual and Digital interpretation processes.	05
3A.	Define 'Digital Image Processing (DIP)'. Explain the steps in DIP.	05
3B.	Explain the steps in 'Supervised Classification'. Compare Supervised Classification with Unsupervised Classifications.	05
4A.	Explain how GIS data formats differ from other data formats.	05
4B.	Compare vector and Raster data formats.	05
5A.	Explain the application of remote sensing and GIS techniques in water quality management	05
5B.	Write short note on the followings. i. Principal Component Analysis ii. Raster data advantages	2.5×2 =5