Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)

III SEMESTER M.TECH (ENVIRONMENTAL ENGINEERING)

END SEMESTER EXAMINATIONS, MAY /JUNE 2016

SUBJECT: REMOTE SENSING AND GIS IN ENVIRONMENTAL ENGINEERING

[CIE 572]

REVISED CREDIT SYSTEM

Time: 3 Hours   MAX. MARKS: 50

Instructions to Candidates:

- ❖ *Answer any 5 questions.*
- ❖ Missing data may be suitable assumed.
- ❖ Draw explanatory neat sketches wherever required.

1A.	What is Spectral Signature? How is it measured? Explain its significance in remote sensing activities.	**05**
1B.	Compare Visual and Digital interpretation. Why both are mutually exclusive?	**05**
2A.	Explain with a neat sketch Atmospheric Window. Which are the atmospheric windows generally considered _in remote sensing activity?	**05**
2B.	What is 'Resolution'? Explain the different types of resolutions.	**05**
3A.	Discuss the different remote sensing platforms and orbits	**05**
3B.	Write short notes on: i) Visual Image Interpretation strategies. ii) Linear Histogram Stretching	**05**
4A.	Explain in detail the stages of Geometric Correction and Image Registration in Digital Image Processing.	**05**
4B.	Discuss the characteristics and stages of 'Unsupervised Classifications'.	**05**
5A.	Explain how GIS data formats differ from other data formats.	**05**
5B.	Discuss the role and applications of remote sensing and GIS techniques in air quality management	**05**

6.	Write short note on the followings.
	   i. Spatial Filtering
	   ii. Applications of GIS
	   iii. Spatial data types in GIS.
	   iv. Triangulated Irregular Network (TIN) model
		10