Reg. No.										

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
(17-06-2017)

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.	Explain 'Atmospheric Window' with a neat sketch. Discuss its significance in remote sensing.	05
1B.	Define scattering. Explain the different types. How scattering affects satellite remote sensing activity?	05
2A.	Explain the different processes that may occur during the interaction of Electro Magnetic Radiation with the targets.	5
2B.	What are the different strategies adopted in Visual Image Processing? Discuss in detail.	05
3A.	What is Contrast Stretching? What are the different types of Contrast Stretching? Explain any two in detail.	05
3B.	Give a detailed account of Raster data characteristics.	05
4A.	Explain the advantages and disadvantages of Raster Geoprocessing.	05
4B.	What is 'Vector Topology'? Explain Vector Topology Model.	05
5A.	Explain the air quality modeling by using Remote Sensing and GIS with a case study.	05
5B.	Write short notes on the followings. i. Normalized Density Vegetation Index (NDVI) ii. Ground Truth Verification	2.5×2 =5