Paper Code: ENV-24A	**Roll No.**									

M.Tech.
(SEM II) EVEN SEMESTER EXAMINATION, 2015-16
ENVIRONMENTAL REMOTE SENSING

[Time: 3 hrs.] **[Max. Marks: 100]**

Note- ***Attempt All Questions. All Questions carry equal marks*:-**

1. Attempt any **TWO** parts of the following:- **[10x2=20]**

   (a) Discuss various processes involved in remote sensing.
   (b) Discuss various processes that occur when electromagnetic energy interacts with the earth atmosphere and the earth surface features.
   (c) Discuss about the spectral, spatial, radiometric and temporal resolution of a satellite sensor.

2. Attempt any **TWO** parts of the following:- **[10x2=20]**

   (a) Discuss in brief about: Geometric correction, Contrast stretching, and spatial filtering.
   (b) Discuss in detail about the Indian Remote sensing satellite program.
   (c) Compare characteristics of an Ideal and Real remote sensing system and determine the wavelength at which maximum radiant existence occur from Sun and Earth.

3. Attempt any **TWO** parts of the following:- **[10x2=20]**

   (a) What is spectral reflectance curve? Discuss spectral reflectance curve of vegetation, water and soil.
   (b) Use the spectral reflectance curves to differentiate between deciduous and the coniferous trees.
   (c) Discuss about the sun synchronous orbit and the atmospheric windows.

4. Attempt any **TWO** parts of the following:- **[10x2=20]**

   (a) Discuss about Supervised methods of image classification.
   (b) Describe Global Positioning System (GPS). Discuss application of GPS for environmental studies?
   (c) Define GIS (Geographical Information System) and its various components. Also, describe various applications of GIS.

5. Attempt any **TWO** parts of the following:- **[10x2=20]**

   (a) Describe the application of Remote Sensing for Environmental Studies.
   (b) Discuss about application of Remote Sensing for Land-use/ Land-cover analysis.
   (c) Describe in detail application of Remote Sensing for Flood zoning and Damage estimation.