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B.E. / B.Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2011

GEOINFORMATICS ENGINEERING BRANCH

SIXTH SEMESTER – (REGULATIONS 2008)

**GI 9151 Remote sensing**

Time : 3 hr

Max Marks : 100

Answer ALL Questions

Part – A (10 x 2 = 20 Mark)

1. Define Remote Sensing.
2. Calculate the wavelength of a quantum of radiation whose photon energy is  $2.10 \times 10^{-19}$  Joules; use  $3 \times 10^8$  m/sec as the speed of light
3. What is Rayleigh scattering?
4. What is Atmospheric window?
5. Differentiate specular reflectors from diffuse reflectors.
6. What is the use of spectroradiometer in remote sensing?
7. Write the importance of S/N ratio.
8. What is LIDAR?
9. Who is the authorized dealer for remote sensing data in India?
10. List the basic characteristics of image elements.

Part – B (5 x 16 = 80 Mark)

11. i) Explain the components of Remote sensing with sketch. (10)  
ii) Write about Electromagnetic spectrum with sketch. (6)
12. a. Explain the main atmospheric regions and its characteristics. (16)  
OR  
b. Discuss the atmospheric effects on visible, infrared, thermal and microwave spectrum (16)
13. a. Describe about energy balance equation and Spectral signature concepts. (16)  
OR  
b. Discuss the typical spectral reflectance curve for vegetation, soil and water body. (16)
14. a. Explain the various imaging platforms system with examples. (16)  
(OR)  
b. Discuss about along track and across track scanners and their merits. (16)
15. a. i) Write the procedure to order remote sensing data (8)  
ii) Write the types of data products based processing levels. (8)  
(OR)  
b. Explain the visual interpretation keys for landuse level 1 class. (16)