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B. E / B. Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS APRIL / MAY 2014
AGRICULTURAL AND IRRIGATION ENGINEERING
FIFTH SEMESTER – (REGULATION 2008)

AI9303 - REMOTE SENSING

TIME: 3 Hr Max Mark: 100

Answer ALL Questions
Part A (10 x 2 = 20 MARKS)

1. Which form of energy transfer in suitable for remote sensing and why?
2. What is meant by atmospheric window?
3. Differentiate Push broom and Whisk broom sensors
4. Define Spectral Resolution.
5. How do you classify the data products based on level of processing?
6. How selective key is different from elimination key for visual image interpretation?
7. Define Histogram
8. List the various indices and define NDWI
9. Draw the spectral reflectance curve for soil
10. What are BSQ, BIP and BIL?

Part B (5 x 16 = 80 MARKS)

11. a.i Draw the spectral reflectance curves for water, vegetation and soil and illustrate the behavior of the same (16)

12 a.i Differentiate Sun Synchronous and Geo Synchronous satellites. (4)

a.ii Explain in detail the significance of various resolutions in the satellites (12)

OR

b.i Explain in detail, the process of passive microwave and active microwave remote sensing. (16)

13 a.i A hardcopy map from LISS III sensor is available in 1:50,000 scale. It is required to get detailed information from this map. How to interpret the information from this map. (16)

OR

b.i Classify the data products from satellites based on level of processing and data formats (16)

14 a.i Explain non-linear contrast enhancement of the digital image (16)

OR

b.i Explain the methodology adopted in supervised classification of a digital image to categorize the pixels into land cover classes. (16)

15 a.i Discuss the techniques adopted in Reservoir sedimentation estimation using digital image processing (16)

OR

b.i Explain any methodology adopted for Evapotranspiration estimation using remote sensing images (16)