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B.E DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY 2013

AGRICULTURAL AND IRRIGATION ENGINEERING BRANCH

FIFTH SEMESTER

AI 9303 REMOTE SENSING

(REGULATIONS 2008)

Time : 3 Hours

Max. Marks : 100

(Answer All Questions)

Part – A (10 x 2 = 20 Marks)

1. Sketch the Electromagnetic spectrum.
2. What is meant by atmospheric windows?
3. Differentiate image and photograph
4. Highlight the significance of Temporal Resolution to Agriculture
5. Define Image Interpretation.
6. How will you identify visually the cropland using Imageries?
7. What do you understand by De-striping?
8. What is the use of soil adjusted vegetation index?
9. Which are the data obtained through remote sensing for Irrigation Scheduling?
10. How will you interpret the quality of water using Imageries?

Part – B (5 x 16 = 80 Marks)

11. (i) Explain briefly about the interaction of EMR with atmosphere. (8)
(ii) Discuss the spectral reflectance characteristics of vegetation and soil. (8)
- 12(a) (i) Classify remote sensing based on Platforms and Energy sources. (8)
(ii) Explain about geosynchronous and sun synchronous orbits (8)

(OR)

- 12(b) (i) Highlight the characteristics and advantages of microwave remote sensing? (4)
(ii) Briefly discuss about the IRS satellite system (12)

- 13(a) (i) Classify the data products based on level of processing, output media and scale (10)
(ii) Write short notes on data format of digital image (6)

(OR)

- 13(b)(i) Explain about the various elements of Visual image interpretation with examples (12)
(ii) Compare the advantages and limitations of Visual and Digital image processing (4)

- 14(a)(i) Discuss the spatial filters used for highlighting features of varying frequency. (10)
(ii) Briefly explain about any two nonlinear contrast enhancements. (6)

(OR)

- 14(b)(i) Differentiate supervised and unsupervised classification. (4)
(ii) Explain in detail about the supervised classification (12)

- 15 (a) Explain the application of remote sensing for crop condition and Acreage assessment.

(OR)

- 15 (b) How will you carry out soil mapping and problem soil identification using RS data?