B.E. / B.Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2011

AGRICULTURAL AND IRRIGATION ENGINEERING

FIFTH SEMESTER – (REGULATIONS 2004)

<u>**AI 374 REMOTE SENSING**</u>

Time: 3 hr   Max Mark : 100

<u>Answer ALL Questions</u>

<u>Part – A (10 x 2 = 20 Marks)</u>

1. Define Stefan-Boltzmann law ?

2. What is Rayleigh Scattering?

3. What is Spatial and Spectral Resolution?

4. What is the significance of Atmospheric Windows?

5. What do you mean by the term Quick look data?

6. List the types of data products based on processing?

7. What is the use of High pass filter?

8. What is the use of Principal Components?

9. What is the significance of Microwave region?

10. How will you assess the soil erosion?

<u>Part – B (5 x 16 = 80 Mark)</u>

11. a. (i) Explain about the Energy Interactions in the Atmosphere? (8)

    (ii) Discuss about the different components of Remote Sensing?(8)

12. a. (i) Explain about the IRS satellite mission? (8)

    (ii) Explain about the various platforms used for remote sensing (8)

                                    OR

    b. (i) Discuss about two Microwave Remote Sensing satellites in detail? (8)

    (ii) Explain about the two Meteorological Satellites and Sensors ? (8)

13. a. (i) Discuss in detail the keys used for image interpretation with suitable example?

                                                                        (16)

                                    OR

    b. (i) Explain in detail about the various Remote Sensing data products available ?
       (16)

14. a. (i) Discuss about the Supervised and Unsupervised classification methods?(16)

OR

b. (i) Write about the various image enhancement techniques used for Image Processing ? (16)

15. a. (i) Explain in detail how Remote Sensing data could be used for Crop condition Assessment studies? (16)

OR

b. (i) Explain in detail how Remote Sensing could be suitable for the Soil sedimentation and Soil los assessment studies? (16)