

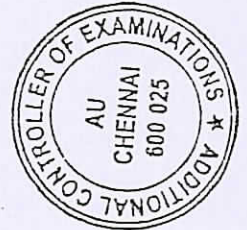
B. E / B.TECH (FT) DEGREE END SEMESTER EXAMINATIONS – APRIL / MAY 2019  
 AGRICULTURAL AND IRRIGATION ENGINEERING  
 FIFTH SEMESTER  
 AI8504 REMOTE SENSING AND GEOGRAPHICAL INFORMATION SYSTEM  
 (REGULATION 2012)

TIME: 3 Hr

Max Mark: 100

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

1. Define the term remote sensing
2. What is meant by Rayleigh scattering?
3. Differentiate selection key and elimination key in visual image interpretation
4. What is the difference between NDVI and EVI?
5. List any five file extensions for raster and vector data
6. How a global datum is different from Local Datum. Give examples.
7. What is meant by proximity analysis in GIS? List four examples.
8. What are the tools used in GIS for deriving a spatial average of rainfall depth?
9. What is Choropleth map?
10. Define sliver polygons



**Part B (5 x 16 = 80 MARKS)**

11. a. (i) Describe the interactions that an EMR will face when it is travelling from Sun in atmosphere and the earth surface features before it is being captured by the sensors

12. a. (i) Explain the significance of resolutions of sensors and platforms in optical remote sensing

(OR)

12. b. (i) Write notes on image enhancement and color compositing (8)  
 (ii) Discuss briefly on contrast stretching methods (8)

13. a. (i) Explain the salient features of curvilinear and rectangular coordinate systems (8)

(ii) Write notes of shape of earth, size of earth and datum (8)

(OR)

13. b. (i) Explain in detail the procedures adopted to input a map and to create various thematic maps in GIS.

14. a. (i) Describe the various GIS data query that can be performed on raster and vector data

(OR)

14. b. (i). Discuss the various methods of interpolation in GIS

15. a. (i) Describe how remote sensing and GIS can be used to map the flood vulnerability zones in an urban area

(OR)

15. b. (i) Explain how RS and GIS can be applied in identifying crops and estimating spatial evapotranspiration need of crops in command area of an irrigation system