

16P219

(Pages: 2)

Name.....

Reg. No.....

**SECOND SEMESTER M.Sc. DEGREE EXAMINATION, MAY-2017**

(Regular/Supplementary/Improvement)

(CUCSS - PG)

**CC 15P ES2 C09 - GIS, REMOTE SENSING, SYSTEM ANALYSIS AND MODELING**

(Environmental Science)

(2015 Admission Onwards)

Time: Three Hours

Maximum: 36 Weightage

I. Answer **all** questions. Each question carries 1 weightage.

1. NDVI
2. Georeferencing.
3. Sun Synchronous Satellites.
4. Edge Matching.
5. DEM
6. EMR
7. Radiometric Resolution.
8. Thermal Imagers.
9. Vector and Raster Data.
10. Free and Open software in GIS
11. Differentiate linear and non-linear regression equations.
12. Fuzzy logic.
13. Evolutionary algorithms.
14. Differentiate Open and Cybernetic systems.

(14 x 1 = 14 weightage)

II. Answer **any seven** questions. Each question carries 2 weightage

15. Define image classification. Discuss different types of image classification.
16. Discuss the advantages and disadvantages of active and passive remote sensing
17. Differentiate Push Broom and Whisk Broom Scanners.
18. Explain the different components of GIS.
19. Explain Gaussian Plume Model.
20. Write a short note on mosaics and subsets.

21. Write an essay on ecosystem model analysis.
22. Write a short note on time series models.
23. Write a short note on Indian imaging systems and their applications.
24. Explain the application of remote sensing in early warnings of natural hazards.

(7 x 2 = 14 weightage)

III. Write an essay on *any two* of the following. Each question carries 4 weightage

25. Define DIP. Explain the techniques adopted for image rectification and restoration.
26. Give an account on the characteristics and applications of LANDSAT and SPOT satellites.
27. Describe in detail the basic principles and applications of GIS in environmental studies.
28. Write an essay on air and water quality modelling methods.

(2 x 4 = 8 weightage)

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