

15P219

(Pages: 2)

Name.....

Reg. No.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, JULY 2016

(CUCSS - PG)

(Environmental Science)

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

(2015 Admission)

Time: Three Hours

Maximum: 36 Weightage

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

1. Vegetation Indices.
2. Topology.
3. Geostationary Satellites.
4. TIN
5. Atmospheric Windows.
6. MSS
7. Spectral Resolution.
8. SPOT
9. Vector and Raster data.
10. Genetic algorithms.
11. Stereophotographs.
12. Cybernetic systems.
13. Time series analysis.
14. Artificial neural networks.

(14 x 1 = 14 weightage)

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

15. Define geometric distortions. Explain in detail the geometric correction process.
16. Briefly explain the main elements of remote sensing.
17. What is thermal imaging? Discuss its application in environmental studies.
18. Write a brief note on applications of fuzzy logic in environmental studies.
19. Explain the application of GIS in Disaster Management.
20. Differentiate linear and non-linear models.
21. Comment on statistical regression approach in ecosystem analysis and forecasting.
22. Explain the application of remote sensing in water resource studies.
23. Comment on free and open software in GIS application.
24. Write a note on principal component analysis.

(7 x 2 = 14 weightage)

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

25. Give an account on the characteristics and applications of Indian remote sensing satellites.
26. Describe in detail the basic principles and applications of GIS in environmental studies.
27. Define DIP. Explain the techniques adopted for image classification.
28. Comment on the scope of system analysis and modelling in environmental studies.

(2 x 4 = 8 weightage)
