

18P225

(Pages: 2)

Name:.....

Reg. No:.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2019

(Regular/Improvement/Supplementary)

(CUCSS - PG)

CC15P 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. What is a spectral reflectance curve?
2. Distinguish between passive and active remote sensing.
3. What is meant by attribute data?
4. What is IDRISI ENVI?
5. Explain RADARSAT
6. What is a Web GIS?
7. Comment on TIN
8. What is principal component analysis?
9. What are the various types of queries used in GIS?
10. Explain Buffering analysis in GIS.
11. How remote sensing is useful for cryogenic studies?
12. What is a linear model?
13. What is simulation?
14. Comment on fuzzy logic.

(14 x 1 = 14 Weightage)

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

15. Discuss the energy interaction in the atmosphere.
16. Application of Remote Sensing and GIS in Ocean studies.
17. How LANDSAT is useful in solving environmental problems?
18. Give an account of Raster Data and its analysis.
19. Comment on terrain analysis and fly simulation.
20. Discuss time series analysis.
21. Differentiate between open and cybernetic systems.
22. Write notes on different watershed models.
23. Comment on non-linear models and non-linear forecasting.
24. Give an account of Lotka-volga model and ANN computation techniques.

(7 x 2 = 14 Weightage)

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

25. Write an essay on application of Remote Sensing and GIS in early warnings of landslide and land subsidence.
26. a. Discuss how digital elevation models are developed using GIS technology.
b. Give an account of the different pre-processing techniques used in digital image processing.
27. Enumerate the various softwares used in RS and GIS to solve groundwater exploration, rainwater harvesting and biomass analysis.
28. Briefly discuss the various models used in the ecosystem analysis, synthesis and forecasting.

(2 x 4 = 8 Weightage)
