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Name :

Reg. No:.....

**THIRD SEMESTER M.Sc DEGREE EXAMINATION DECEMBER 2015
(CUCSS)**

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**Environmental Science
ES 3C 15 BIostatistics, Quantitative Methods of Eco-Informatics
(2014 Admission)**

Time : Three Hours

Maximum : 36 Weightage

Part I

Short Answers (Answer all 14 questions)

14X1 = 14 weightage

1. What is a simple linear regression?
2. Define median.
3. What are the characteristics of Poisson distribution?
4. What are random variables?
5. What is scatter diagram?
6. What is LAN?
7. What are the merits of mode?
8. Define Eco-informatics.
9. What is hypothesis testing?
10. What are the softwares for data analyses?
11. Define harmonic mean.
12. Distinguish linear and non-linear correlation.
13. Define probability. What are the types of probability?
14. What is CCA?

Part II

Short essays (Answer any seven of the following)

7X2 = 14 weightage

15. Write an account on the types of correlations.
16. Describe the characteristics of regression models.
17. Explain the laws of probability.
18. Describe the input and output devices.
19. Explain the post-closure environmental monitoring of landfills.
20. Describe the use of softwares in drawing graphs.
21. Explain frequency distribution.
22. Explain one-way and two-way ANOVA.
23. What are the advantages of SPSS in ecological studies?
24. Discuss the importance of mathematical models in eco-informatics.

Part III

Essay type (Answer any two questions)

2X4 = 8 weightage

25. What is multivariate statistical analysis? Explain PCA and Cluster analysis.
26. Discuss the application of Eco-informatics in natural resource management and wildlife conservation.
27. What is data distribution? Discuss the different types of distributions.
28. Differentiate correlation and regression. Discuss on the different types and their applications in ecological data interpretation.