

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1709 L

Unique Paper Code : 2182014801

Name of the Paper : Environmental Statistics

Name of the Course : **B.Sc. Environmental
Sciences**

Semester : VIII

Duration : 2 Hours Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Answer any **four** questions.
3. **All** questions carry equal marks.

1. (a) Define the following terms: covariance, correlation, regression, time series, spatial data. (2×5=10)
(b) Explain how sampling design influences the reliability of environmental datasets. (5)
2. Differentiate between the following : (5×3=15)
(a) Pearson correlation and Spearman correlation

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(b) One-sample t-test and two-sample t-test

(c) Histogram and boxplot

3. Write short notes on the following : (3½×4=15)

(a) Probability distributions in environmental risk analysis

(b) Skewness and kurtosis

(c) Kruskal-Wallis test

(d) Pattern recognition in environmental decision-making

4. (a) Explain the role of hypothesis testing in environmental research. (7)

(b) Discuss the conditions under which non-parametric tests are preferred over parametric tests. (8)

5. (a) Explain regression model selection in environmental studies. (8)

(b) Discuss how regression results can be interpreted in relation to pollution, biodiversity or climate datasets. (7)

6. Explain the characteristics of time series data and discuss trend analysis, seasonal decomposition, forecasting methods, spatial data types and geostatistical tools in environmental studies. (15)

P.T.O.

(100)

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