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0504N99

Candidate's Seat No :_____

M.Sc Semester-4 Examination

510

Statistics (EC)

April-2024

Time : 2-30 Hours] **[Max. Marks : 70**

Q-1 (A): Explain the method of data collection in environmental statistics in detail. [07]

Q-1 (B): What is Environmental Statistics? Explain the significance of statistics in environmental conservation as one of the sustainable development goals. [07]

=OR=

Q-1 (A): Explain the method of questionnaire in environmental statistics with the help of a suitable chart. [07]

Q-1 (B): Explain environmental data structure. Also differentiate between primary data and secondary data in terms of environmental statistics. [07]

Q-2 (A): What is hyper geometric distribution? State its properties and uses from environmental perspective. [07]

Q-2 (B): State the uses and limitations of chi square test from environmental perspective. [07]

=OR=

Q-2 (A): Explain frequency distribution from ecological and environmental perspective. [07]

Q-2 (B): Explain cross tabulation concept and its application in environmental statistics. [07]

Q-3 (A): Describe the Random Leslie Case and stable age structure from ecological and environmental perspective. [07]

Q-3 (B): Write a short note on Point Source Pollution from environmental perspective. [07]

=OR=

Q-3 (A): Describe the Gaussian Plume Model under ecological perspective. [07]

Q-3 (B): Describe the Box Model in environmental statistics. [07]

Q-4 (A): What is the word ANOVA stand for? Discuss the phenomenon of ANOVA along with general assumptions and explain ONE WAY classification of ANOVA in environmental statistics. [07]

Q-4 (B): Explain the phenomenon of Randomisation, Replication and Local Control in environmental statistics. [07]

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=OR=

Q-4 (A): Explain regression analysis from environmental perspective. Also emphasize on importance of study of regression. **[07]**

Q-4 (B): What is multiple regression? Explain multiple regression concept with the help of an appropriate example from environmental perspective. **[07]**

Q-5 ANSWER IN SHORT: [ANY 7] **[14]**

1. Define Simple Hypothesis in environmental research. Give an example.
2. Define Composite Hypothesis in environmental research. Give an example.
3. Define Type I error in environmental statistics. Give an example.
4. Define Type II error in environmental statistics. Give an example.
5. Define Environmental Sampling. Give an example.
6. State the types of correlation from environmental perspective. Give an example.
7. Define Environmental Inferential Research Approach. State its nature.
8. How many climate zones are there? Give an example of environmental data of various climate zones.
9. State any two statistical tools for data analysis in environmental statistics.
10. What do you mean by formal experimental design in environmental statistics? Give an example.
11. State any one measure to deal with air pollution and soil erosion.
12. Say True or False: "Euler Lotka equation in environmental studies gives the intrinsic growth rate." Also justify your answer.

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