

Roll No.

Total Pages : 2

MDE/D-23

4403

BIOSYSTEMATICS & BIOSTATISTICS

Paper–MZ–103

Time allowed : 3 Hours]

[Maximum Marks : 80

Credits – 4

Note : Attempt **five** questions in all, selecting **one** question from each unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Write brief notes on the following: $8 \times 2 = 16$

- (i) Chemotaxonomy (ii) Mean deviation
- (iii) Allopatric species (iv) Standard error
- (v) Beta taxonomy
- (vi) Coefficient of correlation
- (vii) Level of significance (viii) Discrete frequency.

UNIT-I

2. Write notes on the following: $4 \times 4 = 16$

- (i) Define biosystematics and its perspectives
- (ii) Dimensions of Speciation
- (iii) Molecular taxonomy
- (iv) Hierarchy of categories.

3. Explain different kinds of taxonomic characters and also weighing of characters. 16

UNIT-II

4. Explain different types of taxonomic keys along with their merits and demerits. 16
5. Define biodiversity. Describe the principles of bioethics in biodiversity. 16

UNIT-III

6. Define Standard deviation, explain its merits. Calculate standard deviation from the following distribution data: 16

Score	2	4	6	8	10	12	14
Frequency	4	6	9	11	7	5	3

7. (a) Write a brief note on Chi square test and its uses. 8
- (b) Explain Karl Pearson coefficient of correlation and its uses. 8

UNIT-IV

8. Define probability and describe various theoretical probability distribution. 16
9. (a) Explain test of significance. 8
- (b) Define and explain the law of sampling. 8