

Roll No. :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

BPMS-508

M.Sc. (Previous) Examination, 2023

ZOOLOGY

Paper - IV

**(Evolution, Statistical Methods and Computer Application
in Biology)**

Time : 3 Hours]

[Maximum Marks : 75

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

Section-B

(Marks : 5 × 5 = 25)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **5** marks.

Section-C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

Section-A

1. Answer the following questions in brief :

(i) What do you mean by Pangene Theory ?

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- (ii) Define Polymorphism.
- (iii) What is Allopatric Speciation ?
- (iv) Define Heterosis.
- (v) What is Neo-Darwinism ?
- (vi) What do you know about Mimicry ?
- (vii) How is a Pie diagram drawn ?
- (viii) What is Positive Correlation ?
- (ix) Define Genetic Drift.
- (x) Define the term Mode.

Section-B

2. Explain the Hardy-Weinberg law.

Or

Explain the bottleneck effect.

3. Explain the term Reproductive Isolation.

Or

What do you mean by gene flow ?

4. Differentiate between Lamarkism and Darwinism.

Or

Write the salient features of Neo-Lamarckism.

5. Describe in brief about the Bar-Diagram.

Or

How is mean calculated in discrete series ?

6. What do you mean by Mathematical Modeling ?

Or

What are FASTA and BLASTA softwares used in Sciences ?

Section–C

7. Explain the following terms :

- (i) Gene Frequency
- (ii) Probability
- (iii) Mutation Pressure
- (iv) Selection Pressure

8. Write an essay on Isolation.

9. What do you mean by Speciation ? Describe in brief about Mechanism of Speciation.

10. Define Correlation. How is correlation calculated by the data ?

11. Describe in brief about the role of computers in Mathematical Modeling.