



K23U 2386

Reg. No. :

Name :

V Semester B.Sc. Degree (C.B.C.S.S. – O.B.E. – Regular/Supplementary/
Improvement) Examination, November 2023
(2019-2021 Admissions)
CORE COURSE IN ZOOLOGY
5B 05 ZLG : Evolution, Ethology and Research Methodology

Time : 3 Hours

Max. Marks : 40

Instruction : Give illustrations and figures wherever necessary.

SECTION – A
(Evolution and Ethology)

- I. Essay questions. (Each question carries 8 marks) Answer any 1. (1×8=8)
1) Elaborate various evidence of organic evolution.
2) Explain different types of learned behaviours.
- II. Short essay. (Each question carries 4 marks) Answer any 1. (1×4=4)
3) Explain major postulates and criticisms of Lamarckism.
4) Discuss Oparin theory and Miller-Urey experiment.
- III. Short answer questions. (Each question carries 2 marks) Answer any 3. (3×2=6)
5) Differentiate Batesian mimicry and Mullerian mimicry.
6) Write notes on sympatric speciation.
7) Comment on the characteristics of Neanderthal man.
8) What is mitochondrial eve hypothesis ?
- IV. Multiple choice questions. (Each question carries 0.5 mark) Answer all. (4×0.5=2)
9) What, according to Darwin is the primary driving force behind speciation ?
a) Successful, continuous and minor variations
b) Successful, discontinuous and major variations
c) Sudden mutations
d) Variations due to constant use or disuse

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- 10) _____ is the random evolutionary fluctuations in the allelic frequencies of a small population.
a) Adaptive radiation
b) Genetic drift
c) Kin selection
d) None of these
- 11) The mimicking Monarch butterfly by Viceroy butterfly is an example for
a) Concealing mimicry
b) Warning mimicry
c) Aggressive mimicry
d) Alluring mimicry
- 12) Workers of honeybees are
a) Fertile females
b) Sterile females
c) Sterile males
d) Sterile males and females

SECTION – B
(Research Methodology)

- I. Essay questions. (Each question carries 8 marks.) Answer any 1. (1×8=8)
13) What are the different sampling methods used in biostatistics?
14) Explain the major steps in scientific method.
- II. Short essay. (Each question carries 4 marks.) Answer any 1. (1×4=4)
15) Explain the different types of diagrammatic representations.
16) Write notes on the structure of a scientific paper.
- III. Short answer questions. (Each question carries 2 marks.) Answer any 3. (3×2=6)
17) What is repeatability and replication ?
18) What is tabulation ?
19) What is peer review ?
20) What is null hypothesis ?