

2023
M.Sc.
First Semester
CORE – 03
ZOOLOGY
Course Code: MZOC 1.31
(Biosystematics & Evolutionary Biology)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Write a note on the following: 7×2=14
 - (a) Applications of biosystematics in biology
 - (b) Chromosome banding pattern
2. Explain karyotype test and molecular markers. 7+7=14

UNIT-II

3. Discuss the principle of typification and homonymy. 7+7=14
4. Write a note on the following: 7×2=14
 - (a) Dominance index
 - (b) Association index

UNIT-III

5. Explain the different eras, periods and epoch in evolutionary time scale. 14
6. Discuss the various molecular tools in classification and identification. 7+7=14

UNIT-IV

7. Give an account on Darwin's concept of variation, adaptation, struggle and natural selection. 14
8. Explain the origins of unicellular and multicellular organisms. Add a note on abiotic synthesis of organic monomers and polymers. 8+6=14

UNIT-V

9. Describe the different types of reproductive isolating mechanisms giving examples. 14
10. Write notes on the following: 7×2=14
- (a) Hardy Weinberg law
 - (b) Convergent evolution and natural selection
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