2021
M.Sc.
First Semester
CORE – 03
ZOOLOGY
Course Code: MZOC 1.31
(Biosystematics & Evolutionary Biology)

Total Mark: 70 *Pass Mark: 28*
Time: 3 hours

Answer five *questions, taking* one *from each unit.*

UNIT–I

1. Write short notes on: 7+7=14
   (i) Applications of biosystematics biology
   (ii) Chromosome banding pattern
2. Discuss the following: 7+7=14
   (i) Molecular markers
   (ii) DNA sequencing

UNIT–II

3. Explain the principle of coordination of typification. 14
4. How can biodiversity be measured and monitored at different spatial scales? From the given table, calculate and interpret the Shanon and Simpson's index. 6+8=14

Order	Orthoptera	Hymenoptera	Hemiptera	Odonata	Coleoptera	Lepidotera
No of indiviuals (n)	6	4	9	3	12	14

UNIT–III

5. Explain in detail the theory of Lamarckism. Add a note on Neo-Lamarckism. 10+4=14
6. Give a detailed account on the evolution of man in Pleistocene period. 14

UNIT–IV

7. Explain the different types of premating isolating mechanism giving examples. 14

8. Write notes on: 7+7=14
   (i) Post mating isolating mechanism
   (ii) Origin of reproductive isolation by Muller's and Dobshansky's views

UNIT–V

9. Describe the different types of natural selection. 14

10. Write notes on:
    (i) Differentiate protective and aggressive mimicry 7
    (ii) Chromosomal aberrations 7
