

2025

5th Semester Examination (CCFUP : NEP)

ZOOLOGY

Paper : MJ 9-T (Single Core Major)

[Taxonomy, Adaptation and Evolution]

Full Marks : 40

Time : Two Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

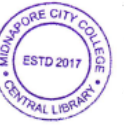
Group - A

Answer any *five* questions : $2 \times 5 = 10$

1. Differentiate between gene frequency and genotypic frequency.
- ~~2.~~ Define Sibling species with suitable example.
- ~~3.~~ Define Coacervates and Microsphere.
4. What do you mean by Deme?
- ~~5.~~ Write short note on sympatric speciation.
- ~~6.~~ What is Stabilizing Natural Selection?

P.T.O.





(2)

7. Mention two important features of order Primate.

8. What is Founder's effect?

Group - B

Answer any *four* questions : $5 \times 4 = 20$

9. Write about the evolutionary forces that can break Hardy-Weinberg equilibrium.

10. Describe about the pre-reproductive and post-reproductive isolation process.

11. Discuss about convergent and divergent adaptation with suitable example. $2\frac{1}{2} + 2\frac{1}{2}$

12. What do you mean by secondary aquatic adaptation? Describe the modifications related to secondary aquatic adaptation. $1 + 4$

13. What is Biological species concept? Mention its limitations. $2 + 3$

14. Briefly explain the concept of the molecular clock in evolution.

Group - C

Answer any *one* question : $10 \times 1 = 10$

15. Define chemogeny and biogeny. Mention the main stages in the chemical evolution of life. State the significance of RNA as a primitive genetic material. $3 + 5 + 2$

(3)

16. Write short notes on :

$2\frac{1}{2} \times 4 = 10$

(a) Darwinian fitness

(b) Genetic drift

(c) Continental drift

(d) Industrial melanism

