

U.G. 2nd Semester Examination-2024**ZOOLOGY****[MAJOR]****Course Code : ZOO-MJ-T-201****(Introduction to Chordate Diversity and Its
Zoogeographical Distribution)****[NEP-2020]**

Full Marks : 40

Time : $2\frac{1}{2}$ Hours*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in
their own words as far as practicable.*1. Answer any **five** questions of the following: $2 \times 5 = 10$

- a) What is Muller's organ? State the role of Hatschek's pit.
- b) Describe function of endostyle. Why is it called precursor of thyroid gland?
- c) Differentiate between physoclistous and physostomous air bladder.
- d) Define potamodromous migration with example.
- e) Distinguish Anura from Apoda with example.

[Turn Over]

- f) Name the muscles involved in avian flight.
- g) Define zoogeography. Name the zoogeographical realms.
- h) What is pygostyle? State its importance.

2. Answer any **two** questions of the following:

$5 \times 2 = 10$

- a) Write a note on different navigatory cues used by migratory birds.
- b) Elaborate the structures of biting apparatus of a poisonous snake and explain its mode of action.
- c) Compare and contrast Ascidiacea and Thaliacea with example. Define the retrogressive and progressive changes seen during development of *Ascidia*.
- d) What is continental drift theory? What are the significance of continental drift to zoogeography?

$2+3$

$2+3$

3. Answer any **two** questions of the following:

$10 \times 2 = 20$

- a) Write down the characteristics of osteichthyes and classify it up to subclass. Give a detailed account of accessory respiratory organ of fishes. Comment on nest building behaviour of fish.

$2+2+3+3$

- b) Define parental care. Differentiate between parental care and parental investment. Write an essay on parental care in amphibia. Briefly describe the metamorphic changes that take place in a tadpole larva. 1+2+4+3
- c) Describe the general characters of class mammalia and classify it up to living infra-class. Mention the process of echolocation in microchiropterans. 2+3+5
- d) Describe the forces involved in aerodynamics of a bird's flight. How can the lift be increased? How Newton's law and Bernoulli's principle can be applied of bird's flight? 4+3+3
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