

**B.Sc. Part—II (Semester—III) Examination
ZOOLOGY**

(Life and Diversity of Chordata and Concept of Evolution)

Time : Three Hours]

[Maximum Marks : 80

Note :—(1) All questions are compulsory.

(2) Question No. 1 carries 8 marks and remaining **SIX** questions carry 12 marks each.

(3) Illustrate your answer with suitable diagrams wherever necessary.

1. (a) Fill in the blanks :

- (i) *Amphioxus* belongs to group _____.
- (ii) *Scoliodon surrakowah* is commonly called _____.
- (iii) Frog heart is covered by a _____ membrane.
- (iv) Adrenal gland is located on anterior part of the _____.

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(b) Choose correct options from the following :

(v) Scientific name of Pigeon is :

- (a) *Rana tigrina*
- (b) *Columba livia*
- (c) *Amphioxus*
- (d) *Calotes*

(vi) Steroid hormone, glucocorticoids secreted by _____ gland.

- (a) Thyroid
- (b) Adrenal
- (c) Pincal
- (d) Parathyroid

(vii) Study of animal fossils is called :

- (a) Palaeobotany
- (b) Micropaleontology
- (c) Palaeoecology
- (d) Paleozoology

(viii) Elongation of Giraffe's neck is the popular example of :

- (a) Darwinsim
- (b) Mutation theory
- (c) Use and disuse of organs
- (d) Theory of natural selection

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(c) Answer in **one sentence** each :

(ix) How many chamber are in Heart of Aves ?

(x) What is snake venom ?

(xi) What do you mean by *Fossilization* ?

(xii) What are *endocrine glands* ?

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2. Describe digestive system of Amphioxus.

OR

Describe structure and working of heart of scoliodon.

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3. Explain the following :

(a) Urinogenital system of *Rana tigerina*

(b) External characters of calotes

(c) Structure of heart (only labelled diagram) of *Rana tigerina*.

OR

(d) Parental care in Amphibia (one example)

(e) Habit and habitat of Calotes

(f) Anti-venom.

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4. Describe Flight adaptations in birds.

OR

Explain morphology of Thyroid and Adrenal glands.

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5. Explain the following :

(g) Morphological evidences of evolution

(h) Petrified fossils

(i) Archacopteryx as connecting link.

OR

(j) Embryological evidences of evolution

(k) Trails and foot prints

(l) Peripatus as connecting link.

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6. Explain the following :

- (m) Use and disuse theory,
- (n) Struggle for existence
- (o) Genetic drift.

OR

- (p) Inheritance of acquired characters
- (q) Natural selection
- (r) Gene frequency.

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7. Explain the following :

- (s) Neanderthal man
- (t) Aortic arches in Mammals
- (u) Desert Adaptations.

OR

- (v) Modern man
- (w) Pronephros
- (x) Aquatic adaptations.

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