

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) Scoliodon is example of class _____.

(ii) Male frog produce sound by _____.

(iii) Melatonin hormone is secreted by _____.

(iv) Natural selection theory was proposed by _____.

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(B) Choose correct options from the following :

(v) Adult frog is :

(a) Ureotelic

(b) Amonotelic

(c) Uricotelic

(d) None of above

(vi) The study of birds termed as :

(a) Ichthyology

(b) Physiology

(c) Osteology

(d) Ornithology

(vii) Calcitonin hormone is secreted by :

(a) Thyroid gland

(b) Pituitary gland

(c) Parathyroid gland

(d) Adrenal gland

(viii) Inheritance of acquired character theory was proposed by :

(a) Lamarck

(b) DeVeries

(c) Morgan

(d) Darwin

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

- (ix) Neurotoxic venom.
- (x) Endocrine glands.
- (xi) What is archaopteryx ?
- (xii) Speciation.

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2. Describe the *excretory organs and gonads* of Amphioxus.

OR

Describe respiratory system and mechanism of respiration in Scoliodon.

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3. Explain the following :

- (a) External characters of *Rana tigrina*
- (b) Parental care in amphibia
- (c) Structure of Heart (Diagram only) of calotes.

OR

- (d) Heart of *Rana tigrina* (Diagram only)
- (e) External features of calotes versicolor
- (f) *Snake venom*.

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4. Describe Migration in birds.

OR

Describe morphology of pituitary and thyroid glands.

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5. Explain the following :

- (g) Embryological evidences of evolution
- (h) Petrified Fossils
- (i) *Archaeopteryx*.

OR

- (j) Biochemical evidences of evolution
- (k) Cast and moulds
- (l) Radioactive carbon dating of fossils.

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6. Explain the following :
- (m) Allopatric speciation
 - (n) Gene frequency
 - (o) Divergent evolution.

OR

- (p) Sympatric speciation
- (q) Gene pool
- (r) Parallel evolution.

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7. Explain the following :
- (s) Neanderthal man
 - (t) Aortic arches in Birds
 - (u) Aquatic adaptation.

OR

- (v) Cro-Magnon man
- (w) Metanephros
- (x) Terrestrial adaptation.

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