AW–1693

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 : 2

(i) *Amphioxus* is commonly known as _____.

(ii) Sweat and sebaceous glands are found in the skin of class _____.

(iii) The connecting link between annelida and arthropoda is _____.

(iv) The *Rana tigrina* is commonly called as _____.

(B) Choose the correct alternative from the following : 2

(v) _____ is a cartilaginous fish.

(a) *Catla* (b) *Labeo*

(c) *Cyprinus* (d) *Scoliodon*

(vi) Coiling around eggs to guard them is found in _____.

(a) Echidna (b) Ichthyophis

(c) Salamander (d) Calotes

(vii) The mammalian kidney is _____.

(a) Protonephric (b) Mesonephric

(c) Metanephric (d) None of these

(viii) *Homo erectus* evolved in _____.

(a) Asia (b) Europe

(c) Africa (d) Australia

(C) Answer in **ONE** sentence each : 4

(ix) What is gene flow ?

(x) How many chambers are present in mammalian heart ?

(xi) Name of the additional chambers of Scoliodon heart.

(xii) Sound producing organ of birds.

2. Give an account of respiratory system of *Scoliodon* with its mechanism. 12

OR

Describe the digestive system of *Amphioxus*.

3. Explain the following : 12

(a) External features of *Rana tigrina*.

(b) Internal structure of heart of frog. (Only labelled diagram).

(c) Urinogenital system of female calotes.

OR

(d) Parental care in anura.

(e) Internal structure of heart of *calotes*. (Only labelled diagram)

(f) Snake venom.

4. Describe the migration in birds. 12

OR

Describe the salient features of Prototheria.

5. Explain the following : 12

(g) Embryological evidences of evolution

(h) Petrified fossils

(i) Peripatus as connecting link.

OR

(j) Anatomical evidences of evolution

(k) Importance of fossils records

(l) Radioactive carbon dating of fossils.

6. Describe the following : 12

(m) Gene frequency

(n) Sympatric speciation

(o) Hardy Weinberg equilibrium.

OR

(p) Genetic drift

(q) Natural selection

(r) Convergent evolution.

7. Attempt the following : 12

(s) Ramapithecus

(t) Aortic arches in fish

(u) Desert adaptation.

OR

(v) Dryopithecus

(w) Neanderthal man

(x) Terrestrial adaptation.