

## 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) Heart of frog is \_\_\_\_\_ chambered.  
 (ii) Vocal sacs are well developed in \_\_\_\_\_ frog only.  
 (iii) The urinogenital system is a combination of excretory and \_\_\_\_\_ organs.  
 (iv) Limulus is an example of \_\_\_\_\_ fossil. 2

(B) Choose correct alternative from the following :

- (v) Heart of scoliodon is :  
 (a) Pulmonary (b) Cardial  
 (c) Arterial (d) Branchial
- (vi) Adult frog is :  
 (a) Ureotelic (b) Uricotelic  
 (c) Amnotelic (d) None of above
- (vii) Egg laying mammal is :  
 (a) Platypus (b) Koala  
 (c) Whale (d) Kangaroo
- (viii) "Inheritance of Acquired Character" theory was proposed by :  
 (a) Pasteur (b) Redi  
 (c) Lamarck (d) Darwin 2

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

- (ix) How many pairs of gill pouches are present in scoliodon ?  
 (x) What are Homologous organs ?  
 (xi) What is neurotoxic venom ?  
 (xii) What is poikilotherm ? 4

2. Explain the following :
- (a) Holobranch
  - (b) Endostyle
  - (c) Scroll valve.
- OR**
- (d) Wheel organ of Amphioxus
  - (e) Significance of migration in fishes
  - (f) Neuromasts. 12
3. Describe heart of Frog.
- OR**
- Describe the urinogenital system of female calotes. 12
4. Explain the following :
- (g) Thyroid gland
  - (h) Types of migration in birds
  - (i) External features of pigeon.
- OR**
- (j) General characters of prototheria
  - (k) Morphological flight adaptations
  - (l) Pancreas. 12
5. Explain the following :
- (m) Embryological evidences of evolution
  - (n) Peripatus as connecting link
  - (o) Trails and foot prints.
- OR**
- (p) Living fossils
  - (q) Type of fossils
  - (r) Carbon dating. 12
6. Explain the following :
- (s) Inheritance of acquired characters
  - (t) Convergent evolution
  - (u) Natural selection.
- OR**
- (v) Struggle for existence
  - (w) Hardy-Weinberg equilibrium
  - (x) Parallel evolution. 12
7. Describe the evolution of aortic arches in the vertebrates.
- OR**
- Give an account of aquatic and desert adaptations. 12