



RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES

B.Sc. in Applied Sciences
First Year - Semester II Examination – September/October 2020

ZOO 1303 – VERTEBRATE DIVERSITY

Time: Three (03) hours

Answer any SIX (06) questions.

1. a) Discuss why chordates are classified as a different group of animals. **(30 marks)**
b) Describe the external morphology of a named Hemichordate. **(58 marks)**
c) Explain the reasons for not placing hemichordates in phylum Chordata. **(12marks)**
2. Discuss the adaptations that have guided early vertebrate evolution. **(100 marks)**
3. a) Describe the major challenges amphibians faced when they colonized land and elucidate the adaptations developed to overcome them. **(75 marks)**
b) Tiktaalik is considered to be an intermediate between fish and amphibians. Briefly analyse this statement. **(25 marks)**
4. a) Critically evaluate the key biological innovations of reptiles that enabled them to conquer land. **(60 marks)**
b) Describe how the reproductive and excretory strategies of reptiles have reduced the dependency on water for their survival on land. **(40 marks)**
5. Discuss citing suitable examples, the main anatomical and physiological features that make birds as “flying machines”. **(100 marks)**

6. Explain briefly the followings.

- a) Advantages of different mating systems of birds **(40 marks)**
- b) Importance of feathers for the survival of birds **(30 marks)**
- c) Ecological implications of bird migration **(30 marks)**

7. a) Describe briefly, the key events in the evolution of mammals. . **(30 marks)**

- b) Mammals are considered to be one of the most successful groups of vertebrates.
Describe briefly, mammalian characteristics that have contributed to their success. **(70 marks)**

8. Write a concise account on salient features of the Order Chiroptera. **(100 marks)**

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