



**RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES**

**B.Sc. (General) Degree in Applied Sciences
First Year - Semester II Examination – November/December 2016**

ZOO 1303 – VERTEBRATE DIVERSITY

Time: Three (03) hours

Answer (06) six questions.

Illustrate your answers with suitable diagrams where appropriate.

1. a) Describe the characteristic features of class Ascidiacea using *Ciona* as an example.
b) How does *Ciona* represent the chordate characters during its lifecycle?
c) State the characters of *Amphioxus* which are shared with vertebrates.
2. a) Briefly discuss the characteristic features of Gnathosmata.
b) Give the characters which are used to distinguish fish belonging to Agnathans and Gnathosmata.
b) Describe the diversity of scale types in fish.
3. Amphibians are the first vertebrates to colonise land. Describe the adaptive features that led them colonise land and diversify.
4. Using anatomical features of snakes, prove that the snakes are the most derived of all reptilian groups.

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5.
 - a) Outline the features that can be observed in Archaeopteryx skeleton that are common for both reptiles and birds.
 - b) Illustrate the structure of bird wing and explain how the wing shape correlates its nature of flight.
 - c) Briefly describe the **four** basic forms of bird wings with suitable examples.
6.
 - a) Succinctly describe the soft tissue characteristics that differentiate mammals from other chordates.
 - b) Briefly comment on the behaviour and ecology of monotremes.
7. Write short notes on the following;
 - a) characteristic features of Class Aves
 - b) functions of feathers
 - b) efficiency of avian respiratory system for flight
 - c) feeding adaptations of birds

END