



Library
Faculty of Applied Science
Rajarata University of Sri Lanka
Mihintale.

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

**B.Sc. (General) Degree in Applied Sciences
Third Year - Semester I Examination – Nov/Dec 2016**

ZOO 3106 – SRI LANKAN HERPETOFAUNA

Index No:

Time: One and a half (1 ½) hours

Answer all questions in section A and two questions from section B.

Section A

- I. The number of amphibian and reptile species currently recorded from Sri Lanka are respectively,
a) 108, 215 b) 115, 210 c) 118, 217 d) 86, 115
- II. Possible reasons for the high diversity and endemism of Sri Lankan herpetofauna are
a) climatic heterogeneity b) tropical climate
c) high ecosystem diversity d) all of the above
- III. Family Microhylidae in Sri Lanka is represented by the genera
a) *Microhyla*, *Ramanella*, *Polypedates* and *Taruga*
b) *Microhyla*, *Ramanella*, *Uperodon* and *Taruga*
c) *Microhyla*, *Ramanella*, *Kaluola* and *Uperodon*
d) *Microhyla*, *Ramanella*, *Kaluola* and *Hoplobatrachus*
- IV. Two of the endemic amphibian genera in Sri Lanka are
a) *Nannophrys* and *Taruga* b) *Adenomus* and *Zakerana*
c) *Nannophrys* and *Zakerana* d) *Microhyla* and *Taruga*
- V. Direct development or the larval development that occurs within the eggs, producing hatchlings that resemble miniature adults is seen in the genus of frogs
a) *Pseudophilautus* b) *Taruga* c) *Hylarana* d) *Polypedates*

- VI. What physical property/ies in the environment can be detected by the loreal and labial pits of pit vipers and pythons of Sri Lanka?
- a) airborne chemicals
 - b) ground vibrations
 - c) temperature
 - d) all of the above
- VII. Of the following natural habitats in Sri Lanka, which one is home to a very high diversity and endemism of amphibians?
- a) Tropical moist evergreen forests
 - b) Tropical dry mixed evergreen forests
 - c) Upper montane forests
 - d) Wet pathana grasslands
- VIII. Which of the following combination includes two of the highly venomous species of snakes in Sri Lanka?
- a) *Bungarus ceylonicus*, *Boiga ceylonensis*
 - b) *Daboia russelii*, *Bungarus caeruleus*
 - c) *Naja naja*, *Trimersurus trignocephalus*
 - d) *Bungarus caeruleus*, *Calliophis melanurus*
- IX. Among the agamid lizards in Sri Lanka, which genus is endemic to Sri Lanka?
- a) *Otocryptis*
 - b) *Cophotis*
 - c) *Sitana*
 - d) *Calotes*
- X. Which of the following combination includes critically endangered species?
- a) *Pseudophilautus pardus* and *Microhyla zeylanica*
 - b) *Pseudophilautus zorro* and *Hypnale nepa*
 - c) *Microhyla zeylanica* and *Cyrtodactylus soba*
 - d) *Crocodylus porosus* and *Duttaphrynus kotagamai*

(4x10 = 40 marks)

Section B

1. Discuss the possible reasons for the high diversity and endemism of the herpetofauna of Sri Lanka. (30 marks)
2. Nearly 70% of the amphibians and 50% of the reptiles of Sri Lanka are threatened with extinction. Considering your knowledge on the threats faced by the herpetofauna of Sri Lanka, outline a mechanism that would be implemented by the Sri Lankan authorities to reduce the current threats. (30 marks)
3. Compare and contrast the herpetofaunal diversity in different forest ecosystems of Sri Lanka. (30 marks)