

The Open University of Sri Lanka
Faculty of Natural Sciences
BSc Degree Programme



Department	: Zoology
Name of the Examination	: Final Examination 2019/2020
Academic Year	: 2019/2020
Course Code and Title	: ZYU5307/ZLU3187-Mammalian Biology
Level	: 05
Date	: 19.12.2020
Time	: 1.30- 3.30 p.m
Duration	: Two Hours

General Instructions to Candidates.

1. Read all instructions carefully before answering the questions.
 2. This question paper consists of **two (02) pages** and **Six (06) questions**.
 3. Answer any **four (04) questions**.
 4. The answer for each question should commence from a new page.
 5. Use blue or black ink to write your answers.
 6. Draw fully labelled diagrams where necessary.
 7. Write the numbers of the questions you answered in the front page of the answer script.
 8. Clearly write your index number in the answer script.
 9. Do not bring in or have in possession unauthorized materials, including mobile phones and other electronic devices, or violate other examination rules.
 10. Handover your answer script at the end of the examination.
-

1. Discuss the anatomical modifications seen in the forelimb of mammals for cursorial, volant/flying and swimming modes of locomotion. (100 marks)
2. 2.1 Describe the advantages of homeothermy in mammals. (30 marks)
- 2.2 Discuss how mammals dissipate heat when there is a rise of temperature in the environment. (70 marks)
3. You are provided with skeletons of three ant eating mammals: an anteater, an echidna and an aardvark for identification and classification.
- 3.1 Describe the cranial and post cranial adaptations you observe in above skeletons for ant eating mode life. (40 marks)
- 3.2 Explain how you should correctly identify above mammals based on their skeletal features and state their respective mammalian orders. (60 marks)
4. Sirenians are the only herbivorous mammals that inhabit in marine environments.
- 4.1 Discuss the adaptations seen in sirenians to feed on aquatic vegetation. (30 marks)
- 4.2 Describe how sirenians reduce the buoyancy when they are swimming. (30 marks)
- 4.3 Comment on the current conservational status and major threats to sirenians in Sri Lanka. (20 marks)
- 4.4 Briefly outline a conservation plan to protect sirenians in Sri Lanka. (20 marks)
5. Compare between the
- a) Anatomy of a typical reptile and a typical mammal. (60 marks)
- b) Megachiroptera and Microchiroptera. (40 marks)
6. Write notes on any two (02) of the following (50 marks x 2)
- 1) Domestication of mammals
- 2) Reproductive system of Marsupials
- 3) Order Dermoptera (Colugos)