

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF  
ECOTOURISM**

**ZOOL 100/104: GENERAL ZOOLOGY**

**STREAMS:**

**TIME: 2 HOURS**

**DAY/DATE: WEDNESDAY 19/4/2023**

**8.30 A.M. – 10.30 A.M.**

**INSTRUCTIONS:**

**ANSWER ALL THE QUESTIONS IN SECTION A AND TWO IN SECTION B**

1. Distinguish between the following terms
  - a) i) Monophyletic and polyphyletic groups. (2 marks)
  - ii) Cilia and flagella (2 marks)
  - b) Explain two methods of a sexual reproduction in protozoa (2 marks)
2. a) Describe locomotion in a Medusa. (2 marks)
- b) Outline two adaptations of trematodes to their parasitic mode of life. (2 marks)
- c) State two differences between class Diplopoda and Chilopoda (2 marks)
3. a) Explain the effect of light on the following biological activities of animals.
  - i) Reproduction (1 mark)
  - ii) Development (1 mark)
  - iii) Pigmentation (1 mark)
- b) Draw a well labeled diagram of a star fish. (3 marks)
4. a) Highlight three characteristics of Osteichthyes (3 marks)

- b) Describe three types of glands found in mammalian skin. (3 marks)
5. a) Explain briefly three types of tissues found in animals. (3 marks)
- b) Explain the following steps of tissue processing for paraffin sections.
- i) Fixation. (1 mark)
  - ii) Dehydration (1 mark)
  - iii) Sectioning (1 mark)

**SECTION B: 40 MARKS**

6. a) Explain five cell types that form the body wall of sponges. (10 marks)
- b) Describe the feeding mechanism in Annelida. (10 marks)
7. a) Describe the structure of the arthropod cuticle and the process of moulting/ecdysis. (15 marks)
- b) Describe the general structure of cnidarians. (5 marks)
8. a) Describe the anatomy of Molluscs. (10 marks)
- b) Explain five special adaptations of mammals that have enabled them to conquer diverse kinds of habitats spanning the earth. (10 marks)
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