



MACHAKOS UNIVERSITY

University Examinations 2019/2020 academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FIRST YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE IN BIOLOGY

BACHELOR OF EDUCATION (SCIENCE)

BACHELOR OF SCIENCE (AGRICULTURAL EDUCATION AND EXTENSION)

SZL 100: GENERAL ZOOLOGY

DATE: 22/1/2021

TIME: 8.30-10.30 AM

INSTRUCTIONS

1. Answer Question one (compulsory) and **any two** questions in Section B.
2. Use clean well labelled diagrams wherever appropriate.

SECTION A

QUESTION ONE (30 MARKS)

- a) State **three** theories that explain the origin of life. (3 marks)
 - b) Giving examples, briefly explain the difference between a taxon and a taxonomic rank. (3 marks)
 - c) Briefly explain **three** nutrition types utilized by protozoans. (3 marks)
 - d) Enumerate **three** classes of phylum porifera. (3 marks)
 - e) State the hypotheses that explain the origin of chordates. (3 marks)
 - f) Briefly explain the differences between vertebrates and invertebrate chordates. (3 marks)
 - g) State **three** characteristics of fishes. (3 marks)
 - h) State the difference between prokaryotic and eukaryotic cells. (3 marks)
 - i) Name **three** lophophorate phyla. (3 marks)
 - j) Define the following:
 - i. Immunity (1 mark)
 - ii. Negative feedback (1 mark)
 - iii. Respiration (1 mark)
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SECTION B

QUESTION TWO (20 MARKS)

Discuss the main characteristics of birds.

QUESTION THREE (20 MARKS)

Discuss the animal nervous system.

QUESTION FOUR (20 MARKS)

Discuss the structure and function of eukaryotic cell organelles.

QUESTION FIVE (20 MARKS)

- a) Discuss the Main features of members of the phylum Arthropoda. (14 marks)
- b) Compare the relationship of member's of the phylum Arthropoda with those of phylum Annelida. (6 marks)