

UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION JULY 2010

TITLE OF PAPER: INTRODUCTION TO ZOOLOGY

COURSE CODE: B112

DURATION: 3 HOURS

- INSTRUCTIONS:
1. THIS PAPER IS DIVIDED INTO TWO SECTIONS, A AND B
 2. USE SEPARATE ANSWER BOOKLETS FOR EACH SECTION
 3. IN SECTION A, ANSWER QUESTION 1 (COMPULSORY) PLUS ANY OTHER QUESTION; IN SECTION B, ANSWER ANY TWO QUESTIONS
 4. EACH QUESTION CARRIES TWENTY FIVE (25) MARKS
 5. WHEREEVER POSSIBLE, ILLUSTRATE YOUR ANSWERS WITH LARGE CLEARLY LABELLED DIAGRAMS.

SPECIAL REQUIREMENTS: NONE

THIS PAPER SHOULD NOT BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATORS.

SECTION A: Answer Question 1 and any other question in this section.

QUESTION 1 (Compulsory)

1. Specialised cells with common function are said to
2. What is an ecosystem?.....
3. Dominant habitats on the earth's surface are the habitats.
4. Feeding on suspended solids/matter in water is known as
5. Scavengers are the animals that feed on
6. The protective outer covering in arthropods is known as
7. The naming of organisms is known as
8. What is a gene?.....
9. Animals without a body cavity are said to be
10. Individuals with identical alleles at the same locus are said to be.....
11. What is codominance?.....
12. What is a biome?.....
13. Biodiversity means.....
14. Name one character which distinguishes mammals.....
15. Primary producers which use energy to manufacture food are known as
16.illustrate all possible nutrient and energy transfer among organisms in the ecosystem.
17.is an interaction which is measured in terms of reproductive success of closely related individuals.
18. A group of individuals of the same age is known as
19. Name one characteristic which has contributed to the success observed in insects.....
20. In birds, the development of feathers is associated with endothermy and
21. Class Mammalia is divided into various sub-classes based on the ways mothersandyoung.
22. Name one phylum with parasitic organisms.....
23. Two factors which contribute to an increase in population size/density over time areand
24. What does viviparous mean?.....
25. What is a hermaphrodite?.....

[Total = 25 Marks]

QUESTION 2

- (a) Using examples, explain the terms predation and mutualism. (7 Marks)
- (b) Why is it that predation does not normally eliminate completely the prey species?. (4 Marks)
- (c) Distinguish between monohybrid and dihybrid crosses using suitable examples. (7 Marks)
- (d) What is a testcross and why is it useful in genetic analysis? (7 Marks)

[Total = 25 Marks]

QUESTION 3

- (a) Outline some of the general characteristics of Protistans (5 Marks)
- (b) Briefly discuss the factors that have led to the success observed in insects. (10 Marks)
- (b) Suggest reasons why modern birds in general are successful in the air. (10 Marks)
- [Total = 25 marks]**

SECTION B: Answer any two questions in this section.

QUESTION 4.

Write notes on the following:

- i) Red blood cells (4 Marks)
- ii) Four (4) functions of the liver (8 Marks)
- iii) Amphibian heart (5 Marks)
- iv) Digestion in the mouth (4 Marks)
- v) Oestrous cycle (4 Marks)
- [Total Marks = 25]**

QUESTION 5.

- (a) Make a fully labeled sketch of a nerve cell (10 Marks)
- (b) What is meant by 'action potential'? How does it arise? (15 Marks)
- [Total Marks = 25]**

QUESTION 6.

Write one or two words that apply to EACH of the following: (2.5 marks each)

- (i) Carries blood from the digestive tract to the liver
- (ii) Openings into the arthropod heart
- (iii) Number of chambers in a fish heart
- (iv) Organ that forms urine in vertebrates
- (v) Closes entrance into windpipe during swallowing in humans
- (vi) Can breathe and swallow at the same time
- (vii) Uses gills for respiration in air
- (viii) Entrance into uterus
- (ix) Hormone of 'flight or fight'
- (x) Acquisition of food
- [Total Marks = 25]**