

UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER 2006

TITLE OF PAPER : INTRODUCTORY ZOOLOGY

COURSE CODE : B112

TIME ALLOWED : THREE HOURS

INSTRUCTIONS :

1. THIS PAPER HAS TWO SECTIONS, A AND B
2. USE ONE (1) ANSWER BOOKLET FOR EACH SECTION
3. IN SECTION A, ANSWER QUESTION 1 (**COMPULSORY**) PLUS ANY OTHER QUESTION; IN SECTION B, ANSWER QUESTION 4 (**COMPULSORY**) PLUS ANY OTHER QUESTION.
4. EACH QUESTION CARRIES TWENTY FIVE (25) MARKS
5. WHEREVER POSSIBLE ILLUSTRATE YOUR ANSWERS WITH LARGE CLEARLY LABELLED DIAGRAMS

SPECIAL REQUIREMENTS: NONE

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATORS

SECTION A

QUESTION 1 (COMPULSORY)

1. _____ are basic structural units of life.
2. Individuals of the same group in the same habitats are called a _____
3. Name one component of the biosphere. _____
4. Name one forest biome. _____
5. _____ feed on dead organisms.
6. _____ illustrate all possible transfers of energy and nutrients among organisms in the ecosystem.
7. _____ is the classification of organisms based on unique recognisable characteristics.
8. 'Sexual' reproduction in ciliates is known as _____
9. Animals without a body cavity are said to be _____
10. Cnidarians use their stinging cells for _____

11. Why are the flukes economically important in Swaziland? _____
12. Name one disadvantage of the arthropod exoskeleton. _____

13. Shark teeth are formed from _____
14. Which class of vertebrates were the first terrestrial animals? _____
15. In birds, the _____ feathers are water resistant.
16. Individuals with identical alleles are said to be _____
17. Arthropods are characterised by _____ appendages.

18. What is codominance? _____

19. Name an animal with a 'pseudo-placenta'. _____
20. Name one character which distinguishes mammals. _____
21. In maximising reproductive success, females are limited by _____

22. Name one phylum with parasitic organisms. _____
23. Name one function of the cytoskeleton. _____
24. _____ is a change in body form as an organism develops.
25. What is speciation? _____

[Total marks = 25]

QUESTION 2

a. Briefly discuss the various types of biomes on earth. (15)

b) Briefly discuss distinguishing features which characterise the chordates. (10)

[Total marks = 25]

QUESTION 3

a. With examples, discuss how insects have an impact on the environment and human activities. (15)

b. Write short notes on the following:

- i. Altruism
- ii. Evidence of evolution

(5 marks each)

[Total marks = 25]

SECTION B

QUESTION 4 (COMPULSORY)

- (a) What is an omnivore? _____.
- (b) _____ are the only group of mammals without oestrous.
- (c) Where digestion occurs outside cells it is called _____ digestion.
- (d) Bubble-like structure of alveoli is maintained by means of substances called _____.
- (e) The tracheal system of insects opens to the outside through _____.
- (f) Give one (2) functions of blood _____.
- (g) What artery carries deoxygenated blood? _____.
- (h) The _____ has more than 5 hearts.
- (i) Excretory organs have a role in _____ and _____.
- (j) How do spiders feed? _____.
- (k) Antennal glands are found in _____.
- (l) In the _____ of the nephron all the glucose, 2/3 water, salt (NaCl) are reabsorbed.
- (m) Name two (2) organs that involved in the control of respiration in terrestrial vertebrates _____.

- (n) What is an osmoconformer? _____
- (o) What is special about kangaroo rats?
_____.
- (p) What three (3) parts do all neurons have in common? _____

- (q) The _____ becomes congested with blood causing its length and diameter to increase greatly (erection).
- (r) _____ is the expulsion of semen from the penis through the urethra.
- (s) The principal male reproductive hormone is _____.
- (t) What is menopause? _____.
- (u) The vagina opens into the uterus at the _____.

[Total = 25 marks]

QUESTION 5

Describe and discuss the process of reproduction in humans.

[Total = 25 marks]

QUESTION 6

- (a) Discuss comparatively: single and double circulation in named organisms. (10 Marks)
- (b) Describe the process of digestion in herbivores. (15 Marks)

[Total = 25 marks]