

COURSE CODE: B204 (M) 2005

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER 2005

TITLE OF PAPER: **INVERTEBRATE ZOOLOGY**

COURSE CODE: **B204**

TIME ALLOWED: **THREE HOURS**

INSTRUCTIONS: 1. **ANSWER ANY FOUR QUESTIONS**
 2. **EACH QUESTION CARRIES TWENTY FIVE (25) MARKS**
 3. **ILLUSTRATE YOUR ANSWERS WITH LARGE AND
 CLEARLY LABELLED DIAGRAMS WHERE APPROPRIATE**

SPECIAL REQUIREMENTS:

NONE

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

Question 1

Discuss the ecological and economic importance of coral reefs.

[Total marks = 25]

Question 2

a. Outline the steps followed during development of organisms (ontogeny). (10)

b. Differentiate between the following:

- i. Centrolecithal and telolecithal eggs
- ii. Indeterminate and determinate cleavage
- iii. Invagination and epiboly (15)

[Total marks = 25]

Question 3

i. Using labelled diagrams, illustrate the significant similarities and differences between the asconoid, syconoid and leuconoid types of sponge organization. (20)

ii. List features which characterize the Urochordata as members of the phylum Chordata (5)

[Total = 25 marks]

Question 4

Describe the following and discuss how these have contributed to the success observed in the Class Insecta:

- i. cuticle
- ii. holometabolous metamorphosis

[Total = 25 marks]

Question 5

Define and briefly discuss the advantages of the following to invertebrates:

- i. Epitoky (10 marks)
- ii. Evisceration (10 marks)
- iii. Parthenogenesis (5 marks)

[Total = 25 marks]

Question 6

Illustrate the life cycles of two named parasites found in Swaziland transmitted by vectors of two different classes of the phylum Arthropoda. Discuss methods of their control.

[Total = 25 marks]