

UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER 2016

TITLE OF PAPER : INVERTEBRATE ZOOLOGY

COURSE CODE : B204

TIME ALLOWED : THREE HOURS

INSTRUCTIONS :

1. ANSWER ANY FOUR (4) QUESTIONS
2. 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

QUESTION 1

- a. Compare and contrast the variation in animal body plans with regard to the following:
- i. Symmetry
 - ii. Cellularity (15)
- b. Differentiate between the following:
- i. Gametes and gonads (2)
 - ii. Synapomorphy and sympleisiomorphy (4)
 - iii. Enterocoelous and schizocoelous condition (4)

[Total marks = 25]

QUESTION 2

Write notes on the structure and function of the following:

- i. Exoskeleton
- ii. Pseudopodium
- iii. Water vascular system

[Total = 25 marks]

QUESTION 3

Invertebrates contribute significantly to ecosystem health. Discuss the ecological role of each of the following:

- i. Cnidaria
- ii. Oligochaeta
- iii. Insecta

[Total = 25 marks]

QUESTION 4

Write a short essay on any *two* of the following topics:

- i. metamorphosis
- ii. polymorphism in Cnidaria
- iii. body cavities

[Total = 25 marks]

QUESTION 5

Write an account of feeding habits in the Phylum Mollusca.

[Total = 25 marks]

QUESTION 6

- a. Gastrulation is considered to be an important stage in the ontogeny of an organism. Validate this statement and elaborate on the various methods observed among the Metazoa. (15)
- b. Explain paedomorphosis and elaborate on its evolutionary significance. (10)

[Total = 25 marks]