

UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER 2014

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

Using the following groups, discuss the variation in reproductive strategies observed in invertebrates:

- | | | |
|------|-------------------|-----|
| i. | Rotifera | (8) |
| ii. | <u>Plasmodium</u> | (8) |
| iii. | Polychaetes | (9) |

[Total marks = 25]

Question 2

a. Contrast hemi- and holometabolous development and give some examples for each type. (10)

b. Define adaptive radiation and discuss the term with regard to the Bivalves. (15)

[Total = 25 marks]

Question 3

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]

Question 4

Briefly describe the various modes of nutrition observed in the protozoans and invertebrates.

[Total = 25 marks]

Question 5

Define the following and discuss their contribution to survival of the organisms in which observed: (5 marks each)

- i. torsion
- ii. evisceration
- iii. metamorphosis
- iv. cryptobiosis
- v. neutral buoyancy

[Total = 25 marks]

Question 6

Draw a phylogeny of the Metazoa including 13 different phyla. List the common name or one representative taxon for each phylum. Indicate the Eumetazoa, Bilateria, Protostomia, Ecydsozoa, Lophotrochozoa, and Deuterostomia.

[Total = 25 marks]