

UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER 2013

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

Invertebrates are a diverse group of animals which have significant impact on mankind and environment. Using named examples from the diversity of invertebrates studied in this course, enumerate their importance with regard to the following (answer in tabular form as shown):

Category	Specific roles/impacts	Example/s	
i. Agriculture			(7.5)
ii. Medical/scientific research			(7.5)
iii. Ecosystem function			(10)

[Total marks = 25]

Question 2

a. List the name and function of six different cells that might be found in the body wall of a poriferan and the primary function of each. (12)

b. Illustrate the life-cycle of a parasite of the genus *Babesia*, the parasites causing cattle tick fever in Swaziland and means of its control. (13)

[Total = 25 marks]

Question 3

Distinguish between the following:

(5 marks each)

- i. monophyletic and paraphyletic
- ii. protonephridia and metanephridia
- iii. pleisomorphy and apomorphy
- iv. ontogeny and phylogeny
- v. osmoregulating and osmoconforming

[Total = 25 marks]

Question 4

Using illustrations, categorise the various ways of gastrulation as observed in the metazoan.

[Total = 25 marks]

Question 5

What is coral bleaching? Discuss in detail factors which contribute to this phenomenon

[Total = 25 marks]

Question 6

Using named examples, assess the value of the following to organisms where observed:

- i. epitoky (10)
- ii. torsion (8)
- iii. metamorphosis (7)

[Total = 25 marks]