

UNIVERSITY OF SWAZILAND

MAIN 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

What is the ecological significance of the following invertebrates:

- a. Oligochaeta (8)
- b. Cnidaria (5)
- c. Insecta (12)

[Total = 25 marks]

Question 2

- a. Using labelled diagrams, illustrate the significant similarities and differences between the asconoid, syconoid and leuconoid types of sponge organization. (15)
- b. What features make the anthozoan polyp more complex? What is the advantage of these features? (10)

[Total = 25 marks]

Question 3

- a. Differentiate between the following:
 - i. strobilation and segmentation (5)
 - ii. pleisiomorphy and synapomorphy (4)
 - iii. indeterminate and determinate cleavage (6)
- b. Discuss in detail strategies and methods used in the prevention and control of Human African Trypanosomiasis (10)

[Total = 25 marks]

Question 4

- a. Distinguish between torsion and coiling in molluscs. (15)
- b. Enumerate the stages observed in metazoan ontogeny. (10)

[Total = 25 marks]

Question 5

Using named examples, discuss strategies employed by parasites to overcome the challenges they encounter during their lifecycles.

[Total = 25 marks]

Question 6

Define the following and briefly state their advantage:

- | | |
|---------------------|-----|
| i. cephalisation | (4) |
| ii. metamerism | (4) |
| iii. tagmatisation | (4) |
| iv. parthenogenesis | (4) |
| v. epitoky | (4) |
| vi. paedomorphosis | (5) |

[Total = 25 marks]