UNIVERSITY OF ESWATINI

SUPPLEMENTARY/RE-SIT EXAMINATION PAPER 2018

TITLE OF PAPER : **INVERTEBRATE ZOOLOGY**

COURSE CODE : **B204/BIO251**

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		
ii. Medical/scientific research		
Iii. Ecosystem function		

[Total = 25 marks]

QUESTION 2

a. Compare and contrast the variation in animal body plans with regard to the following:
i) Symmetry [15]
ii) Cellularity
b) Differentiate between the following
i) Gametes and Gonads [2]
ii) Synapomorphy and Sympleisiomorphy [4]
iii) Indeterminate and Determinate cleavage [4]
[Total = 25 marks]

QUESTION 3

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

[Total = 25 marks]

QUESTION 4

Elaborate on the ecological importance of the following:
a) Coral reefs
b) Oligochaeta
c) Mollusca

[Total = 25 marks]

QUESTION 5

a. What is a larva? Using the various phyla studied, discuss the purpose of having a larval stage. [10]
b. Using named examples and illustrations, distinguish the following modes of reproduction:
i) Fragmentation/Budding [3]
ii) Schizogony [4]
iii) Conjugation [8]

[Total = 25 marks]

QUESTION 6

Draw a phylogeny ofthe 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]