

**UNIVERSITY OF SWAZILAND**

**MAIN EXAMINATION PAPER 2019/20**

**TITLE OF PAPER** : INVERTEBRATE ZOOLOGY

**COURSE CODE** : BIO251

**TIME ALLOWED** : THREE HOURS

- INSTRUCTIONS** :
1. THIS PAPER HAS TWO SECTIONS, A AND B
  2. SECTION A IS COMPULSORY
  3. ANSWER ANY TWO (2) QUESTIONS FROM SECTION B
  4. 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**

SECTION B

Question 2

With the aid of a diagram, describe the pelagic zone of the marine habitat. Discuss challenges faced by organisms occurring within this habitat s as well their adaptations.

[Total = 25 marks]

Question 3

a. Briefly discuss the *ecological* importance of Poriferans and Cnidarians

(15)

b. Differentiate between the following:

- i. gametes and gonads (2)
- ii. hermaphroditism and sexual dimorphism (4)
- iii. enterocoelus and schizocoelus condition (4)

[Total = 25 marks]

Question 4

Using named examples, compare and contrast embryonic development between Protostomes and Deuterostomes.

[Total = 25 marks]

Question 5

Write short notes on *two* of the following:

- i. Arthropod cuticle

- ii. Water vascular system
- iii. Invertebrate excretory organs

[Total = 25 marks]

### Question 6

Using specific examples, discuss advantages of the following: (5 marks each)

- i. Cephalisation
- ii. Multicellularity
- iii. Polymorphism
- iv. Ciliated larval stages
- v. Body cavities

[Total = 25 marks]