UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER JUNE 2010

TITLE OF PAPER :   INVERTEBRATE ZOOLOGY

COURSE CODE   :   B204

TIME ALLOWED :   THREE HOURS

INSTRUCTIONS :   1.   THIS PAPER HAS TWO SECTIONS, A AND B
                   2.   SECTION A IS <u>COMPULSORY</u>
                   3.   ANSWER ANY THREE (3) 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 A (Compulsory)

a. Debate Cnidarian phylogeny.   (20)

b. Draw a table similar to the one below in your answer booklet. List and explain five different character states for the character 'symmetry'. Use a drawing to supplement each explanation (outside table). For each character state, name a taxon covered in the course that displays the particular character state.

Character state name & description	Diagram	Example of taxon
i.		
ii.		
iii.		
iv.		
v.		

15 marks

[Total marks = 35]

SECTION B

Answer any **three (3)** questions

QUESTION 2

Using named examples, differentiate between the following:
    i.   Osmoregulator and osmoconformer
    ii. Paratomy and architomy
    iii. Cnidarian colony and coral
    iv. Lophophore and radiole

[Total marks = 25]

QUESTION 3

a. Write short notes on any *two* of the following:
    i.   Urochordata
    ii. Tardigrada
    iii. Lophophorate phyla
    iv. Rotifera

[Total = 25 marks]

QUESTION 4

a. Using illustrations and named examples, briefly analyse the structure and function of the following:
  i.   Body cavities   (10)
  ii.   Nephridia   (10)

b. Briefly discuss how invertebrates maximise chances of fertilisation and embryo survival.   (5)

[Total = 25 marks]

QUESTION 5

Invertebrate parasites face a number of challenges at various stages of their life cycles. Explain these and examine solutions used by parasites to overcome these challenges.

[Total = 25 marks]

QUESTION 6

More species of insect have been described than any other group of animals. Write an essay explaining why insects have been so successful.

[Total = 25 marks]