UNIVERSITY OF ESWATINI

RESIT/SUPPLEMENTARY EXAMINATION PAPER 2019

TITLE OF PAPER : ENTOMOLOGY

COURSE CODE : BIO372/BIO472

TIME ALLOWED : THREE HOURS

INSTRUCTIONS :

1. THIS PAPER HAS TWO SECTIONS, A AND B
2. SECTION A IS COMPULSORY (ANSWER ALL QUESTIONS IN THIS SECTION)
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

Answer all questions in your answer booklet.

1. Name the three parts which make up the antennae.

2. Name one insect Order with flabellate antennae.

3. Which type of metamorphosis do Exopterygota undergo?

4. Lepidoptera means_____

5. Hymenoptera means_____

6. Which type of larvae have thoracic and abdominal legs?

7. Posteriorly oriented mouthparts are referred to as being _____

8*. Why is the modification of similar structures for different functions an advantage?

9. The cuticle is secreted by the _____

10. Dorsal sclerites are known as_____

11. Phytophagous means_____

12. Paleoptera means_____

13. The number of generations insects have per year is known as_____

14. The mass directional movement of large numbers of one species is known as _____

15. The _____ is the temporary storage area in the digestive system.

16. In which part of the hindgut are symbiotic flagellates are found?_____

17*. Name two hydrostatic functions of insect blood.

18. Tracheae terminate in fine branches known as _____

19*. Name two methods by which insects signal to each other for mate location.

20. Reproduction by the production of lots of embryos from one egg is known as _____

All questions = 1 mark except * = 2 marks; Underlined = **3 marks**

SECTION B

Answer any three (3) questions

QUESTION 2

Using named examples, discuss the diversity in mouthparts observed in the Class Insecta and how they have contributed to their different feeding strategies.

[Total = 25 marks]

QUESTION 3

Write short notes on the following, emphasising their distinguishing characteristics.

i. Coleoptera (10)
ii. Isoptera (7)
iii. Lepidoptera (8)

[Total = 25 marks]

QUESTION 4

The success observed in the Class Insecta is often attributed to the "modification of the similar parts for different functions". Using at least three named body parts, discuss this statement and explain how this has contributed to the success of this class.

[Total = 25 marks]

QUESTION 5

Illustrate the following with large, clearly labelled diagrams:

i. Insect digestive system
ii. Male and female reproductive system
iii. Respiratory system

[Total = 25 marks]