

**NATIONAL UNIVERSITY OF LESOTHO**

**FACULTY OF AGRICULTURE**

**CPS 2506: Introduction to Entomology**

**June 2023**

**Marks: 100 Marks**

**Time: 3 hours**

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**Instructions: Section A is compulsory**

**Section B: Answer ONLY FOUR questions**

**Each question carries equal marks of 20**

## Section A

- a) Tagmata
- b) Stridulation
- c) Anterior
- d) Spiracles
- e) Ecdysis
- f) Insect's diapause
- g) Viviparity
- h) Multivoltine
- i) Insect monitoring
- j) Pheromones

## Section B

### Question 1

Make short notes on the following as used in entomology. (5 marks each)

- a) Parthenogenesis
- b) Migratory movement
- c) Reproductive potential
- d) Metamorphosis

### Question 2

Discuss the distinguishing characteristics of the following orders. Give examples. (20 marks)

- i. Diptera
- ii. Coleoptera
- iii. Orthoptera
- iv. Homoptera

### Question 3

- a) Elaborate on the features of plant based agro-ecosystem. (8 marks)
- b) Discuss the following mortality factors in insects ecology (12 marks)
  - i. Food shortages
  - ii. Physico-chemical conditions
  - iii. Natural enemies

#### Question 4

- a) Discuss how insects are adapted to conserving moisture on their body during dry conditions. (10 marks)
- b) Discuss the effects of the following abiotic factors on insects' population. (10 marks)
  - i. Temperature
  - ii. Rainfall

#### Question 5

With the aid of a labeled diagram show and explain how the natural factors regulates insect populations in an ecosystem. (20 marks)