



Department	: Zoology
Level	: 5
Name of the Examination	: Final Examination
Course Code and Title	: ZLU3186 - Insect Biology
Academic Year	: 2019 / 2020
Date	: 9 <sup>th</sup> January, 2020
Time	: 9.30 a.m. – 11.30 a.m.
Duration	: 2 hours

### General Instructions

1. Read all instructions carefully before answering the questions.
2. This question paper consists of six (6) questions indicated in page 2.
3. Answer any four (4) questions only.
4. Answer for each question should commence from a new page.
5. Draw fully labelled diagrams where necessary.
6. Clearly state your index number in your answer script
7. Having any unauthorized documents/ mobile phones in your possession is a punishable offense

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- 1) 1.1 Name **one** example for **each** of the following categories of insects ;  
**Predatory insects, Insect parasitoids, Ectoparasitic insects, Scavenging insects.**  
**(10 marks)**
- 1.2 Describe the modes of life of **each** insect you mentioned in 1.1 above with respect to their habitats, biology, feeding behavior and nutrition. **(50 marks)**
- 1.3 Comment on the importance of insects you mentioned in 1.1 above to humans. **(40 marks)**
- 2) 2.1 Compare and contrast between hemimetabolous and holometabolous development in insects. **(50 marks)**
- 2.2 Explain in a stepwise manner changes that occur in the insect integument during the process of moulting in insects. **(50 marks)**
- 3) 3.1 Name **four** types of semiochemicals that elicit intraspecific interactions. **(10 marks)**
- 3.2 Using examples explain the interaction each semiochemical (mentioned in 3.1 above) mediates stating clearly the outcome/s and the importance to insects. **(60 marks)**
- 3.3 Briefly comment on the use of sex attractants in insect pest control. **(30 marks)**
- 4) 4.1 Describe **four** types of insect collection methods from natural habitats. **(40 marks)**
- 4.2 Discuss the advantages and disadvantages of captive breeding of insects. **(60 marks)**
- 5) Explain the reproductive, morphological and behavioral adaptations of insects to avoid predation. **(100 marks)**
- 6) Write short notes on **any three (3)** of the following:  
a) Insect limbs  
b) *Musca domestica*  
c) The compound eye  
d) Cicada. **(100 marks)**