



NATIONAL OPEN UNIVERSITY OF NIGERIA
UNIVERSITY VILLAGE, PLOT 91 CADASTRAL ZONE, NNAMDI AZIKIWE
EXPRESS WAY, JABI - ABUJA.
FACULTY OF SCIENCE
Department of Biological Science
2025_2 EXAMINATIONS

BIO 407: BASIC ENTOMOLOGY

TIME: 2 Hours

CREDIT UNITS: 2

INSTRUCTION: Attempt THREE (3) questions in all. Question 1 is compulsory

- 1a. Outline the basic units of a typical insect head (5 marks)
- 1b. Discuss the process of Ecdysis in a typical insect (11 marks)
- 1c. Discuss the adaptation of insects under the following:
 - i. Relatively small size (3 marks)
 - ii. Body architecture (6 marks)
 - iii. Great reproductive capacity (5 marks)

2. Write notes on the characteristic features of the following Arthropoda Orders
 - a. Order Diplura (5 marks)
 - b. Order Thysanura (5 marks)
 - c. Order Microcoryphia (5 marks)
 - d. Order Siphonaptera (5 marks)

- 3a Arrange the following accordingly in their appropriate groups:
Housefly, Mosquito, Praying mantis, Diptera, Dragonfly, Butterfly, Moth, Cockroach, Damsel Fly, Odonata, Lepidoptera, Dictyoptera (5 marks)

- 3b. In a tabular form, differentiate between Order Odonata and Order Anoplura characteristics (15 marks)

- 4a. State the modifications in the mouth types of the following insects:
Sucking louse, Bee, Butterfly, Female mosquito, Mayfly, Housefly, Beetle, Edible termite, Praying mantis, Flea (8 marks).

- 4b. Write explanatory notes on the characteristics and roles of the following caste in the termite community
 - i. Workers (6 marks)
 - ii. Soldiers (6 marks)

5. Write short notes the anatomy of the following segments of the insect leg.
 - a. Coxa (5 marks)
 - b. Tarsus (5 marks)
 - c. Pretarsus (5 marks)
 - d. Femur (5 marks)