



National Open University of Nigeria
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja
Faculty of Science

APRIL 2019 EXAMINATION

COURSE CODE: BIO 407

COURSE TITLE: BASIC ENTOMOLOGY (2 CREDIT UNITS)

TIME ALLOWED: 2HOURS

INSTRUCTION: QUESTION ONE IS COMPULSORY AND ANY OTHER THREE QUESTIONS.

1. a. Enumerate ten characteristics of insects **(5marks)**
b. State **five** beneficial and detrimental effects of insects **(5 marks)**
c. Outline **five** factors that contributes to the success of insects **(5marks)**
e. Briefly describe the evolution of insects **(5marks)**
f. What is **Tagmatization** in insects? **(5marks)**
2. a. The foregut of the digestive system of insects is divided into four regions:
 - i. Name these **four** regions **(4 marks)**
 - ii. State **one** characteristic feature/function of each of these regions **(4marks)**
- b. Mention the **three** divisions of the Visceral Central Nervous system of insects **(3marks)**
- c. State **one** function each of these divisions of the Visceral Central Nervous system of insects **(3marks)**
- d. The trachea system of insects is divided into two on the basis of spiracles. Mention these two systems **(1mark).**

3. a The class **Apterygota** is classified as one the most primitive class of insects because they possess certain characteristics. State these characteristics (**3marks**).

b. Outline **five** characteristics of the **Proturans** (**5marks**)

c. Cockroaches belong to the group of insects called **Dictyoptera**. List **five** characteristics of this group (**5marks**)

d. State any **four** economic importance of flies (**2marks**).

4. a. Describe the mouth part of insects (**5marks**).

b. i. Mention **two** basic types of mouth parts found in insects (**2marks**).

ii. State **one** function each of these mouth parts found in insects? (**2marks**)

c. State the **two** functions of Maxilla in insects (**2marks**)

d. The legs of insects consist of six segments. List any **four** of these segments (**4marks**)

5. a. i. Define moulting in insect (**2 mark**)

ii. Describe the process of moulting in insects (**13 marks**)