



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

OCTOBER/NOVEMBER 2016 EXAMINATION

COURSE CODE: BIO 407

COURSE TITLE: BASIC ENTOMOLOGY

TIME ALLOWED: 2HOURS

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

1. a. Enumerate **ten** characteristics of insects **(5marks)**
b. State **five** beneficial effects of insects **(2 ½ marks)**
c. State **five** detrimental effects of insects **(2 ½ marks)**
d. Discuss **five** factors that contributes to the success of insects **(10 marks)**
e. In few words, describe the evolution of insects **(5marks)**

2. a. The foregut of the digestive system of insects is divided into four regions:
 - i. What are these **four** regions **(4marks)**
 - 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. Briefly 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 in order ,any **four** of these segments **(4marks)**

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

ii. Describe the process of moulting in insects **(5marks)**

b. State **five** behavioural adaptations of termites **(5marks)**

c. Outline **three** behavioural adaptations of bees **(3marks)**

6. a. Explain the term: **Tagmatization** in insects **(5marks)**

b. The head of insects can be classified into three (3) types on the basis of the orientation with the mouth part:

i. Indicate **three** types of classifications **(3marks)**

ii. Giving examples, state **two** features of each of these classifications **(6marks)**

iii. Mention **two** types of simple eyes in insects **(1 mark)**

