



**NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
MARCH/APRIL 2016 EXAMINATION**

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: BIO 407
COURSE TITLE: BASIC ENTOMOLOGY

TIME ALLOWED: 2HOURS

INTRUCTION: ANSWER QUESTION 1 (COMPULSORY) AND ANY OTHER THREE QUESTIONS.

1a.Enumerate **five** characteristics of insects **(5marks)**

b. What are **five** beneficial effects of insects **(5marks)**

c. State **five** detrimental effects of insects **(5marks)**

d. What are the **five** factors that contributes to the success of insects **(5marks)**

e. Briefly describe the evolution of insects **(5marks)**

2a 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)**.

3a. Define Tagmatization in insects **(1mark)**

b. The head of insects can be classified into 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 in each of these classifications **(9marks)**

iii.What are the **two** types of simple eyes in insects **(2marks)**

4a. 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)**

5a. 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)**.

6a. 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)**