



NATIONAL OPEN UNIVERSITY OF NIGERIA

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

APRIL 2019 EXAMINATIONS

COURSE CODE: BIO 414

COURSE TITLE: APPLIED ENTOMOLOGY (2 CREDIT UNITS)

TIME ALLOWED: 2HOURS

INSTRUCTION: ANSWER QUESTION ONE AND ANY OTHER THREE QUESTIONS.

1. a. Define pest, pesticides and chemical pest control **(3marks)**
b. Enumerate **ten** ideal qualities of an insecticide **(5marks)**
c. Based on organisms against which the pesticides are used, mention **four** different types of pesticides **(2marks)**
d. Give a concise classification of insects based on their economic importance. Mention at least **one** example in each classification **(5marks)**
e. Honey bee is known to be a very good example of an economic insect. Briefly describe its life Cycle **(10marks)**
2. a. Mention **ten** parasitic mites of mammals **(10marks)**
b. Enumerate **five** mites of named invertebrate organisms **(5marks)**

3. a. The classification of an insect as a pest is a subjective one, based on its potential damage to human purposes. Explain **(8marks)**.
b. State **four reasons** why some insects are considered as pest? **(4marks)**.
c. Mention **three** insects that are considered as pests **(3marks)**.
4. a. What are the important advancements reckoned with in the study of insecticide metabolism? **(6marks)**
b. Briefly explain the properties of pesticides which determine their behavior and fate **(4marks)**
c. Explain how Pesticides enters into the atmosphere **(5marks)**
5. a. Give characteristics with examples of predator-prey and host-parasitoid relationships amongst insects **(5marks)**
b. Mention the specific orders of insects that are involved in these relationships **(5marks)**
c. Explain the techniques used by insect as predators and parasitoids **(5marks)**