



**NATIONAL OPEN UNIVERSITY OF NIGERIA  
FACULTY OF AGRICULTURAL SCIENCES  
DEPARTMENT OF CROP AND SOIL SCIENCES  
2020\_1 EXAMINATION**

**COURSE TITLE: STORED PRODUCE PROTECTION**

**COURSE CODE: CRP 311**

**TOTAL SCORE: 70 MARKS**

**TIME ALLOWED: 3 hours**

**INSTRUCTION: Answer compulsory question 1 (25marks) and any THREE questions (15 marks each)**

**QUESTION 1**

- i) What is a LD-50?
- ii) What is the difference between a contact and systemic herbicide?
- iii) Cultural controls of insects include which of the following
  - a. crop rotation
  - b. tillage methods
  - c. resistant or tolerate varieties
  - d. all of the above
- iv. Which of the following should not be kept in a pesticide storage area?
  - a. Broom
  - b. Shovel
  - c. Fire Extinguisher
  - d. Saw dust or other absorbents
  - e None of the Above
- v. Which choice would be an example of a biological method of pest control?
  - a. applying a pre emergence herbicide
  - b. cultivating between rows
  - c. crop rotation
  - d. increasing the population of the pests natural enemy.
- vi. Which of the following is a guideline for transporting pesticides?
  - a. Throw them in the back of the truck
  - b. Put them in with the groceries
  - c. Put correct warning signs on vehicle
  - d. Throw dirt on top of any spills to hide them
- vii. Which is a way Pesticides kill insects?
  - A. Mouth
  - B. Contact
  - C. Breathing
  - D. All of the Above
- viii). Which is not a method of control?
  - A. Cultural
  - B. Mechanical
  - C. Biological

- D. Legal
  - E. All are methods of control
- ix). Fire Blight is an example of:
- A. Virus
  - B. Fungi
  - C. Bacteria
  - D. Insect
- x). Which on the list is not a chemical formulation?
- a) fungicide
  - b) Dust
  - c) Fumigants
  - d) granules
  - e) Emulcifiable concentrates
- xi) Which of this is not a type of pesticide
- a) Fungicide
  - b) Insecticide
  - c) Miticides
  - d) Organochloride
  - e) Bactericide
- xii) Which of these is not a group of pesticide active ingredient.
- a) Organochloride
  - b) Organophosphorus
  - c) Carbamate
  - d) Virucide
  - e) Pyrethroid
- xiii) Which of the following is not a method used in controlling insects?
- A) Identification
  - B) Cultural
  - C) Mechanical
  - D) Biological
- xiv) What order should one follow when mixing pesticides?
- a. Liquids, add E concentrate, Water Soluble, Agitate
  - b. Agitate, Water Soluble, add E concentrate, Liquids
  - c. Water Soluble, Agitate, add liquids, add E concentrate
  - d) a, b, & c
- xv) What does EC stand for?
- xvii) What is an Integrated Pest Management system?
- xviii. Which of the following is not a natural control in Integrated Pest Management?
- a. Climate Control
  - b. Cultural Control
  - c. Geographic Barriers
  - d. Natural Enemies
  - e. Shelter Control
- xix) Which is not a natural control element against pests
- a) Climate
  - b) Introduction Natural Enemies

- c) food and water supply
- d) all of the above
- xx) What is meant by the term "lethal dose"?
- xxi) Between an emulsifiable concentrate, a wettable powder, and a soluble powder, which requires the most agitation in the tank?
  - (a) Wettable Powder (b) Oil (c) fumigants (d) fumigants
- xxii) Which formulation on the list is not ordinarily water mixable
  - a) Oil (b) Powder (c) fumigants (d) aerosols
- xxiii) What do you use to facilitate mixability of a pesticide that is not water soluble
  - a) Soap or detergents (b) Emulsifier (c) hot water (d) petrol (e) a & b.
- xxiv) What do nematodes feed on?
  - a. leaves
  - b. Roots and lower stems
  - c. seeds
  - d. flower
- xxv). What does the abbreviation IPM stand for?
  - a. Internal Pesticide Market
  - b. Integrated Pesticide Manager
  - c. Important Pest Monitor
  - d. Integrated Pest Management

### **QUESTION 2**

- a) Explain five (5) problems that can be encountered in the use of chemical pesticides.
- a) Mention three groups of insecticides used in storage
- b) List three ways in which insecticides penetrate the bodies of insects

### **QUESTION 3**

- a) Describe three signal words that are used to express pesticide toxicity.
- b) What are the conditions that make the use of pesticides acceptable
- (c) Mention four (4) control techniques for stored produce pests.

### **QUESTION 4**

- a) What are the Advantages (Benefits) of Pesticides usage in stored produce protection?
- b) Describe storage Insects on the basis of their feeding habit
- 4c. Write descriptive note on Types of pesticides application methods

### **QUESTION 5**

- a) List five (5) methods used in to stored produce application of pesticides
- b) Describe the recommended procedures for cleaning pesticide-soiled clothing for re-use
- c) Name 3 major components of a sprayer

### **QUESTION 6**

- a) What are the Problems associated with Overuse of Pesticides?
- b) Mention three possible reasons for spray inefficiencies.
- c) Mention three (3) ways in which pesticides affect the environment