



**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