

PARUL UNIVERSITY
COLLEGE OF AGRICULTURE
B.Sc. (Hons.) Agriculture Winter 2019-20 Examination

Semester: 4
Subject Code: 20104251
Subject Name: Insect Ecology & Integrated pest management including beneficial insects

Date:04/12/2019
Time:02:00 pm to 04:30pm
Total Marks: 60

Instructions

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Do as Directed.**A. Fill in the blanks. (Each of 1.00 marks)****(10)**

1. Alternate drying and wetting rice fields reduces the population of _____
2. Banding with grease or slippery polythene sheets around trunk of mango reduces _____ pest attack
3. _____ defined ecology as 'the study of the structure and functions of nature'
4. Father of Host Plant Resistance is _____
5. _____ is the cultivation of earthworms, especially in order to use them to convert organic waste into fertilizer
6. Full form of DIPA is _____
7. First Organophosphates compound is _____
8. _____ is the level of injury where damage can be measured.
9. _____ is the study of the group or groups of organisms associated in a community in the same environment.
10. _____ is extracted from the roots of *Derris elliptica* plant

B. Multiple choice type questions. (Each of 1.00 mark)**(10)**

1. When crowding, the insects feed on the individuals of the same species is called.....
 - a) Carnivorous
 - b) Cannibalism
 - c) Both a and b
 - d) None of above
2. Which one is granular insecticide?
 - a) Carbofuran
 - b) Phorate
 - c) Both a and b
 - d) None of above
3. The competition occurring between members of one species is called.....
 - a) Interspecific competition
 - b) Intraspecific competition
 - c) Both a and b
 - d) None of above
4. _____ is first synthetic analogue of pyrethroids
 - a) fenvalerate
 - b) allethrin
 - c) permethrin
 - d) None of above
5. Rotenone is act as a.....
 - a) Nerve poison
 - b) Contact poison
 - c) Fish poison
 - d) All of above
6. Full form of CIB
 - a) Central Insects Board
 - b) Central Insecticide Beauru
 - c) Central Insecticide Board
 - d) All of above
7.coined the term pheromone
 - a) Karlson and Butenandt
 - b) Paul Muller
 - c) E. F. Knipling
 - d) None of above
8.Parasites that live in the body of the host
 - a) Ectoparasites
 - b) Endoparasites
 - c) Both a and b
 - d) None of above
9. White muscardine fungus is.....
 - a) *Verticillium lecanii*
 - b) *Beauveria bassiana*
 - c) *Hirsutella thompsonii*
 - d) All of above

10. An ecosystem is a complete interacting system of with physical environment is called.....

- a) Community
- b) Individual
- c) Population
- d) None of these

Q.2 Do as Directed.

A. Define the following. (Any five)

(05)

1. Integrated Pest Management
2. Antixenosis
3. Economic Threshold Level (ETL)
4. Pesticide Residue
5. Ecology
6. Key pest
7. LD₅₀

B. Answer the following. (Any Five)

(05)

1. Any two reference books of Integrated Pest Management
2. Components of Integrated pest management
3. Enlist the pesticide application methods
4. Characteristics of ideal microbial insecticide
5. Write two examples of parasitoids and predators each.
6. Difference between parasites and predators
7. Give two rodenticides names

Q.3 Write short notes. (Any five)

(15)

1. Pest forecasting
2. Microbial insecticides
3. Vermiculture
4. Host plant resistance
5. Legislative control
6. Sterile insect technique

Q.4 Attempt any Three/Long Questions/Example

(15)

1. Explain Biological control with examples
2. Give the classification of insecticides and explain in details
3. Explain the effects of abiotic factors on population growth of insects with examples
4. Explain the categories of pests with examples