

PARUL UNIVERSITY
COLLEGE OF AGRICULTURE
B.Sc. (Hons.) Agriculture Winter 2018 - 19 Examination

Semester: 4

Date: 19-12-2018

Subject Code: 20104251

Time: 02:00 pm to 4:30pm

Subject Name: Insect Ecology and IPM including Beneficial Insects

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. _____ pests that occur on a crop during a particular season of the year.
2. _____ defined ecology as 'the study of the structure and functions of nature
3. *Epiricania melanoleuca* is an important parasitoid of _____
4. Father of Host Plant Resistance was _____
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. Insecticidal property of DDT discovered by _____
8. When the commensal uses its host as a means of transport the phenomenon is termed as _____.
9. _____ is the study of the group or groups of organisms associated in a community in the same environment.
10. _____ is the level of injury where damage can be measured.

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

1. The increase in number of a particular pest species is termed as.....

a) Pest Outbreak	c) pesticide resistance
b) Pest residue	d) All above
2. Which one is granular insecticide?

a) Carbofuran	c) Both a and b
b) Phorate	d) None of above
3. When crowding, the insects feed on the individuals of the same species is called.....

a) Carnivorous	c) Both a and b
b) Cannibalism	d) None of above
4. An ecosystem is composed of.....

a) Bacteria and biotic components	c) Various forms of life supporting environment
b) Bacteria and abiotic components	d) Producer, consumer and bacteria
5. Which one is abiotic factor?

a) Temperature	c) Parasite
b) Predator	d) All of above
6. Green muscardine fungus is.....

a) <i>Beauveria bassiana</i>	c) <i>Metarhizium anisopliae</i>
b) <i>Verticillium lecanii</i>	d) None of above
7. Adoption of appropriate farm practices to eliminate or reduce the pest population is called.....

a) Legal	c) Mechanical
b) Physical	d) Cultural
8. Pyrethrum is extracted from dried flower heads of.....

a) <i>Chrysanthemum malaccensis</i>	c) <i>Chrysanthemum cinerariaefolium</i>
b) <i>Derris elliptica</i>	d) None of above

9. Helilure attracts the male of.....
- | | |
|------------------------|----------------------|
| a) <i>Helicoverpa</i> | c) <i>Spodoptera</i> |
| b) <i>Pectinophora</i> | d) None of these |
10. First Organo Phosphate compound is.....
- | | |
|---------------------|------------------|
| a) Methyl parathion | c) TEPP |
| b) Diazinon | d) None of above |

Q.2 Do as Directed.

A. Define the following. (Any five)

(05)

1. Key pest
2. Community
3. Economic Threshold Level (ETL)
4. Biotype
5. Ecology
6. Chemosterilant
7. LC₅₀

B. Answer the following. (Any Five)

(05)

1. Any two reference books of insect ecology and IPM
2. Principles Integrated pest management
3. Difference between Intraspecific competition and Interspecific competition
4. Characteristics of ideal microbial insecticide
5. Write two examples of parasitoids and predators each.
6. What is botanical insecticides?
7. Give two acaricides names

Q.3 Write short notes. (Any five)

(15)

1. Pest surveillance
2. Mechanical control
3. Vermiculture
4. Host plant resistance
5. Non insect pests
6. Sterile insect technique

Q.4 Attempt any Three/Long Questions/Example

(15)

1. Explain the effects of biotic factors on population growth of insects with examples
2. Give the classification of insecticides and explain in details
3. Explain cultural method of insect control with examples
4. Explain Biological control with examples