

KERALA AGRICULTURAL UNIVERSITY
B.Sc. (Hons.) Agriculture – 2009 Admission - IInd Semester
Final Examination - August 2010

Cat. No. : Ento 1202
Title : Insect Ecology and Integrated Pest Management
(2+1)

Max. marks: 80
Time : 3 hours

I Answer all questions (20x0.5=10)

State whether the following statements are true or false

1. Sporadic pests are the ones found all through the year
2. Red hairy caterpillar is a classical example of seasonal pest.
3. Light trap is an example for physical control
4. Adjustment of sowing date is cultural control.
5. *Chrysoperla carnea* is used for the control of grape vine mealy bug
6. Phorate belongs to the carbamate group of insecticides
7. Mixing of red earth with pulses is cultural control.
8. Natural enemies of pests is not an abiotic factor.
9. Emamectin benzoate is available commercially as Success
10. Fenvalerate belongs to the OP group.

Fill up the blanks

11. Chemicals used to control mites are called _____
12. _____ lit. of water per hectare is used in a high volume spray
13. Insecticides Act came into force in the year _____
14. Sterile male technique has been successfully used against _____
15. Accidental introduction of one species replacing another is called _____
16. LD₅₀ is expressed in terms of _____
17. The term Antixenosis was coined by _____
18. ETL for rice stem borer is _____ dead heart in the vegetative stage.
19. Indoxacarb is available commercially as _____
20. Spinosad is obtained from _____

II. Define/ describe in one / two sentences (10x1=10)

- | | | |
|----------------|---------------------|----------------------|
| 1. Antifeedant | 5. Stomach poisons | 9. Resurgence |
| 2. EIL | 6. Pseudoresistance | 10. ED ₅₀ |
| 3. Synecology | 7. Trap crop | |
| 4. Parasitoid | 8. NPV | |

III. Write short answers on any TEN of the following (10x2=20)

1. Pesticide formulations
2. Mode of action of OP compounds
3. Hyper and Super parasitism
4. Life table studies
5. Qualities of an effective natural enemy
6. Biotic factors
7. Horizontal and vertical resistance
8. Legislative method of pest control
9. Mechanisms of host plant resistance
10. Repellants and attractants

Refute/defend

11. Insecticides used at the right dose and at right time is highly effective.
12. IPM is a boon to the farming community

IV Write short essays on any FOUR of the following

(4x5=20)

1. Bring out the classification of insecticides
2. Narrate the merits and demerits of biological control. Also cite four situations of successful biological control
3. Describe the hazards and limitations of chemical control
4. Outline classification of pest damage/injury to crops along with examples
5. What are the different categories of pests and explain the causes for their outbreak
6. Outline the procedure for mass multiplication of *Trichogramma* sp.

V Write essays on any TWO of the following

(2x10=20)

1. Discuss the role of biotechnology in pest management
2. Define IPM and discuss the important tools
3. Elaborate on the novel insecticides for use in IPM