

**KERALA AGRICULTURAL UNIVERSITY**  
**B.Sc. (Hons.) Agriculture – 2008 Admission**  
**II<sup>nd</sup> Semester Final Examination - September 2009**

Cat. No. : Ento 1202

Max. marks: 80

Title : Insect Ecology and Integrated Pest Management (2+1) Time : 3 hours

**I. i) Fill up the blanks:**

10 x 0.5 = 5 marks

1. Insects which destroy other insects are called as \_\_\_\_\_.
2. Pests which occur most frequently on a crop are \_\_\_\_\_ *pests*.
3. Pest surveillance comprises of ~~—~~basic components .
4. Net sweeping method is suited for the assessment of \_\_\_\_\_.
5. IPM means \_\_\_\_\_.
6. Father of HPR \_\_\_\_\_.
7. Warfarin is an \_\_\_\_\_.
8. Insecticides Act came in the year \_\_\_\_\_.
9. Toxicity produced by a single dose of a toxicant is \_\_\_\_\_ toxicity
10. MRL means \_\_\_\_\_.

**ii) Match the following:**

5x 0.5 = 2.5 marks

- |               |                                   |
|---------------|-----------------------------------|
| i) Endosulfan | a - Botanical insecticide         |
| ii) NPV       | b - Chlorinated hydrocarbon       |
| iii) Neem     | c - Organophosphorous insecticide |
| iv) Sprayer   | d - Microbial insecticide         |
| v) DDVP       | e - Plant protection equipment    |

**iii) State True OR False:**

5x 0.5 = 2.5 marks

1. Vit.K<sub>1</sub> can be used as antidote.
2. Hollow cone nozzles are commonly used in Pest & Disease control.
3. Adjusting time of planting comes under cultural method of pest management
4. *Isotima javensis* controls Tobacco caterpillar.
5. Clipping the tip of seedlings practised to reduce population of rice Yellow Stemborer

**II. Write answers in a word or sentence /define**

**10x 1 = 10 marks**

1. Egg parasitoid.
2. Predator
3. What are the pests controlled by NPV?
4. Emulsifying agent
5. Give two examples for fumigants
6. Trade names of the chemical Endosulfan.
7. Examples for IGRs
8. What are the pests controlled by Fish oil Rosin soap?
9. Expand: LD<sub>50</sub>
10. Which gene from *Bt* is used in Transgenic studies?

**III. Write short notes(Answer any TEN)**

**10x2= 20 marks**

1. Life table of Pest.
2. Fungi used in pest control
3. Antidote
4. Limitations of IPM
5. Botanical insecticides
6. Larval parasitism
7. ETL
8. Attractants
9. Nematicides
10. Classification of insecticides based on mode of action
11. Insecticide Formulation
12. *Bacillus thuringiensis*

**IV. Write short essays on any Four of the following**

**4x5 = 20 marks**

1. Types of Insect parasitism.
2. Weed killers
3. Assessment of Insect population
4. Cultural method of Pest control
5. Preparation procedure for spray solution
6. Zinc phosphide as rodenticide

**V. Write essays on Any Two**

**2x10 = 20 marks**

1. Biotechnology in pest management.
2. Repellants, antifeedants & pheromones
3. Plant protection equipments