

B.Sc. (Ag.) Honours Semester-IV Examination, 2017
Course No.: AEN-221
(Insect Ecology and Integrated Pest Management)

Signature of Centre Superintendent

Roll No.: (in figure) _____ (in words) _____

Student Index No. _____ Regn. No. _____ of _____

Time: Two Hours

Full Marks: 40

Questions are of value as indicated in the margin

Part-I
(Objective and Short Answer Type)
(Use only ball point pen)

Time: 20 minutes

Full Marks: 10

Note: 1. Answer in question paper itself.

2. Striking, rewriting or overwriting are not allowed in the objective type questions.

1. Fill up the blanks with most appropriate words:

0.5×10=5

- a) Rotenone is extracted from _____.
- b) Cinerin and Jasmolin are the active principles of _____.
- c) Proponure belongs to _____ group of insecticides.
- d) Buprofezin is a _____.
- e) Vitamin k is the antidote of _____.
- f) "Salient Spring" was written by _____.
- g) Bracon spp. is a _____ parasitoid.
- h) NBAIR is situated in _____.
- i) R.H. Painter works on _____.
- j) Crepuscular insects are active during _____.

2. Tick (✓) the correct alternatives

0.5×10=5

- a) Insecticides act was passed in the year - (i) 1971 (ii) 1968 (iii) 1986 (iv) 1972
- b) Caterpillar wilt or tree top disease is caused by – (i) Bacteria (ii) Virus (iii) Fungi (iv) MLO
- c) *Beauveria bassiana* is known as – (i) Green muscardine (ii) Yellow muscardine (iii) Purple muscardine (iv) White muscardine
- d) The infective stage of entomopathogenic nematode is – (i) IJ2 (ii) IJ3 (iii) Quiescent stage (iv) None of the above
- e) Bio control agent of weed; - (i) *Coccinella septumpunctata* (ii) *Trichogramma chilonis* (iii) *Neochetina bruchi* (iv) *Cicindella sexpunctata*
- f) Droplet size of aerosol is – (i) 5μ - 50μ (ii) 0.1μ - 5μ (iii) 50μ -100μ (iv) 100μ - 250μ.
- g) Phoresy is one type of – (i) flying (ii) Swimming (iii) dancing (iv) transport mechanism.
- h) DDT was first synthesized by – (i) Paul Mullar (ii) Michael Faraday (iii) Othmar Zeidler (iv) Vander Linden
- i) Destructive insect and pests act was passed on – (i) 1912 (ii) 1924 (iii) 1914 (iv) 1916.
- j) Dicofol is mainly – (i) Insecticide (ii) Acaricide (iii) Fungicide (iv) Bactericide.

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Part - II
(Descriptive Type)

Time: 100 Minutes

Full Marks: 30

Questions are of value as indicated in the margin.

Answer *any three* questions from the following

3. Write down the mechanism of host plant resistance. What is vertical and horizontal resistance? What is SIRM? Write the basic requirements of SIRM? 3+4+1+2=10
 4. What is IPM? Write down the objectives, components and justification of IPM. Define endemic and epidemic pest. 2+5+3=10
 5. Classify insecticides based on their mode of entry. Briefly explain the mode of action of organophosphorus or organocarbamate insecticides. Define insect repellents and antifeedants. What is Universal antidote? 3+4+2+1=10
 6. What is poikilothermic animal? What is biotic potential of insects? How biotic factors affect insect population? What is the role of co-efficient of destruction? 2+2+4+2=10
 7. Write short notes on the following: (*any four*) 4×2.5=10
 - i) Differentiate between JH and Anti JH.
 - ii) How pheromone traps help in insect pest management?
 - iii) Generally ETL is lower than EIL – Justify.
 - iv) Techniques in biological control.
 - v) Mode of action of Bt.
 - vi) Differentiate between parasitoid and predator.
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