

B.Sc. (Honours) Agriculture Semester-IV Examination, 2019

Course No: AEN-221[Old]

(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

- i) Pest population at EIL is _____ than the ETL.
- ii) National Biodiversity Authority (NBA) is located at _____.
- iii) One-way outward movement of individuals from one place to another is called _____.
- iv) NBAIR is situated in _____.
- v) *Trichogramma spp.* is a _____ parasitoid.
- vi) The father of insect pathology is _____.
- vii) One L. E. For *Helicoverpa* is _____ PIB.
- viii) Abamectin is isolated from soil actinomycete _____.
- ix) Dimilin is an example of _____.
- x) The crop having the maximum area under transgenic crop in the world is _____.

2. **Tick (✓) the correct alternatives:** 0.5×10=5

- i) Ethoxazole is mainly a) Insecticide b) Acaricide c) Fungicide d) Bactericide
- ii) Use of yellow sticky trap coated with castor oil to trap white fly is a method of a) Physical control b) Mechanical control c) Biological control d) Cultural control.
- iii) The Central Insecticide Act came into force from a) 1950 b) 1966 c) 1971 d) 1975
- iv) Which of the following is lepidopteran predator a) *Menochilus* b) *Dipha* c) *Brumus* d) *Cryptolaemus*
- v) Which of the following insect pest is of domestic quarantine importance a) Cottony cushion b) Coffee berry borer c) San Jose scale d) All of these
- vi) Which of the following is a cultural method for controlling insects a) Crop rotation b) Quarantine c) Window screens d) Sex pheromone traps.

P.T.O.

(2)

vii) Non preference to host plant is also known as

- a) Antibiosis b) Antixenosis c) Tolerance d) None of these

viii) Sterile insect control method is most effective against

- a) Honey bee b) Housefly c) Termite d) None of these

ix) The lateral movement theory of insecticidal penetration was proposed by

- a) Gerolt b) Matsumura c) Ross d) Menton

x) The first report of insecticide resistance in India was that of

- a) Diamondback moth b) American bollworm c) Singhara beetle d) Mustard aphid

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Semester-IV
Course No: AEN-221 (Old)
(Insect Ecology and Integrated Pest Management)

Part - II
(Descriptive Type)

Time : 100 Minutes

Full marks : 30

Questions are of value as indicated in the margin

Answer *any three* questions

3. What do you mean by survey and surveillance? What are the objectives of pest surveillance?
Write a brief note on the different methods of survey. 2+2+6=10
 4. What do you mean by biotic potential, environmental resistance and carrying capacity?
Distinguish between 'S' shaped and 'J' shaped population growth curves. 2+2+2+4=10
 5. What is Gain threshold? Distinguish between ETL and TIL. How the economic decision levels are calculated? Explain with an example. 2+3+5=10
 6. What do you mean by ecological engineering? Describe various habitat diversification measures by which pest population can be managed and predator population can be enhanced. 3+7=10
 7. Write short notes on the following (**any four**) : 2.5×4=10
 - a) Semiochemicals
 - b) Legislative pest control
 - c) EPN in pest management
 - d) Push-Pull strategy
 - e) Genetic engineering in pest management
 - f) Insect Growth Regulator (IGR)
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