Roll No. | | | | | | | | | | | | | **Total No. of Pages: 02**

Total No. of Questions: 09

B.Sc.(Agriculture) (2014 & Onwards) (Sem. – 4)

INSECT ECOLOGY AND INTEGRATED PEST MANAGEMENT

M Code: 72756

Subject Code: BSAG-404

Paper ID: [72756]

Time: 3 Hrs. **Max. Marks: 60**

INSTRUCTIONS TO CANDIDATES:

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION A

l. Write short notes on:

a) Agroecosystem and its main features

b) Classification of pest based on level of infestation

c) Control measures against rodent pests

d) Cultural control

e) Economic threshold level

f) Biorational pesticides

g) Classify insecticides on the basis of mode of entry into the insect body

h) Host Plant Resistance

i) Antifeedants

j) Pest forecasting

SECTION B

2. Define crop loss. What is the utility of estimation of crop losses in pest management? Give an outline of various methods used for relative estimates of pest populations. (1 +2+2=5)

3. Define IPM. What are the critical factors which are required for execution of IPM programmes? What should be the goal of an IPM programme? (1 +2+2=5)

4. What are the advantages and disadvantages of using pheromones in pest control? Classify allelochemicals into different categories. (2+3=5)

5. Outline the advantages and limitation of synthetic pyrethroids. Classify organophosphates on the basis of their chemical nature. (2+3=5)

6. Classify the pesticide formulations. Enumerate the salient features of solid formulations. What are poison baits? (1 +3+ 1 = 5)

SECTION C

7. Define ecology. Describe various abiotic factors which influence the distribution and abundance of insects. Outline the structural components of an ecosystem. (1 +5+4=10)

8. Define microbial control. What should be the characteristics of an ideal microbial insecticide? Write the different types of microbial control agents with examples used in insect control. List the advantages and disadvantages of microbial control.
(1 +2+3+4=10)

9. Write the short notes of the following insecticides:

   a) Neonicotinoids, b) Phenyl pyrazoles, c) Oxadiazines, d) Pyridines and e) Nereistoxin derivatives

(2+2+2+2+2=10)