

Roll No.

Total No. of Pages : 02

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B.Sc. Agriculture (Sem.-4)
INSECT ECOLOGY AND INTEGRATED PEST MANAGEMENT

Subject Code : BSAG-404

M.Code : 72756

Date of Examination : 01-07-22

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION 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

1. Write short notes on :

- a) Write short note on abiotic levels of organism.
- b) Differentiate community, ecosystem, population and biosphere.
- c) Define natality and mortality. Among the natality and mortality which is most affected by the environment?
- d) How mite differs from insect based on their body characteristics?
- e) How rodents and birds damage the agriculture crops? Give one example of each with their suitable management.
- f) Give brief about advantages and disadvantages of insecticides used in pest management.
- g) What kind of IPM can be suggested in management of brinjal shoot and fruit borer?
- h) Define pesticide. How it differs from insecticides?
- i) Give brief about mode of action of neonicotinoids and organochlorines.

- j) Define plant resistance to insects. How host plant resistance is utilized in pest management?

SECTION-B

2. Describe bio-rational approaches for pest management in fruit and vegetable crops recommended by PAU, Ludhiana.
3. Explain IPM strategies for management of bollworm complex and whitefly in cotton.
4. Write short note on primary and secondary crop losses. Describe regular, endemic, potential, occasional, seasonal and sporadic pests as per their association with their crop host.
5. What is legislative control? List its categories. When was the Insecticides Act, 1968 passed and enforced, and give its specific objectives?
6. Which insecticides fall into neonicotinoids group for pest management? Give their mode of action and impact on beneficial insects?

SECTION-C

7. What is Integrated Pest Management (IPM) and explain its origin? Explain IPM approaches for management of maize borer and brinjal shoot and fruit borer.
8. What is biological control and its types? Describe mechanism of biological control through *Trichogramma* in maize, sugarcane and rice crops.
9. Describe critical factors required for successful implementation of IPM programmes. What constraints are faced in implantation of IPM?

NOTE : Disclosure of identity by writing mobile number or making passing request on any page of Answer sheet will lead to UMC case against the Student.