



## SECTION-A

2. Describe various chemical, physical, mechanical and cultural control strategies recommended by PAU, Ludhiana for management rice stemborers and leaf folder?
3. Define microbial control of pest. What is mode of action of *Bacillus thuringiensis* in lepidopteran pests? How the Nuclear Polyhedrosis viruses (NPV) affect the insects?
4. Define mechanical control and outline five methods for mechanical control of insects. Also list various pheromone traps and sticky traps which are useful for insect control.
5. Define legislative control and list its categories. When the Insecticides Act, 1968 passed and enforced, and what are its specific objectives?
6. What are the major insecticides in neonicotinoids group used for pest management? Give their mode of action in insects. What is their impact on beneficial insects?

## SECTION-C

7. Define Integrated Pest Control (IPC) and Integrated Pest Management (IPM). Explain IPM approaches for management of maize borer and brinjal shoot and fruit borer?
8. Write short note on semiochemicals, pheromones, allelochemicals and hormones? What are various hormones produced by endocrine organs in insects and what advantages and disadvantages of using hormones in pest management?
9. Giving one example, write briefly the mode of action of organochlorines and organophosphates? Explain the management of mites on brinjal, okra and chilli with different acaricides. Also describe use of pesticides as fumigants in rodents and stored grain pest management.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**