

19. (a) Describe about any two biological agents involved in pest management.

Or

- (b) Mention any 5 uses of insect growth regulators.
20. (a) What are the long run impacts of locust swarms? Explain.

Or

- (b) Summarize in detail about the reproduction and infestation of insects.

SECTION C — (3 × 10 = 30)

Answer any THREE the following

21. Discuss about the classification of insects.
22. Elucidate in detail about the bionomics and management of any two crop plants.
23. Describe the role of biotechnology in Insect Pest Management (IPM)
24. Elaborate about the various biological agents involved in pest management.
25. Discuss about the biological rhythms in insects and unusual behaviour of insects in detail.

S.No. 3333

P 22 ZOE1B

(For candidates admitted from 2022–2023 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Zoology — Elective

ENTOMOLOGY

Time : Three hours

Maximum : 75 marks

SECTION A — (20 marks)

Answer the following

- I. (A) Choose the Correct answer (5 × 1 = 5)
1. Which order of insects does not undergo complete metamorphosis?
- (a) Diptera (b) Lepidoptera
- (c) Orthoptera (d) Coleoptera
2. Harmful stage of *Citrus psylla* is _____
- (a) Nymph only (b) Adult only
- (c) Both (a) and (b) (d) Larval stage
3. IPM is also known as _____
- (a) IPC. (b) IDM.
- (c) IPA. (d) IIM.

4. Universal pest is _____.
 (a) Hoppers (b) Aphids
 (c) Thrips (d) Locust
5. The scientific name of desert locust is _____.
 (a) *Schistocerca gregaria*
 (b) *Nomadacris succincta*
 (c) *Schistocerca paranensis*
 (d) *Locusts migratoria*

(B) Fill in the blanks (5 × 1 = 5)

6. _____ is the most common pest in the world.
7. An example for polyphagous insect pest is _____.
8. Antimetabolites such as Amethopterin and Aminopterin are examples of _____.
9. _____ an insect whose larvae feed and develop within or on the bodies of other arthropods.
10. _____ causes locust migration

II. Answer the following (5 × 2 = 10)

11. Define pest outbreak.
12. What are economic threshold levels?

13. What is surveillance in pest management?
14. How do parasites differ from parasites?
15. Define foraging?

SECTION B — (5 × 5 = 25)

Answer the following, by either choosing (a) or (b)

16. (a) Brief about the adaptive features that contribute to the success of insects?

Or

- (b) What is pest resurgence? Explain.

17. (a) Write about the nature and management of cotton plant.

Or

- (b) What are all preventive measures in controlling storage pest?

18. (a) Describe the cultural and mechanical tools of pest management.

Or

- (b) Brief about the steps involved in pest risk analysis.