

(6 pages)

Reg. No. : _____

Code No. : 5457

Sub. Code : ZZOM 43

M.Sc. (CRCS) DEGREE EXAMINATION,
APRIL 2023.

Fourth Semester

Zoology - Core

ENTOMOLOGY

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

Choose the correct answer :

1. Identify the order in which beetles and weevils are included
 - (a) hymenoptera
 - (b) isoptera
 - (c) coleoptera
 - (d) diptera

7. Identify the pest of Paddy
 - (a) *Bombyx sp*
 - (b) *Megascolex*
 - (c) *Oryctes rhinoceros*
 - (d) *Chilo*
8. Tell the common name of *Leptocorisa varicornis*.
 - (a) rice bug
 - (b) cotton weevil
 - (c) cotton bug
 - (d) coconut beetle
9. Identify the following which controls the mosquito larva
 - (a) *Gambusia*
 - (b) Lady beetles
 - (c) Prawm
 - (d) Salmon
10. Identify an example of semiochemicals.
 - (a) Hormones
 - (b) Ecdyzone
 - (c) Insect pheromones
 - (d) FSH

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2. Match the following with the preservation of Pinned insects
 - (a) steaming
 - (b) dehydration
 - (c) sun drying
 - (d) heating
3. Match the insects which have chewing and lapping type of mouthparts
 - (a) bees and wasps
 - (b) mosquito
 - (c) ants
 - (d) cockroach
4. Which of the following exhibit the partial metamorphosis?
 - (a) wasp
 - (b) ant
 - (c) dragonfly
 - (d) all the above
5. Identify the following where the hemocytes are present
 - (a) lymph
 - (b) hemolymph
 - (c) spiracles
 - (d) stigmata
6. Identify the which Inorganic salts mostly present in the hemolymph of Insects
 - (a) sodium
 - (b) chlorine
 - (c) potassium
 - (d) all the above

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain the characteristics of order Hymenoptera.

Or

(b) Interpret the killing insects.
12. (a) Illustrate the segmentation in an abdomen.

Or

(b) Explain the hypermetabolous development in insect.
13. (a) Explain the functions of integuments in insects.

Or

(b) Write a note on hemolymph.
14. (a) Evaluate the damage caused by sugar cane leaf borer.

Or

(b) Predict the damages caused by *Oryctes rhinoceros*.

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15. (a) Write a note on pest control through cultural method.

Or

- (b) Write short note on Sterile insect technique.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Discuss the various method of collection and preservation of insects.

Or

- (b) Explain the following :

(i) Hemiptera

(ii) Isoptera.

17. (a) Illustrate the various type of mouthparts.

Or

- (b) Explain the life cycle of Insects.

18. (a) Order the types and functions of hemocytes.

Or

- (b) Illustrate the structure of female reproductive system of insects.

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19. (a) Predict the damages caused by *Chilo infuscatellus*.

Or

- (b) Summarize the beneficial insects.

20. (a) Design the applications of integrated pest management.

Or

- (b) Prepare an essay on the pest control through Organic compounds.

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