

Roll No.

D-1013

**M. Sc. (Fourth Semester) (Main/ATKT)
EXAMINATION, May-June, 2020**

ZOOLOGY

(Optional Group—C)

Paper Fourth

(Applied Entomology)

Time : Three Hours] [Maximum Marks : 80

Note : Attempt all Sections as directed.

Section—A 1 each

(Objective/Multiple Choice Questions)

Note : Attempt all questions.

Choose the correct answer :

1. Insects lacking the ability to fold their wings over the abdomen :
 - (a) Palaeoptera
 - (b) Lepidoptera
 - (c) Odonata
 - (d) Hymenoptera

2. Which one of the following belongs to the order Phasmatodea ?
 - (a) Stick insects
 - (b) Lice
 - (c) Butterfly
 - (d) Dragonfly
3. The fish helpful in controlling mosquitoes is :
 - (a) Gambusia
 - (b) Arius
 - (c) Opicephalus
 - (d) All of the above
4. Which one is member of order Hemiptera ?
 - (a) Honeybee
 - (b) True bugs
 - (c) Cricket
 - (d) Silverfish
5. Biological control is carried out by :
 - (a) Parasitic insects
 - (b) Predatory insects
 - (c) Micro organisms
 - (d) All of the above

P. T. O.

[3]

D-1013

6. is a store grain pest.
- (a) *Tribolium castaneum*
 - (b) *Leptocoracia*
 - (c) *Schistocerca*
 - (d) *Spodoptera*
7. Khapra beetle is :
- (a) *Rhizopertha dominica*
 - (b) *Trogoderma granarium*
 - (c) *Callosobruchus chinensis*
 - (d) *Dacuscucurbitae*
8. DD-136, a biological controller is related to :
- (a) Virus
 - (b) Bacteria
 - (c) Fungi
 - (d) Nematode
9. The vector of orange leaf disease in rice is :
- (a) Zig-zag leafhoppers
 - (b) Pink ants
 - (c) Pink stem borer
 - (d) Paleheaded stripe borer

[4]

D-1013

10. Which of these have historically caused extensive damage to crops ?
- (a) Butter flies
 - (b) Cockroaches
 - (c) Beetles
 - (d) Locusts
11. *Tinea pellionella* is :
- (a) Clothes moths
 - (b) Fruits beetle
 - (c) Cotton pest
 - (d) Pulse beetle
12. *Chilozonellus* is a pest of :
- (a) Stored grains
 - (b) Vegetable
 - (c) Maize
 - (d) Tobacco
13. Entomology as a tool to solving criminal cases was first used by this man :
- (a) Paolo Zacchia
 - (b) Sir Arthur Conan Doyle
 - (c) Song Ci
 - (d) Ambroise Pare

P. T. O.

[5]

D-1013

14. Which of these insects are considered to be late stage scavengers ?
- (a) Macrochetes mites
 - (b) Hide beetles
 - (c) Hister beetles
 - (d) Devil's coach-horse beetles
15. Pupae of silkworm is called :
- (a) Crysalis
 - (b) Imago
 - (c) Maggot
 - (d) Nayad
16. Sting capacity is found in :
- (a) Mate Honey Bee
 - (b) Only Queen
 - (c) Queen and Workers
 - (d) Male and Queen
17. Indian Lac Research Institute is situated in :
- (a) Jabalpur
 - (b) Ranchi
 - (c) Mirjapur
 - (d) Mysore

P. T. O.

[6]

D-1013

18. Indian silkboard was set up in :
- (a) 1949
 - (b) 1951
 - (c) 1953
 - (d) 1955
19. Silk thread is made of the following protein :
- (a) Casein
 - (b) Myrecin
 - (c) Fibroins
 - (d) All above mentioned
20. Foveicollis lycas is :
- (a) Red pumpkin beetle
 - (b) Cabbage butterfly
 - (c) Red cotton bug
 - (d) Red flour beetle

Section—B

2 each

(Very Short Answer Type Questions)

Note : Attempt all questions in **2** or **3** sentences.

1. Write down *five* important characters of subclass Apterygota.
2. What is unique about Diptera wings ?
3. What is the defining characteristic of Coleoptera ?
4. What are the *four* steps in Insect Pest Management ?

[7]

D-1013

5. What are the *four* major diseases of Rice ?
6. What is the silk glands ?
7. Name the *three* disease of Mango.
8. What insects are the most useful in forensic entomology ?

Section—C

3 each

(Short Answer Type Questions)

Note : Attempt all questions max 75 words.

1. Classify order Hemiptera giving suitable examples.
2. What is the life cycle of Lepidoptera ?
3. Describe in brief any *one* pest of sugarcane.
4. How can we control household pests ?
5. What is the medical importance of insects ?
6. What is the influence of insects on the environment ?
7. Describe the sting apparatus of worker honeybee.
8. Why should we eat insects it's the future of food ?

Section—D

5 each

(Long Answer Type Questions)

Note : Attempt all questions.

1. Describe the methods of collection of insects.

Or

Classify order Hymenoptera upto suborders (only) giving characters of the order and suborders.

2. Describe the Insect Pest management tools.

Or

Describe the life cycle, damage caused and control of any *two* pests of stored food grains.

[8]

D-1013

3. How and why do insects migrate ?

Or

How are insects used in medicine ?

4. Write an essay on sericulture.

Or

Scope and importance of lac culture in India.

D-1013

P. T. O.