

M.Sc. ZOOLOGY
THIRD SEMESTER
ENTOMOLOGY-I: INSECT STRUCTURE AND FUNCTION
MSZ-303 D

SET
A

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

(Objective)

Marks: 20

Choose the correct answer from the following:

1×20=20

1. Outermost membrane of the insect egg is called:
a. Amnion
b. Chorion
c. Serosa
d. None of the above
2. Olfactory receptor of insect belongs to:
a. Mechanoreceptor
b. Chemoreceptor
c. Photoreceptor
d. Thermoreceptor
3. Moulting hormone is secreted by:
a. Corpora allata
b. Corpora cardiaca
c. Brain
d. Prothoracic gland
4. Prothoracicotropic hormone (PTTH) is secreted by:
a. Prothoracic gland
b. Corpora cardiaca
c. Corpora allata
d. Suboesophageal ganglia
5. Asynchronous muscles are found in:
a. Butterfly
b. Moth
c. Honey bee
d. Mosquito
6. Insect enter in reproductive diapause in absence of:
a. Juvenile hormone
b. Moulting hormone
c. Prothoracicotropic hormone
d. All of the above
7. Wax gland of worker bee is situated on the:
a. Head
b. Thorax
c. Abdomen
d. Legs
8. Stridulatory organs are involved in:
a. Sound production
b. Light production
c. Flight
d. Receiving smell
9. In insect, alary muscles are involved in movement of:
a. Mouthparts
b. Head
c. Heart
d. Legs
10. Nymph is the juvenile stage of:
a. Ametabolous insect
b. Holometabolous insect
c. Hemimetabolous insect
d. All of the above

11. The endoskeleton of insect head is known as:
 - a. Gonopophysis
 - b. Ocelli
 - c. Labrum
 - d. Tentorium
12. Two pairs of insect wings present in:
 - a. Prothorax and mesothorax
 - b. Mesothorax and metathorax
 - c. Prothorax and metathorax
 - d. None of the above
13. In honey bees pollen basket is present in which segment of leg?
 - a. Coxa
 - b. Trochanter
 - c. Femur
 - d. Tibia
14. The separation of the cuticle from the epidermis is known as:
 - a. Ecdysis
 - b. Apolysis
 - c. Catalysis
 - d. None of the above
15. Chitin is absent in:
 - a. Epicuticle
 - b. Exocuticle
 - c. Endocuticle
 - d. All of the above
16. Which of the following is/are insect cuticular protein?
 - a. Resilin
 - b. Arthropodin
 - c. Sclerotin
 - d. All of the above
17. Leathery forewing of cockroach is known as:
 - a. Elytra
 - b. Tegmina
 - c. Hemielytra
 - d. None of the above
18. Piercing and sucking type of mouthparts are found in:
 - a. Mosquitos
 - b. Bugs
 - c. Beetles
 - d. Grasshoppers
19. Members of which insect order can't flex their wings?
 - a. Coleoptera
 - b. Orthoptera
 - c. Odonata
 - d. Lepidoptera
20. Complete metamorphosis is found in:
 - a. Coleoptera
 - b. Orthoptera
 - c. Hemiptera
 - d. All of the above

(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. Write the structure of light producing organ in insect. Describe the mechanism of light production. 5+5=10
2. Mention the types of muscles found in insect. Describe the ultrastructure of skeletal muscle. 2+8=10
3. Discuss about the hormonal control of reproduction in insect. 10
4. Write a note on 'silk gland' of silkworm and 'poison gland' of honey bee. 5+5=10
5. Write about structure of insect integument and mention its functions. 7+3=10
6. Briefly write about wing venation and wing modification of insects. 5+5=10
7. What is moulting? Describe the process of moulting in insect. 2+8=10
8. What are the salient features of class insecta? Briefly explain about apterygote orders of class insect. 3+7=10

= = *** = =