

M.Sc. ZOOLOGY
Third Semester (Repeat)
ENTOMOLOGY
(MSZ – 13 D)

Duration: 3Hrs.

Full Marks: 70

Part-A (Objective) =20
Part-B (Descriptive) =50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

Answer any four from Question no. 2 to 8
Question no. 1 is compulsory.

1. Answer any two: (5+5=10)
 - (i) Describe the structure and function of Maxillae.
 - (ii) Differentiate between Arolium and Empodium.
 - (iii) Describe the different types of wing veins found in insects.
2. Describe the different types of Antennae found in insects. (10)
3. Describe the different types of legs found in insects with suitable diagram. (10)
4. Describe the structure of insect integument. Explain its function. (5+5=10)
5. What is metamorphosis? Mention different types of metamorphosis found in insects. How hormones control metamorphosis? (2+3+5=10)
6. Describe different forms of larva found in insects. What is the significance of larval forms? (8+2=10)
7. Describe synchronous and asynchronous muscles of insects. (10)
8. Describe the structure and function of compound eye of insects with a suitable diagram. (10)

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Duration: 20 minutes

Marks – 20

(PART A - Objective Type)

I. Tick (✓) the correct answer:

1×20=20

1. Intercalary segment of head is a part of -
 - (a) Procephalon
 - (b) Gnathocephalon
 - (c) In between Procephalon & Gnathocephalon
 - (d) None

2. According to Labral Segmental theory, the head segmentation of insect is-
 - (a) Six
 - (b) seven
 - (c) Both six & seven
 - (d) None

3. The last segment of head is-
 - (a) Labral
 - (b) Mandibular
 - (c) Maxillary
 - (d) Labial

4.is cellular layer of insect integument.
 - (a) Epidermis
 - (b) Basement membrane
 - (c) Exocuticle
 - (d) Endocuticle

5. The hormone helps in sclerotization is.....
 - (a) Eclosion
 - (b) Bursicon
 - (c) Prothoracicotropic
 - (d) Allatotropic

6. White ants' are under order-
- (a) Hymenoptera (b) Isoptera
(c) Coleoptera (d) Diptera
7. Corpora allata secretes-
- (a) Molting hormone (b) Juvenile hormone
(c) Allatotropin hormone (d) ADH
8. 'Halters' helps houseflies in-
- (a) Sound production (b) Osmoregulation
(c) Balancing (d) Respiration
9. Forewings modified to "Elytra" in order-
- (a) Dermaptera (b) Protura
(c) Coleoptera (d) Trichoptera
10. 'Ring gland' is found in-
- (a) Cyclorrhaphous Diptera (b) Polyneopteran Zoraptera
(c) Oligoneopteran Siphonaptera (d) Palaeopteran Zygoptera
11. 'Semiloopers' has-
- (a) Three pairs of abdominal legs (b) Two pairs of abdominal legs
(c) Four pairs of abdominal legs (d) five pairs of abdominal legs
12. 'Swarming' in Locust occur in-
- (a) Solitary phase (b) Gregarious phase
(c) Transition phase (d) Breeding phase
13. Alary muscles are present in-
- (a) Brain (b) Heart
(c) Wings (d) Mouth parts

14. Compound eye of insect is composed of certain similar repetitive units called-

- (a) Lens
- (b) Rhabdome
- (c) Cone cells
- (d) Ommatidia

15. In most of the Orthopteroid insect, a median lobe found in between the terminal claws called-

- (a) Arolium
- (b) Empodium
- (c) Pulvilli
- (d) Coxa

16. The leg segment between trochanter and tibia is-

- (a) tarsus
- (b) coxa
- (c) femur
- (d) pretarsus

17. The major component of Piercing –sucking mouth part are-

- (a) mandibles and maxillae
- (b) mandibles and labrum
- (c) maxillae and labium
- (d) mandibles and labrum

18. The stick insect, Carausius under order-

- (a) Dermaptera
- (b) Phasmida
- (c) Grylloblattoidea
- (d) Plecoptera

19. The cerci are modified into stout forceps or pincers in order-

- (a) Dermaptera
- (b) Protura
- (c) Odonata
- (d) Collembola

20. The type of legs modified for leaping and jumping are called-

- (a) Fossorial leg
- (b) Saltatorial leg
- (c) Natatorial leg
- (d) Raptorial leg
