

M.Sc. ZOOLOGY
THIRD SEMESTER
ENTOMOLOGY (INSECT STRUCTURE AND FUNCTION)
MSZ-303 D

Duration: 3 Hrs.

Marks: 70

PART : A (OBJECTIVE) = 20

PART : B (DESCRIPTIVE) = 50

[PART-B : Descriptive]

Duration: 2 Hrs. 40 Mins.

Marks: 50

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

1. Write short notes on: (*any two*) (5+5=10)
 - (i) Dorsal ocelli.
 - (ii) Ring gland.
 - (iii) Synchronous muscle.
 - (iv) Arolium and Empodium.
2. Describe the structure of insect integument. What are the functions of insect integument? (5+5=10)
3. Describe the different types of legs found in insects. (10)
4. Describe the different types of antennae found in insects. (10)
5. Describe physiology of muscle contraction with suitable diagram. (10)
6. Describe the structure and function of compound eye of insect. (10)
7. Write about hormonal control on reproduction in insects. (10)
8. Write about apterygote orders of insect. (10)

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[PART-A : Objective]

Choose the correct answer from the following:

1×20=20

1. Stemmata is the term applied for:
 - a. Dorsal ocellus.
 - b. Lateral ocelli of larvae.
 - c. Compound eye of adult.
 - d. Ommatidium.
2. The unit of length between two Z lines of skeletal muscle is called:
 - a. Sarcomere.
 - b. Sarcolemma.
 - c. Sarcoplasm.
 - d. Sarcoplasmic reticulum.
3. In insect, muscle present in the wall of crop is:
 - a. Skeletal
 - b. Visceral
 - c. Alary
 - d. None of the above
4. Halteres present in:
 - a. Coleoptera
 - b. Diptera
 - c. Hemiptera
 - d. Hymenoptera
5. Sting of bee is modification of:
 - a. Ovary
 - b. Ovarian follicle
 - c. Ovipositor
 - d. Oviduct
6. Cuticulin layer of new cuticle is secreted by:
 - a. Basement membrane.
 - b. Epidermis.
 - c. Fat body.
 - d. Oenocytes.
7. Well developed stridulatory organs are found in:
 - a. House fly
 - b. Grasshopper
 - c. Termite
 - d. Honey bee
8. Sound production by wing vibration is found in:
 - a. Butterfly
 - b. Cockroach
 - c. Mosquito
 - d. Ant
9. In cicada, tympanic membrane is present in:
 - a. Female.
 - b. Male.
 - c. Both male and female.
 - d. None of the above.
10. In firefly, light is emitted by the oxidation of:
 - a. Pyrophosphate
 - b. Luciferase
 - c. Luciferin
 - d. Acetylcholinesterase
11. Forewing of coleoptera is called:
 - a. Tegmina
 - b. Semielytra
 - c. Elytra
 - d. Furcula
12. The hormone initiate moulting process is:
 - a. 20-hydroxy ecdysone.
 - b. Juvenile hormone.
 - c. Bursicon.
 - d. Brain hormone.
13. "Bombykol" is:
 - a. Alarm pheromone.
 - b. Recruitment pheromone.
 - c. Allomone.
 - d. Sex pheromone.
14. Larval form of moths and butterflies are:
 - a. Caterpillar
 - b. Grub
 - c. Maggot
 - d. None of the above



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15. According to the Labral Segmental Theory the insect head is composed of:
- 6 segment.
 - 7 segment.
 - 8 segment.
 - In larval 6 segment and in adult 7 segment.
16. The Plumose Antennae found in:
- Male mosquito.
 - Female mosquito.
 - Both male & female mosquito.
 - Not found in mosquito.
17. The Chewing types of Mouth Parts found in:
- Apterygota
 - Orthoptera
 - Coleoptera
 - All the above
18. On the lateral side of the pronotum in several lepidopteran insects the lobe-like structures are well developed and are known as:
- Sternites
 - Tergites
 - Petagia
 - Pleurites
19. In dipteran insects a long prominent spine or bristle lying in between terminal claws known as:
- Empodium
 - Arolium
 - Coxa
 - Trochanter
20. The Fossorial Legs modified for:
- Running
 - Walking
 - Digging
 - Jumping

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Course :

Semester : Roll No :

Enrollment No : Course code :

Course Title :

Session : 2017-18 Date :

Instructions / Guidelines

- The paper contains twenty (20) / ten (10) questions.
- Students shall tick (✓) the correct answer.
- No marks shall be given for overwrite / erasing.
- Students have to submit the Objective Part (Part-A) to the invigilator just after completion of the allotted time from the starting of examination.

Full Marks	Marks Obtained
20	

Scrutinizer's Signature

Examiner's Signature

Invigilator's Signature