

2023
M.Sc.
Third Semester
DISCIPLINE SPECIFIC ELECTIVE – 01
ZOOLOGY
Course Code: MZOD 3.11 (D)
(Entomology - I)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Describe the general structure and venation of insect wing. Add a note on various types of wings coupling in insects. 8+6=14
2. Describe the general structure and functions of insect antenna. Add a note on its various types. 8+6=14

UNIT-II

3. Explain in detail the insect alimentary canal with suitable labelled diagram. Add a note on its functions. 10+4=14
4. Explain the general structure and function of Malpighian tubule. Add a brief note on cryptonephridial system. 9+5=14

UNIT-III

5. Give an account on neurosecretory cells of insect. 14
6. Explain the various types of ovarioles in insect. Write a note on hormonal control of reproduction. 8+6=14

UNIT-IV

7. Write notes on the following: 7×2=14
 - (a) Structure of insect integuments
 - (b) Sclerotization of cuticle

8. Write notes on the following: 7×2=14
(a) Types and functions of hemocytes
(b) Glycerol-3-phosphate shuttle in flight muscles

UNIT-V

9. Discuss the biosynthesis and mode of action of ecdysteroids in insect. 10+4=14
10. Explain the molting process and the formation of new cuticle in insect. 14
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