

November 2025
M.Sc.
Third Semester
DISCIPLINE SPECIFIC ELECTIVE – 01
ZOOLOGY
Course Code: MZOD 3.11 (C)
(Entomology - I)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Give the basic classification of the subclass Apterygota up to orders with characters and citing examples of each order. 14
2. Discuss in detail the different types of mouth parts found in insects with appropriate diagrams. 14

UNIT-II

3. Explain in detail the process of digestion in insects. 14
4. Write a note on each of the following: 7×2=14
 - (a) Ventilation and diffusion of gases
 - (b) Structure and functions of Malpighian tubules

UNIT-III

5. Give a detailed account of the mechanism of insect vision. 14
6. Write a note on each of the following: 7×2=14
 - (a) Biosynthesis of juvenile hormone
 - (b) Types of ovaries in insects

UNIT-IV

7. Explain the structure of insect integument with an illustrated diagram. Add a note on the sclerotisation of insect cuticle. 10+4=14

8. Write a note on each of the following: 7×2=14
(a) Chemistry and function of haemolymph
(b) Glycerol-3-phosphate shuttle in insect flight muscles

UNIT-V

9. Explain in detail the different types of insect metamorphosis. Add a note on the formation of new cuticle. 10+4=14
10. Write an account of the hormonal regulation in insect moultings and metamorphosis. 7+7=14
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