

No. of Printed Pages : 4

MZOE-005

M. SC. (ZOOLOGY)

(MSCZOO)

Term-End Examination

December, 2025

**MZOE-005 : INSECT PHYSIOLOGY AND
TOXICOLOGY**

Time : 2 Hours

Maximum Marks : 50

Note : Attempt any ***five*** questions. The
marks for each question are indicated
against it.

C-2783/MZOE-005

P. T. O.

1. What are organophosphate compounds ?
Describe their characteristic features and uses. Why are these considered harmful to the environment ? 10
2. Name the hormones controlling moulting and metamorphosis in insects. Describe the hormonal control of moulting and metamorphosis in detail. 10
3. Define the following terms : 5×2=10
 - (a) Paedogenesis
 - (b) Antifeedant
 - (c) Biopesticide
 - (d) Polyembryony
 - (e) Antidote

4. Explain the different indices of acute toxicity i.e., LD_{50} , LC_{50} and LT_{50} . Discuss the significance of these values. 10
5. (a) Explain the structure and function of Malpighian tubules in insect. 5
- (b) Discuss the functions of haemolymph. 5
6. (a) Explain the impulse transmission process in insects. 5
- (b) Compare the process of osmoregulation in terrestrial and aquatic insects. 5
7. (a) Describe the source, active ingredient and uses of neem oil as a safe pesticide. 5
- (b) Discuss various respiratory methods employed by aquatic insects. 5

8. (a) Explain how do Insect Growth Regulators (IGRs) function as insecticides. 5
- (b) Explain the mechanism of circulation in insects. 5

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