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5 SEM TDC DSE ZOO (CBCS) 4 (H)

2024

(November)

ZOOLOGY

(Discipline Specific Elective)

(For Honours)

Paper : DSE-4

(**Biology of Insecta**)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Fill in the blanks :

1×5=5

- (a) The tracheal system bearing 10 pairs of functional spiracles is known as ____.
- (b) Nassanoff's glands are mainly found in ____ honeybees.
- (c) Corpora allata produces ____ hormone that regulates metamorphosis.

(d) Drones in a honeybee colony are _____ male.

(e) Mosquitoes have mouthparts of _____ and _____ types.

2. (a) Distinguish between the following pairs (any two) : $3 \times 2 = 6$

(i) Mechanical and Biological vectors

(ii) Workers and Soldiers in termite

(iii) Compound eye and Ocelli

(b) Write brief notes on (any two) : $3 \times 2 = 6$

(i) Tracheal respiration in insect

(ii) Function of insect integument

(iii) Paurometabola metamorphosis

3. Describe the general features of insects. 4

Or

Discuss the reasons of success of insects on the earth.

4. What are spiracles? Discuss about the types of tracheal system in insects. $2 + 6 = 8$

Or

Name different types of mouthparts found in insects. Write about any two types of mouthparts in insects. $1 + 7 = 8$

5. What is metamorphosis? Explain about different types of metamorphosis which are found in insects. 2+6=8

Or

What is sensilla? Discuss about sensory receptors found in insects. 1+7=8

6. What is parthenogenesis? Write about reproductive system in insects with diagram. 2+4=6

Or

What is endocrine gland? Write down the function of insect endocrine system. 1+5=6

7. Draw and discuss about social life in termite. 5

Or

Discuss about different castes which are found in honeybee.

8. What is theory of coevolution? Write about the role of insects as plant pests. 2+3=5

Or

Write a note on mosquitoes as biological vectors. 5

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