2009

ZOOLOGY

PAPER—Z-201

Full Marks : 40

Time : 2 hours

The figures in the right-hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

GROUP—A

(*Entomology*)

1. Answer *two* questions from the following: 2 × 2

   (*a*) Mention with a labelled diagram the different sutures present in the insect's head.

   (*b*) What is vector? Name two insect borne diseases.

(c) What is seed cocoon ?

(d) Draw the relationship between 'Economic Threshold Level' and 'Economic Injury Level'.

2. Answer *two* questions from the following: 4 × 2

(a) What are the strategies adopted for overcoming the problems of mulberry sericulture propagation in South West Bengal ?

(b) Write a brief note on the evolutionary significance of modification of wings in insects.

(c) Mention the difference between Neurohumour and Neurohormones in insects.

(d) Write a note on IPM.

3. Answer any *one* from the following: 8 × 1

(a) (i) Enumerate the problems associated with sericulture practice with special reference to Southern West Bengal.

    (*ii*) Comment on the adaptations for osmoregulatory mechanism of freshwater aquatic insects.   4 + 4

(*b*) Highlight the structural and functional specialities of insect midgut. Briefly describe the filter-chamber and peritrophic membrane in insects.   4 + (2 + 2)

GROUP—B

(*Ethology*)

4. Distinguish between (any *two*):   2 × 2

    (*a*) Motivational and Terminating stimuli.

    (*b*) Habituation and Extinction.

    (*c*) Loafing cover and Roosting cover.

    (*d*) Arrhentoky and Thelytoky.

5. Answer any *two* of the following : 4×2

   (a) Hierarchy of drive

   (b) Anting

   (c) Conflict in mind

   (d) Primary and secondary defence mechanism.

6. Answer *one* of the following : 8×1

   (a) Discuss with the help of suitable examples the basis of habitat selection.   8

   (b) Define evolutionarily stable strategy ? Explain the phenomenon with the help of a suitable example. $2 + 6$

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