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(CBCS)

(5th Semester)

ZOOLOGY

EIGHTH (B) PAPER

(Entomology)

Full Marks : 75

Time : 3 hours

(PART : A—OBJECTIVE)

(*Marks* : 25)

The figures in the margin indicate full marks for the questions

SECTION—A

(*Marks* : 10)

Tick (✓) the correct answer in the brackets provided : 1×10=10

1. Insects lacking the ability to fold their wings over the abdomen belong to the sub-class
(a) Apterygota ( )
(b) Palaeoptera ( )
(c) Paraneoptera ( )
(d) Polyneoptera ( )

2. The scientific name of the rice leaf folder is
(a) *Nilaparvata lugens* ( )
(b) *Dicladispa armigera* ( )
(c) *Cnaphalocrocis medinalis* ( )
(d) *Chilo suppressalis* ( )

3. An elastomeric protein in the body wall of insects responsible for flexibility is
(a) chitin ( )
(b) arthropodin ( )
(c) sclerotin ( )
(d) resilin ( )

4. A food storage organ in insects is

(a) esophagus ( )

(b) pharynx ( )

(c) crop ( )

(d) mid gut ( )

5. A fat-soluble hormone secreted by corpora allata of insects is

(a) juvenile hormone ( )

(b) ecdysone ( )

(c) prothoracicotropic hormone ( )

(d) bursicon ( )

6. An example of ametabolous insect is

(a) honeybee ( )

(b) silverfish ( )

(c) grasshopper ( )

(d) mosquito ( )

7. The two crops of Kusumi strain of lac are

(a) *jethwi* and *aghani* ( )

(b) *kartiki* and *baisakhi* ( )

(c) *jethwi* and *kartiki* ( )

(d) *aghani* and *baisakhi* ( )

8. A silkworm which is considered as the largest moth in the world is

(a) *Bombyx mori* ( )

(b) *Antheraea polyphemus* ( )

(c) *Actias luna* ( )

(d) *Attacus atlas* ( )

9. The increasing concentration of a substance, such as pesticides like DDT, in successively higher trophic level is termed as

(a) big bang ( )

(b) explosion ( )

(c) biomagnification ( )

(d) outbreak ( )

10. A biological control agent which is an egg parasitoid is

(a) *Chrysoperla carnea* ( )

(b) *Trichogramma* spp. ( )

(c) *Epilachna* spp. ( )

(d) *Apanteles* spp. ( )

SECTION—B

(*Marks* : 15)

Write short notes on the following in 5–8 sentences each : 3×5=15

1. General characters of Hymenoptera

OR

Orders of Insecta

2. Female reproductive organs of insects

OR

Composite of body wall of insects

3. Trophallaxis

OR

Hormones of insect metamorphosis

4. Outline of silkworm life cycle

OR

Role of worker bees

5. Parasitic insects

OR

Biological pesticides

(PART : B—DESCRIPTIVE)

(*Marks* : 50)

The figures in the margin indicate full marks for the questions

1. Discuss the different methods for insect's collection. Add a note on their preservations. 7+3=10

OR

What is pest? Discuss the major insect pests of vegetables. 2+8=10

2. Discuss the respiratory system in insects with a suitable diagram. 8+2=10

OR

Discuss the structure and functions of insect mouthparts with a suitable diagram. 8+2=10

3. Elucidate the caste system in insects with reference to honeybee. 10

OR

Describe the different types of metamorphosis in insects giving examples. 10

4. Discuss briefly the mechanism of action of insect's hormones. 10

OR

Discuss the cultivation of lac insect. Add a note on its economic importance. 7+3=10

5. Give a brief account of predatory insects and their utility as biological control agents. 10

OR

Discuss the chemical control of insect pest. Add a note on an integrated pest management. 6+4=10

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