3 (Sem–6/CBCS) ZOO HE 1

2025

ZOOLOGY

(Honours Elective)

Paper : ZOO–HE–6016

(Biology of Insecta)

Full Marks : 60

Time : Three hours

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

1. Choose the correct option : 1×7=7

   (i) Termites have _____ type of antennae.

   (a) Moniliform

   (b) Filiform

   (c) Plumose

   (d) Serrate

   (ii) 'Costa' is a part of

   (a) Antenna

   (b) Mouth

   (c) Wing venation

   (d) Thorax

(iii) Siphoning type of mouthparts are found in

(a) Butterfly

(b) Housefly

(c) Mosquitoes

(d) Honey bee

(iv) The thorax of insects has _____ segments.

(a) two

(b) three

(c) four

(d) five

(v) Halteres are found in—

(a) Coleoptera

(b) Orthoptera

(c) Diptera

(d) Hemiptera

(vi) _____ absorbs nitrogenous waste from haemolymph.

(a) Haemocytes

(b) Oenocytes

(c) Malpighian body

(d) Rectum

(vii) Complete metamorphosis is found in–

(a) Grasshopper

(b) Silverfish

(c) Dragonfly

(d) Butterfly

2. Answer the following questions : 2×4=8

(i) What are the primary parts of the insect mouth ?

(ii) Distinguish between simple eyes and compound eyes of insects.

(iii) What is plastron ?

(iv) Mention the function of Haemolymph in insects.

3. Answer the following questions : ***(any three)*** 5×3=15

(i) Distinguish between hemimetabolous and holometabolous metamorphosis.

(ii) Write about the abdominal structures of insects.

(iii) Describe the raptorial type of legs of insects.

(iv) What is *corpora allata* ? What hormone does it secrete ? Mention its functions. 1+1+3=5

(v) What are reasons for the fact that insects are a dominant group of animals ?

4. Answer the following questions : ***(any three)*** 10×3=30

(i) What are the important characteristics of social organisation in insects ? Write about the social behaviour of *any one* insect.

(ii) What do you mean by plant-insect interactions ? Describe plant defence mechanisms and adaptation of insects to plant defences. 2+8=10

(iii) Describe the following type of mouth parts of insects with labelled diagrams :

(a) Biting and chewing type

(b) Piercing and sucking type 5+5=10

(iv) Describe the digestive system of insects.

(v) What are the different types of sense organs in insects ? Describe Mechano-receptors and Chemoreceptors.

(vi) Write the distinctive characters of the orders *Coleoptera, Diptera, Lepidoptera* and *Hymenoptera* with examples. 2½×4=10
