Total number of printed pages–8

3 (Sem–6/CBCS) ZOO HE 1/2

2024

ZOOLOGY

(Honours Elective)

Answer the Questions from any one Option.

OPTION–A

(Biology of Insecta)

Paper : ZOO–HE–6016

OPTION–B

(Fish and Fisheries)

Paper : ZOO–HE–6026

Full Marks : 60

Time : Three hours

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

Contd.

OPTION-A

(Biology of Insecta)

Paper : ZOO-HE-6016

1. Choose the correct option : 1×7=7

(i) Ommatidia are associated with—

(a) locomotion

(b) digestion

(c) vision

(d) flight

(ii) The cuticle is secreted by—

(a) epidermis

(b) basement membrane

(c) dermis

(d) molting gland

(iii) Plumose antennae are found in

(a) Termite

(b) Mosquito

(c) Cockroach

(d) Butterfly

(iv) Sponging mouthparts are found in

(a) Housefly

(b) Mosquito

(c) Butterfly

(d) Grasshopper

(v) Which part of the alimentary canal acts as a reservoir of food in insects ?

(a) Midgut

(b) Illium

(c) Gizzard

(d) Crop

(vi) Which of the following is an Ametabolous insect ?

(a) Termite

(b) Collembola

(c) Silkworm

(d) Dragonfly

(vii) Corpora cardiaca is a part of

(a) Respiratory system

(b) Endocrine system

(c) Excretory system

(d) Integumentary system

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

(i) Name the different segments of an insect's leg.

(ii) What is an ommatidium ?

(iii) What are the four main anatomical components of insect endocrine system ?

(iv) What is hemimetabolous metamorphosis ?

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

(i) Describe the mouthparts of a mosquito.

(ii) Write briefly about excretion by Malpighian tubules.

(iii) What are haemocytes ? Mention some of their functions.

(iv) Write about different types of receptors in insects.

(v) Draw a labelled diagram of ommatidium.

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

(i) Describe the social organization and social life of any insect.

(ii) Describe different types of metamorphosis in insects.

(iii) How are insects attracted towards host plants ? Describe how plants protect themselves from insects.

(iv) Mention some characters of insects of order Lepidoptera. Give some examples of insects of order Lepidoptera.

(v) Write about houseflies and mosquitoes as insect vectors.

(vi) Describe briefly the tracheal system of respiration in terrestrial insects.

OPTION–B

(Fish and Fisheries)

Paper : ZOO–HE–6026

1. Fill in the blanks : 1×7=7

   (a) Fish migration in search of food and water is known as _____ .

   (b) _____ is a soil sealant used for the treatment of porous soil in a fish farm.

   (c) Common name of *Vallisacria* sp is _____ .

   (d) Tail and fin rot disease in fish is caused by _____ .

   (e) Brewaries use _____ made from swim bladder of sturgeon as filtering agent.

   (f) A mixture of chorionic gonadotropin and mammalian pituitary extract is known as _____ .

   (g) _____ tubes are used to encourage plant growth in an aquarium.

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

   (a) What are red bodies ?

   (b) Write *two* advantages of polyculture.

   (c) Write *two* causes of depletion of fishery resources.

   (d) What is intensive culture of fish ?

3. Write short notes on : ***(any three)*** 5×3=15

   (a) Transgenic fish

   (b) Fisheries law and regulations

   (c) Mechanoreceptors

   (d) Cage culture

   (e) Classification of fishes based on feeding habits

4. What is bioluminescence ? Give an account of bioluminescence in fishes with examples. 2+8=10

Or

Give an account of different scales of fishes with diagrams. How is scale of fish used for the determination of age ? 8+2=10

5. What is bundh breeding ? Describe briefly the method of hypophysation in carps. 3+7=10

Or

Explain the causative agent, symptoms and preventive measures of protozoan diseases in cultivable fishes. 3+5+2=10

6. Write a note on the different fishing crafts and gears used in fishery. 10

Or

Describe the different methods of preservation techniques of harvested fishes.
