·2019

ZOOLOGY — HONOURS

Paper : CC–3

Full Marks : 50

The figures in the margin indicate full marks.

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

1. Answer *any five* questions :   2×5

   (a) What is 'ink gland'? What is its function?

   (b) In which animal 'Aristotle's Lantern' is found? What is its function?

   (c) Distinguish between connective and commissure.

   (d) Distinguish between ophiopluteus and echinopluteus.

   (e) What is meant by 'apposition image'?

   (f) Distinguish protostomes and deuterostomes with example.

   (g) What is a termitarium and fungus garden?

   (h) What is parapodia? Where do you find it?

2. Write short notes on *any two* of the following :   5×2

   (a) Effect of torsion on the digestive system and nervous system of Gastropoda.

   (b) Components of a typical water vascular system in *Asterias* sp.

   (c) Inclusion of *Balanoglossus* sp. into its current systematic position.

   (d) Structure of a typical gill in prawn and mechanism of respiration.

3. Answer *any three* of the following :

   (a) (i) Define coelom. Distinguish between schizocoelous and enterocoelous coelom with examples.

        (ii) Classify Phylum Annelida up to class with suitable characters and examples.   (2+3)+5

   (b) (i) *Peripatus* sp. is considered a connecting link between Annelida and Arthropoda. — Justify.

        (ii) Distinguish Auricularia and Bipinnaria larva. Briefly discuss the affinities of echinoderm larva
             with chordates.   4+(2+4)

   (c) (i) Describe septal nephridia with proper illustration. Mention its role in excretion.

        (ii) Discuss the theories on origin of metamerism in Annelida.   (3+2)+5

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(d) (i) Describe in brief the caste system in termite colony.

(ii) Describe the respiratory structures in *Pila* sp. Add a note on the mechanism of respiration.

4+(4+2)

(e) (i) Distinguish the following with example :

(I) Scaphopoda and Bivalvia

(II) Crinoidea and Holothuroidea.

(ii) Describe in brief the process of metamorphosis in lepidopteran insect.   (2½×2)+5

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