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UG/1-Sem/H/19

2019

ZOOLOGY

(Honours)

Paper - ZOOLOG-H-DC-1-T

[Non-Chordates - I (Protists to Pseudo-coelomates)]

[CBCS]

Full Marks : 25

Time : Two Hours

The figures in the margin indicate full marks.

1. Answer any *eight* questions :

$\frac{1}{2} \times 8 = 4$

(a) In Parazoa, tissue grade of organisation exists —
select the right option (True or False)

(b) Rhizopodia is locomotory organ of _____
(Fill in the gap)

(c) Write the name of malaria fever caused by
Plasmodium vivax.

(d) Write the name of totipotent cell of porifera.

(e) Write the scientific name of common bath
sponge.

P.T.O.

(2)

- (f) How many protofilaments are there in a tubule of the shaft of a cilium?
- (g) The vegetative phase of *Plasmodium* in RBC of man is called _____. (Fill in the gap)
- (h) Write the name of larval form found in all class of cnidaria.
- (i) Where does the development of first larval stage of *Wuchereria bancrofti* take place?
- (j) The defensive zooid of a polymorphic colony is _____. (Fill in the gap)
- (k) The infective stage of *Taenia solium* is _____. (Fill in the gap)
- (l) Write the name of adhesive cells present in the tentacles of Ctenophora.

2. Answer any *two* questions :

$2\frac{1}{2} \times 2 = 5$

- (a) Define taxonomy and systematics.
- (b) State the parasitic adaptations of *Fasciola sp.*
- (c) Write the name of different types of coral reef with their distribution.

(3)

(d) Write the name of different classes of porifera with one example of each classes.

3. Answer any *four* questions : $4 \times 4 = 16$

(a) Write the name of different domains as proposed by Carl Woese. Carl Woese divided the kingdom Monera into two separate kingdoms – Eubacteria and Archaeobacteria — Justify the reasons behind it. $1+3=4$

(b) Describe the mechanism of formation of Pseudopodia.

(c) Draw a labelled diagram of stages of conjugation in *Paramoecium caudatum*.

(d) Describe in brief the syconoid canal system of porifera.

(e) Give the general characters of class Anthozoa.

(f) Write a note on metagenesis in *Obelia sp.*

(g) Describe the life cycle of *Wuchereria bancrofti* in mosquito briefly.

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UG/1-Sem/H/19

2019

ZOOLOGY

(Honours)

Paper - Zool-H-DC-2

[Non-Chordates - II (Coelomates)]

[CBCS]

Full Marks : 25

Time : Two Hours

The figures in the margin indicate full marks.

1. Answer any *eight* questions :

$\frac{1}{2} \times 8 = 4$

(a) True coelom is originated from _____ .

(Fill in the blank)

(b) The Clitellum of *Pheretima* sp. is primarily concerned with —

(i) Difference between two sexes

(ii) Copulation

(iii) Excretion

(iv) Production of cocoons (Pick one of these)

P.T.O.

(c) *Peripatus* sp. belongs to —

- (i) Onychophora
- (ii) Thysanura
- (iii) Mollusca
- (iv) Elateroidea (Pick one of these)

(d) Body cavity of arthropods is —

- (i) Coelom
- (ii) Haemocoelom
- (iii) Pseudocoelom
- (iv) Coelenteron (Pick one of these)

(e) What is the common name of *Octopus* sp?

(f) Which type of metamorphosis is found in Lepidopteran insects?

(g) Acorn worm belongs to phylum —

- (i) Chordata
- (ii) Urochordata
- (iii) Hemichordata
- (iv) Cephalochordata (Pick one of these)

(3)

(h) Animals of which phylum is exclusively marine —

(i) Porifera

(ii) Protozoa

(iii) Echinodermata

(iv) Mollusca

(Pick one of these)

(i) Ambulacral system of *Asterias* sp. helps in —

(i) Locomotion

(ii) Attachment

(iii) Respiration

(iv) All of these

(Pick one of these)

(j) Stomochord is present in —

(i) *Amphioxus* sp.

(ii) *Herdmania* sp.

(iii) *Balanoglossus* sp.

(iv) None of the above

(Pick one of these)

P.T.O.

(4)

(k) Aerial respiration in *Pila* sp. occurs from —

- (i) mantle
 - (ii) ctenidium
 - (iii) pulmonary sac
 - (iv) branchiae
- (Pick one of these)

(l) The total number of appendages present in the prawn is —

- (i) Sixteen pairs
 - (ii) Nineteen pairs
 - (iii) Seven pairs
 - (iv) Thirteen pairs
- (Pick one of these)

2. Answer any *two* questions : $2\frac{1}{2} \times 2 = 5$

~~(a)~~ Differentiate between coelom and pseudocoelom with proper examples.

(b) Why peripatus is said to be a connecting link?

(c) Give the diagnostic characters of class Insecta and classify the class upto sub-class with examples.

~~(d)~~ Write a short note on Bipinnaria larva.

3. Answer any *four* questions :

4×4=16

(a) Write down the diagnostic features of phylum Annelida. Classify the phylum upto classes with characteristics and examples. 1+3=4

(b) Give an illustration on mosaic vision in Insects. 4

(c) What is torsion? Briefly describe how torsion has affected the nervous system of Gastropoda. 1+3=4

(d) Write the general characteristics of Hemichordata. Briefly discuss its affinities with Chordata and Echinodermata. $1\frac{1}{2}+2\frac{1}{2}=4$

(e) Draw a labelled diagram of water vascular system in Asterias. State the function of water vascular system. 2+2=4

(f) What is radula? Draw a well labelled diagram of digestive system of *Pila* sp. and mention various adaptive features found in its digestive system. 1+2+1=4

(g) Define metamorphosis. Write the role of hormones in metamorphosis of insects. 1+3=4