

P-1(1+1+1)H/13

2013

ZOOLOGY (Honours)

First Paper

Full Marks : 90 Time : Four Hours

The figures in the margin indicate full marks.

Group - A

1. Answer any four questions : 2×4=8

- What is ecdysis and moulting ?
- Give two characters of pterygota.
- Why *Pila* sp. is called amphibian animal ?
- Name one shelled and one colonial protozoa.
- Distinguish between dactylozoid and genozoid.
- What is scolex ?

2. Answer any four questions : 4×4=16

- State the importance of poripheran spiquale in classification.
- Describe the structure of a ctenidium with its function.
- "Limulus is a living fossil" — Justify.
- Why are echinoderms considered more closely related to the chordates than any other Invertebrate phylla ?

P.T.O.

( 2 )

(e) State different locomotory structures in protozoan with salient features and examples.

(f) Mention different types of parasitic adaptation in *Ascaris* sp.

3. Answer any *two* of the following :  $10\frac{1}{2} \times 2 = 21$

(a) Describe the general morphology and skeletal system of *Scypha* sp.  $4 + 6\frac{1}{2} = 10\frac{1}{2}$

(b) State the anatomical changes that taking place during torsion in Gastropoda. Discuss the importance of this process in relation to gastropodal organization.

(c) Classify phylum annelida upto sub-class level with character and examples.

(d) Distinguish between cnidaria and ctenophora. What are the different mouth parts in insects? Give examples of each. Explain any of them with diagram.  $2 + 2 + 2 + 4\frac{1}{2} = 10\frac{1}{2}$

**Group - B**

4. Answer any *four* of the following :  $2 \times 4 = 8$

(a) Define parapsid skull with example.

(b) Distinguish between hovering flight and flapping flight.

(c) What is ampulla of Lorenzini ?

(d) What is pigeon's milk ?

( 3 )

(e) Define ovoviviparity and viviparity with example.

(f) What is holobranch and hemibranch ?

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

(a) Mention the specialized and degenerate characters of cyclostoma.

(b) Write a short note on reptilian affinities of Monotremata.

(c) Differentiate poisonous snake from a non-poisonous one with examples. What are neurotoxic and haemotoxic venom?  $2+2=4$

(d) Write a note on echolocation in bats.

(e) State the pharyngeal structure of *Ascidia* sp. with diagram.

(f) Distinguish between Cetacea and Sirenia.

6. Answer any *two* of the following :  $10\frac{1}{2} \times 2 = 21$

(a) Classify modern Reptilia upto sub-order with suitable character and examples.

(b) What is axolotl larva? Describe neoteny with respect to *Ambystoma* sp. larva. Distinguish between neoteny and paedogenesis.

$2+6\frac{1}{2}+2=10\frac{1}{2}$

P.T.O.

(c) Give an account of accessory respiratory organ in fish.

(d) Give comparative account of aortic arch in vertebrates with suitable diagram. Define Retrogressive metamorphosis.  $8+2\frac{1}{2}=10\frac{1}{2}$