

I.F.S. EXAM-2016

ZOOLOGY

PAPER—I

Time Allowed : Three Hours

Maximum Marks : 200

**QUESTION PAPER SPECIFIC INSTRUCTIONS**

**Please read each of the following instructions carefully  
before attempting questions**

There are EIGHT questions in all, out of which FIVE are to be attempted.

Question Nos. **1** and **5** are compulsory. Out of the remaining SIX questions, THREE are to be attempted selecting at least ONE question from each of the two Sections A and B.

Attempts of questions shall be counted in sequential order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.

All questions carry equal marks. The number of marks carried by a question/part is indicated against it.

Answers must be written in ENGLISH only.

Neat sketches may be drawn, wherever required.

## SECTION—A

1. Write notes on the following : 8×5=40
- (a) Minor Phyla
  - (b) Scales in bony fishes
  - (c) Primates
  - (d) Spicules in Porifera
  - (e) Shell diversity in Mollusca
2. (a) What are coral reefs? Write about different types of coral reefs and various theories of coral reef formation. 15
- (b) Give an account of larval forms in Crustacea giving suitable examples and diagrams. Add a note on the significance of larvae. 15
- (c) Discuss parasitic adaptations of Platyhelminthes. 10
3. (a) Discuss that *Sphenodon* is the most primitive and crocodilians are the most advanced of all living reptiles. 15
- (b) Describe parental care in Amphibia giving suitable examples. 15
- (c) Explain primitive, degenerate and advanced characters of *Branchiostoma*. 10
4. (a) Give an account of gills and accessory respiratory organs in vertebrates with suitable drawings. 15
- (b) Describe flight adaptations in birds. 15
- (c) Give an account of nutrition in Protozoa with suitable examples. 10

## SECTION—B

5. Write notes on the following : 8×5=40
- (a) Biosphere
  - (b) Carp culture
  - (c) Navigation
  - (d) Null hypothesis
  - (e) Scintillation counter

6. (a) Explain the causes and consequences of water pollution. Suggest measures for abatement of water pollution. 15
- (b) Differentiate between infectious and communicable diseases. Write briefly about major communicable diseases. 15
- (c) Write about SEM indicating its principle and applications in zoology. 10
7. (a) Explain one-way and two-way analysis of variance and comment on its application. 15
- (b) Discuss the role of learning, instinct and habituation in animal behaviour. 15
- (c) Give an account of prawn culture indicating important cultivable species. 10
8. (a) Define population. Outline salient population characteristics and add a note on population stabilization. 15
- (b) Differentiate between spectrophotometry and flame photometry. Elaborate the principles and applications of flame photometry. 15
- (c) Explain the role of pheromones in alarm spreading. 10

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