

Indian Forest Service Examina. 2013

A-JGPT-M-APP-A

ZOOLOGY

PAPER--I

(CONVENTIONAL)

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 chronological 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 a brief note on each of the following : 8×5=40
- (a) Dentition in mammals 8
 - (b) Branchiostoma 8
 - (c) Parasitic adaptation in *Taenia* 8
 - (d) Air sacs in pigeon 8
 - (e) Nutrition in Protozoa 8
2. (a) Give an account of various types of canal systems. 15
- (b) What is metagenesis? Describe the structure and life history of *Obelia*. 15
- (c) Draw neat labelled diagrams of any *four* larval forms of Crustacea. (Description not required) 10
3. (a) Describe the phenomenon of metamorphosis with reference to insects, and add a note on its hormonal regulation. 15
- (b) Give an illustrated account of comparative anatomy of vertebrate urinogenital system. 15
- (c) Describe the shell diversity encountered in molluscs. 10
4. (a) Discuss the role of reproductive endocrines in life of vertebrates, and add a note on regulation of such glands. 20
- (b) Illustrate comparative functional anatomy of heart with reference to reptiles, birds and mammals. 20

SECTION—B

5. Write a brief note on each of the following : 8×5=40
- (a) Social behaviour in Primates 8
 - (b) Project Tiger 8
 - (c) Pearl culture 8
 - (d) SEM 8
 - (e) Null hypothesis 8
6. (a) Describe the propagation of lac insects through various cultivation practices, adding a note on lac extraction and uses of this product. 20
- (b) Discuss the importance of IPM in sustainable agricultural production. 20

7. (a) Give an account of the damage caused to farm animals by arthropod pests, and add a note on their control. 20
- (b) Elaborate on how circadian rhythms govern the life of animals. 20
8. (a) Describe the principle, working and application of transmission electron microscope. 20
- (b) Give an account of regression analysis emphasizing its salient features. 20
