

Sl. No. 19251

DP-CHA-010

ZOOLOGY

Paper I

Time Allowed : Three Hours

Maximum Marks : 200

INSTRUCTIONS

Candidates should attempt questions 1 and 5 which are compulsory, and any THREE of the remaining questions selecting at least ONE question from each Section.

The number of marks carried by each question is indicated at the end of the question.

Answers must be written in ENGLISH.

Suitable diagrams may be drawn, wherever required.

(Contd.)

Section 'A'

1. Write briefly on any *five* of the following in not more than 120 words each :

(a) Status of *Peripatus* 8

(b) Autogamy in *Paramecium* 8

(c) Bilateral versus Radial symmetry 8

(d) Cnidoblast in *Hydra* 8

(e) Life history of *Monocystis* 8

(f) Vision in cockroach 8

2. (a) Discuss the status of Parazoa. 20

(b) Describe the general features and life history of *Nereis*. 20

3. (a) Give an account of the general features and life history of *Taenia*, and its relation to man. 20

(b) Describe torsion and detorsion in Gastropoda. 20

4. (a) Write an account on the ways by which parental care is effected in amphibians. 20

(b) Give an account on the integumentary derivatives in mammals. 20

Section 'B'

5. Write notes on any *five* of the following in not more than 120 words each :
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| (a) Ozone hole | 8 |
| (b) Sign stimuli | 8 |
| (c) Acquired Immuno Deficiency Syndrome | 8 |
| (d) One-Way F-test | 8 |
| (e) Measures of central tendency | 8 |
| (f) Habituation | 8 |
6. Give an elaborate account on the Project Tiger. Discuss the merits and demerits of this Project. 40
7. (a) Distinguish between seasonal and circadian rhythms. How circadian rhythm is influenced by the exogenous and endogenous factors? Add a note on its significance. 20
- (b) Give an account on lac culture in India, and enemies of lac insects. 20
8. (a) Describe correlation (r) and its various types. Add explanatory notes on the assumptions, properties and computations of Pearson's r between two variables. 20
- (b) What is transmission electron microscopy? Discuss the basic theory, structure and functions of a transmission electron microscope. Write on the applications of transmission electron microscopy. 20

