

ZOOLOGY

Paper A : Biodiversity Chordates & Evolution-I (Zoo-301)

Time Allowed : Three Hours

Maximum Marks : 36

Note : Attempt five questions, selecting one from each unit. Question No. 1 is compulsory.

1. Explain the following :

- (a) Vestigial Organs
- (b) Lamarckism
- (c) Classify Molgula
- (d) Parental care
- (e) Cyclostomes
- (f) Lung fish
- (g) Axolotl larva
- (h) Metamorphosis.

8×1=8

UNIT-I

2. (a) What is serial homology ? Explain it giving suitable example. $3\frac{1}{2}$
(b) Explain Oparin and Haldane concept of origin of life. $3\frac{1}{2}$
3. Describe modern synthetic theory of evolution. Explain different types of natural selection. 7

UNIT-II

4. Write notes on the following :
 - (a) Pharynx of *Herdmania*
 - (b) Pharynx of *Branchiostoma*. $3\frac{1}{2} \times 2 = 7$
5. Write brief ecological notes on *Pyrosoma*, *Salpa* and *Doliolum*. 7

UNIT-III

6. Describe urinogenital system of *Labeo*. 7
7. Write notes on the following :
 - (a) External characters of *Petromyzon*
 - (b) Scales and fins of *Labeo*. $3\frac{1}{2} \times 2 = 7$

UNIT-IV

8. Write notes on the following :
 - (a) Heart of frog
 - (b) Digestive system of frog. $3\frac{1}{2} \times 2 = 7$
9. Write brief ecological notes of *Necturus*, *Hyla* and *Triton*. 7