

Roll No.

Total Pages : 2

GSQ/D-21

1079

ZOOLOGY

(EVOLUTION AND DEVELOPMENTAL BIOLOGY)

Paper-II

Time : Three Hours]

[Maximum Marks : 40

Note : Attempt *five* questions in all, selecting *two* questions from each Section A and B. Question No. 1 is compulsory.

Compulsory Question

1. Define :

- (a) vestigial organs.
- (b) Biogenetic Law.
- (c) Micro Evolution.
- (d) Divergent Evolution.
- (e) Archaeopterix.
- (f) Sach's Law.
- (g) Chalaza.
- (h) Discoblastula.
- (i) Significance of centriole of sperm.
- (j) Invagination. (10)

SECTION-A

2. Explain the chemical evolution upto the formation of coacervates. (7.5)

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3. Explain the following :
- (i) Archaeopteryx as a missing link. (3.5)
 - (ii) Haeckel's Biogenetic Law. (4)
4. Describe the postulates of Darwinism. (7.5)
5. (i) Describe Lederberg's replica plating experiment to explain the genetic basis of adaptations in Bacteria. (4)
- (ii) Homology in chromosomes of Man and ape. (3.5)

SECTION-B

6. Describe in details :
- (i) Spermiogenesis.
 - (ii) Vitellogenesis.
 - (iii) Hormonal control of oogenesis. (2.5 each)
7. Write notes :
- (i) Arrhenotoky. (3)
 - (ii) Effect of Yolk on cleavage. (4.5)
8. Write all you know about :
- (i) Primitive streak. (3)
 - (ii) Involution and Epiboly in frog. (4.5)
9. Explain the formation and functions of various extra embryonic membranes of amniotes. (7.5)