

Roll No. ....

(12/24)

**5247**

**B.Sc. EXAMINATION**

(For Batch 2011 & Onwards)

(Fifth Semester)

**ZOOLOGY**

**Paper II**

**Evolution and Developmental Biology**

*Time : Three Hours*

*Maximum Marks : 40*

**Note :** Attempt *Five* questions in all, selecting *one* question from each Section. Q. No. 1 is compulsory.

1. Define the following terms :  $1 \times 10 = 10$

- (a) Coacervates
- (b) Chemoautotrophs
- (c) Connecting links
- (d) Carboniferous period

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- (e) Dawn Horse
- (f) Manchette
- (g) Discoblastula
- (h) Primitive streak
- (i) Vitellogensis
- (j) Epiboly.

#### Section A

2. Describe in detail Chemosynthetic theory of origin of life. 7.5
3. (a) Differentiate between homologous and analogous organs. 3  
(b) Write a detailed note on origin and evolution of Prokaryotes. 4.5
4. Write notes on the following :  
(a) Mechanism of natural selection. 3.5  
(b) Microevolution with examples. 2  
(c) Reproductive isolation. 2

5. Discuss in detail different stages of evolution of man. 7.5

#### Section B

6. (a) Draw a flowchart depicting Hormonal control of spermatogenesis. 2.5  
(b) Write note on acrosome formation during Spermiogenesis. 3  
(c) Draw structure of mature human ovum. 2
7. (a) Explain the mechanism of fertilization. 4  
(b) Describe the planes of cleavage. 3.5
8. (a) Describe the gastrulation of Frog. 4  
(b) What is embryonic induction ? Discuss the role of grey crescent in neural induction. 3.5



9. (a) Write a note on formation of amnion and chorion in chick. 3.5
- (b) Level of differentiation. 2
- (c) Restorative regeneration. 2