

B.Sc. DEGREE EXAMINATION NOVEMBER 2016  
BRANCH VI A – ADVANCED ZOOLOGY & BIOTECHNOLOGY  
FIFTH SEMESTER

COURSE : MAJOR ELECTIVE  
PAPER : EVOLUTION  
TIME : 3 HOURS

MAX. MARKS: 100

SECTION A

ANSWER ALL QUESTIONS

(10X3=30)

1. CHOOSE THE BEST ANSWER:

1. Similar structure with dissimilar functions.
  - a) Analogy b) Homology c) Atavism d) Neoteny
2. Fossil connecting link between reptiles and birds.
  - a) Protopterus b) Balanoglossus c) Chimaera d) Archacoperryx
3. Define Sewall Wright Effect.
4. List any three barriers to dispersal of animals.
5. What is coevolution?
6. Comment on monophyletic and polyphyletic theory of elephant evolution.
7. a) \_\_\_\_\_ era is named as golden age of reptiles.
  - b) The reappearance of ancestral characters in the decendants is called \_\_\_\_\_.
  - c) In the ontogeny of chick, the anterior part of nephrotome develops into a primitive type of kidney called \_\_\_\_\_.
  - d) Gene mutation is otherwise called as \_\_\_\_\_.
  - e) Formation of two species by geographical separation is called \_\_\_\_\_.
  - f) The organism or the object which is mimicked or imitated is named as \_\_\_\_\_.
8. What is macroevolution?
9. Comment on molecular markers.
10. a) Fossil Amphibia - Living fossil  
b) Natural selection - Java man  
c) Halobiotic - Phylogenetic tree  
d) *Homo erectus* - Animals distributed in sea  
e) Dendrogram - Stegocephalia  
f) *Peripatus* - Favourable characters

**SECTION B**

**ANSWER ANY FIVE QUESTIONS**

**(5X6=30)**

11. Briefly explain mutation theory of De Vries.
12. Give a brief account on dating of fossils.
13. What are the differences between allopatric and sympatric speciation?
14. Explain divergent evolution with suitable examples.
15. Explain the mechanism of microevolution.
16. Write a brief account on the evolution of horse.
17. Write notes on reconstruction of evolutionary trees.

**SECTION-C**

**ANSWER TWO QUESTIONS**

**(2X20=40)**

18. Write an essay on Darwinism.
19. Give an account on isolating mechanisms.
20. Describe the various zoogeographical realms of the world.
21. Discuss the role of culture in the evolution of man.

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