

(6 pages)

Reg. No. :

Code No. : 6434

Sub. Code : HZOM 43

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2017.

Fourth Semester

Zoology

EVOLUTION

(For those who joined in July 2012-2015)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

Choose the correct answer :

1. Ontogeny repeats phylogeny is the essence of

- (a) Pre-formation theory
- (b) Biogenetic law
- (c) Germplasm theory
- (d) Theory of pangenesis

2. Analogy leads to

- (a) Convergent evolution
- (b) Divergent evolution
- (c) Parallel evolution
- (d) Quantum evolution

3. Vermiform appendix in man is an example of

- (a) Analogous organs
- (b) Homologous organs
- (c) Vestigial organs
- (d) Rudimentary organs

4. The carbon 14 method was evolved by

- (a) Bolt wood
- (b) Libby
- (c) William smith
- (d) Leonardo da Vinci

5. When a new population is formed from a large population by isolation its gene pool is not identical with that of the parent population is due to?

- (a) Genetic drift
- (b) Founder principle
- (c) Recombination
- (d) Hybridization

Page 2

Code No. : 6434



6. Species which are morphologically similar but reproductively isolated are called
- (a) Sibling species (b) Sub-species
(c) Semi-species (d) Deme
7. Evolution of horse is an example of
- (a) Micro evolution (b) Macro evolution
(c) Mega evolution (d) Quantum evolution
8. Which one of the following is a connecting link between reptiles and birds?
- (a) Peripatus (b) Lung fishes
(c) Archaeopteryx (d) Monotremes
9. An unique state of intellectual development in human beings refers to
- (a) Coevolution (b) Cultural evolution
(c) Organic evolution (d) All of the above
10. The extinct modern man was
- (a) Heidelberg man (b) Rhodesian man
(c) Neanderthal man (d) Cro Magnum man

Page 3 Code No. : 6434

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Comment on the formation of nucleoproteins.

Or

- (b) Explain the evolution of aerobic metabolism.

12. (a) What are the homologous organs? Explain with examples.

Or

- (b) Discuss the basis of the mutation theory of Hugo de Vries.

13. (a) Write short notes on gene frequency and its impacts.

Or

- (b) State the importance of geographic isolation in evolution.

14. (a) Write notes on preadaptations and postadaptations.

Or

- (b) Discuss living fossils as connecting links.

Page 4 Code No. : 6434
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15. (a) Describe the characteristics of Australopithecus.

Or

- (b) Write an account on the evolutionary future of man.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Discuss the evolutionary importance of Grey Miller experiment.

Or

- (b) Write an essay on the evolution of prokaryotes and eukaryotes.

17. (a) Comment on the types of fossils.

Or

- (b) Describe the salient features of modern synthetic theory.

18. (a) "Variation is the raw material for evolution" – Discuss.

Or

- (b) Write an essay on speciation.

Page 5

Code No. : 6434

19. (a) Illustrate macro evolution with an example.

Or

- (b) Give a detailed account on extinction and its causes.

20. (a) Describe the fossil record of man.

Or

- (b) Write notes the significance of altruism and kin selection.

Page 6

Code No. : 6434

