

(6 pages)

Reg. No. :

Code No. : 6808

Sub. Code : KZOM 23

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

Second Semester

Zoology

EVOLUTION

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The present epoch in the Earth's age is known as
(a) Holocene (b) Miocene
(c) Pleistocene (d) Pliocene
2. Which of the following amino acids was not found to be synthesized in Miller's experiment?
(a) Alanine (b) Haeckel
(c) Morgan (d) Weismann

3. An important evidence in favor of organic evolution is the occurrence of
(a) Homologous organs only
(b) Analogous and vestigial organs
(c) Homologous and vestigial organs
(d) Homologous and analogous organs
4. Fossils are most commonly preserved in
(a) Metamorphic rocks
(b) Igneous rocks
(c) Sedimentary rocks
(d) Any type of rock
5. A species inhabiting different geographical areas is known as
(a) Sympatric (b) Allopatric
(c) Sibling (d) Biospecies
6. Phenomenon of Industrial melanism demonstrates
(a) Geographical isolation
(b) Reproductive isolation
(c) Natural selection
(d) Induced mutation

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7. Divergent evolution of a single group of organisms in a new environment is called
- Adaptive radiation
 - Uniformitarianism
 - Catastrophism
 - Convergent evolution
8. Darwin's Finches are all excellent example of
- Connecting links
 - Adaptive radiation
 - Seasonal migration
 - Brood parasitism
9. Which of the following is the direct ancestor of *Homo sapiens*?
- Australopithecus*
 - H. sapiens* Neanderthals
 - Homoerectus*
 - Homosapiens fossilis*
10. Common origin of man and chimpanzee is best shown by
- Binocular vision
 - Chromosome number
 - Dental formula
 - Cranial capacity

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PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Explain "Miller's experiment" in detail and add a note on its significance.

Or

- (b) What evidence supports the argument that RNA evolved first on the early earth? What evidence supports the argument that proteins evolved first?

12. (a) Write an account on role of mutation in evolution.

Or

- (b) Give a short account on modern synthetic theory of evolution.

13. (a) Discuss how new mutations are constantly being generated in a gene pool.

Or

- (b) Write an essay about gene pool in the mechanism of evolution.

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14. (a) Write an account on rates of evolution.

Or

- (b) Write an account on the role of adaptation in evolution.

15. (a) Discuss their characteristics of Neanderthal man.

Or

- (b) Explain kith and kin selection.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Theories about the origin of cells – Discuss.

Or

- (b) What are coacervates, and what characteristics do they have in common with organisms? Are they alive? Discuss.

17. (a) What is fossil? Explain how theories of its origin.

Or

- (b) Give detailed account on Geological time scales with special reference to phylogeny.

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18. (a) What is the mechanism of evolution? Explain with examples.

Or

- (b) Give a detailed account on theories an origin of species.

19. (a) What is adaptation? Describe the impacts of adaptations in evolution with suitable examples.

Or

- (b) Give a detailed account on macro and micro evolution.

20. (a) With reference to the primates discuss their origin and evolution.

Or

- (b) Discuss the evolutionary trends of man evolution.

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