

(6 pages)

Reg. No. :

Code No. : 6884

Sub. Code : KZOM 23/
PZOM 23

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.

Second Semester

Zoology

EVOLUTION

(For those who joined in July 2016 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Theory of abiogenesis was put forwarded by _____

- (a) Spallanzani
- (b) Redi
- (c) Pasteur
- (d) Van Helmont

2. Swan neck flask experiment was performed by _____

- (a) Oparin and Haldane
- (b) Darwin
- (c) Aristotle
- (d) Luis Pasteur

3. According to De Vries theory, evolution is _____

- (a) Jerky
- (b) Discontinuous
- (c) Both (a) and (b)
- (d) Continuous and smooth

4. Similarity between the animals and plants of different species is called _____

- (a) Sexual homology
- (b) Phylogenetic homology
- (c) Serial homology
- (d) Analogy

5. Genetic drift is on account of _____

- (a) variations
- (b) mutation
- (c) increase in population
- (d) decrease in population



6. Natural selection as the guiding force of evolution was recognised by
- (a) Dobzhansky (b) Charles Darwin
(c) Both (a) and (b) (d) Simpson
7. The evolution which results in the production of new adaptive types through a process of population fragmentation and genetic divergence is known as —————
- (a) micro evolution
(b) macro evolution
(c) divergent evolution
(d) convergent evolution
8. Taxes whose members have descended from a common ancestors are called ————— evolution.
- (a) monophyletic (b) polyphyletic
(c) both (a) and (b) (d) convergent
9. Primates are characterized by —————
- (a) single births
(b) lengthy gestation
(c) an extended period of juvenile dependency
(d) all the above

10. An act which ends in itself with no benefit to the individual would be which of the following?
- (a) Hedonic (b) Pro social
(c) Sadistic (d) Altruistic

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Summarize oparin concept of origin of life on earth.
- Or
- (b) Differentiate between coacervates and microspheres.
12. (a) Give an account on palaeontological evidences of evolution.
- Or
- (b) Write a note on mutation theory of Hugo Derives.
13. (a) What do you understand by gene frequency? Explain it.
- Or
- (b) Describe why allopatric speciation is also called geographic speciation.



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

Or

- (b) Write a note on mechanism of the origin of higher categories.

15. (a) Give an account on kith and kin selection.

Or

- (b) Write short note on place and time of origin.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Write what do you know about the history of earth and origin of life.

Or

- (b) Discuss various theories of origin of life on earth which one seems to be most plausible and why?

17. (a) Describe the theory of inheritance of acquired characters.

Or

- (b) Write any three evidences in support of the theory of evolution.

18. (a) State Hardy Weinberg's law of equilibrium and its significance.

Or

- (b) What are the different types of natural selection? Explain the role of stabilizing selection with suitable example.

19. (a) Write an essay on extinction and its causes.

Or

- (b) Differentiate between three different types of evolution. Trace the interrelationship between them.

20. (a) Give an account on fossil history of man.

Or

- (b) Write an essay on evolutionary trends of man evolution.

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