

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2023.

Sixth Semester

Zoology – Core

EVOLUTION

(For those who joined in July 2017 – 2020)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. _____ is used to determine what the organism was, when it lived, and what major events it experienced during its lifetime.
 - (a) Geological tables
 - (b) Fossil evidence
 - (c) Biological tables
 - (d) None of the above

2. A common example of homologous structures is the
 - (a) wings of birds and butterflies
 - (b) flippers of Penguins and Dolphins
 - (c) forelimbs of vertebrates
 - (d) all the above
3. Lamarck proposed theories like the
 - (a) inheritance of acquired characters
 - (b) use and disuse
 - (c) increase in complexity
 - (d) all the above
4. Natural selection is the process through which populations of living organisms
 - (a) adapt and not change
 - (b) adapt and change
 - (c) not adapt and not change
 - (d) all the above
5. Behavioral isolation is a mechanism of evolution that can lead to
 - (a) Isolation
 - (b) geographic isolation
 - (c) behaviour isolation
 - (d) speciation

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6. Examples of allopatric speciation
 - (a) Darwin's finches
 - (b) Housefly population
 - (c) Parapatric population
 - (d) All the above
7. Batesian mimicry was originally defined in non-predatory animals, it is common in
 - (a) frogs
 - (b) snakes
 - (c) butterflies
 - (d) all the above
8. The adaptations of desert animals are _____.
 - (a) long eye lashes
 - (b) hairy ears
 - (c) closing nostrils
 - (d) all the above
9. _____ the genus to which all modern equines including horses, asses, and zebras.
 - (a) Equus
 - (b) Aquus
 - (c) Aquatic
 - (d) All the above
10. Human evolution is the lengthy process of change by which people originated from
 - (a) homos ancestors
 - (b) apelike ancestors
 - (c) ayes ancestors
 - (d) none of the above

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Which is the best example of analogous structures?

Or

 (b) What are the paleontological evidences of evolution?
12. (a) Define the term lamarckism explain the neo-Lamarckism.

Or

 (b) Describe the Hugo de Vries theory of evolution.
13. (a) Write about some major concepts of species.

Or

 (b) Give an account on examples of temporal or seasonal isolation.
14. (a) How do cursorial animals adapt for running?

Or

 (b) How are arboreal animals adapted to live on trees?

15. (a) What are the five stages of human evolution?

Or

(b) Explain the various types of animal distribution.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) How does biochemical evidence support organic evolution?

Or

(b) What are three examples of evidence for biological evolution?

17. (a) How do you explain natural selection?

Or

(b) Explain the mechanisms of natural selection with suitable example.

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18. (a) Explain the most important types and concept in population genetics.

Or

(b) How is Hardy Weinberg law used in population genetics?

19. (a) How is mimicry an adaptation for organisms?

Or

(b) What is a protective Colouration?

20. (a) Write an essay on horse evolution.

Or

(b) Describe the major changes in human evolution.

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