

(6 pages)

**Reg. No. :** .....

**Code No. : 10704 E      Sub. Code : JMZO 61/  
SMZO 61**

B.Sc. (CBCS) DEGREE EXAMINATION,  
APRIL 2020.

Sixth Semester

Zoology – Main

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. Theory of biochemical origin of life was formulated by
  - (a) Haeckel
  - (b) Oparin
  - (c) Haldane
  - (d) Sudrez

2. Evidences considered as writer documents for Evolution
  - (a) Morphology and comparative anatomy
  - (b) Geological scale
  - (c) Physiology
  - (d) Palaeontology
3. Postulates of Lamarck are presented in the book of
  - (a) Origin of species
  - (b) Philosophique zoology
  - (c) Rate of Evolution
  - (d) Effects of Mutation
4. Mutation theory was first formulated by
  - (a) Muller
  - (b) Dobzhensky
  - (c) Hugo Devires
  - (d) Mendel
5. Factor that effects Hardy-Weinberg equilibrium is
  - (a) Mutation
  - (b) Natural selection
  - (c) Genetic drift
  - (d) All of these

6. Biological Spices concept was given by
- (a) Goldsmidt
  - (b) Lotsy
  - (c) Mayor and Dobzhansky
  - (d) Emerson
7. The leaf insect Phyllium is an example for
- (a) Protective mimicry
  - (b) Warning mimicry
  - (c) Aggressive mimicry
  - (d) None of these
8. Which one of the following animals for limb is modified into powerful digging organs?
- (a) Shrew
  - (b) Mole
  - (c) Whale
  - (d) Vulture
9. The available fossils indicate that human beings originated first in
- (a) South America
  - (b) South Africa
  - (c) Central Asia
  - (d) Russia
10. Area which covers South America, Central America, South Mexico and West India constitute
- (a) Palaearctic
  - (b) Neartic
  - (c) Neotropical
  - (d) Ethiopian

PART B — ( $5 \times 5 = 25$  marks)

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

Each answer should not exceed 250 words.

11. (a) Compare and contrast homologous and analogous organs with example.

Or

- (b) With illustrations explain Redi's experiment and Louis Pasteur's experiment and then outcomes.

12. (a) Enlist and explain the special features of Mutation theory.

Or

- (b) Briefly explain about Industrial melanism and its evolutionary importances.

13. (a) Write short note on sources of variations.

Or

- (b) State Hardy-Weinberg equilibrium and comment on the factors affecting the equilibrium.

14. (a) Point out the adaptations found in desert and cave animals.

Or

- (b) What is protective colouration? Explain the advantages with examples.

15. (a) Write an account on Ancestry of man.

Or

- (b) Tabulate and explain the salient features of Ape and Man.

PART C — ( $5 \times 8 = 40$  marks)

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

Each answer should not exceed 600 words.

16. (a) Critically analyse the biochemical and physiological evidences in support of organic evolution.

Or

- (b) Discuss the embryological evidences in favour of evolution.

17. (a) With suitable example critically evaluate the types of natural selection.

Or

- (b) Explain in detail about the mechanism of Natural selection.

18. (a) Differentiate the mechanism of Allopatric and sympatric speciation.

Or

- (b) Evaluate the different components of species concept.

19. (a) What is adaptive radiation? With examples explain Cursocial, Fossocial, Arboreal and Volent adaptation found among animals.

Or

- (b) Explain the features of Batesian and Mullarian mimicry with examples.
20. (a) Write an essay on cultural evolution of man.

Or

- (b) Enlist and explain patterns of animals distribution.
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