

Class-12th- Test
EVOLUTION

M.M-35

TIME-1.5 HR

SECTION A

Multiple Choice Questions

[1X 10=10]

1. Select the mismatched pair.

- (a) Saltation – Hugo de Vries
- (b) Pre-adaptive mutation – Joshua Lederberg
- (c) Genetic drift – Sewall Wright
- (d) Use and disuse of organs – Darwin

2. The organism that is associated with industrial melanism is

- (a) Biston betularia
- (b) Rhesus monkey
- (c) Mimosa pudica
- (d) Triticum aestivum

3. 450 out of 1000 individuals in a population have a genotype of AA while 350 have Aa genotype. Frequency of allele A in this population is

- (a) 0.5
- (b) 0.45
- (c) 0.77
- (d) 0.67

4. Sickle cell anaemia is caused by substitution of

- (a) valine by glutamic acid
- (b) glutamic acid by valine at sixth position of beta chain
- (c) phenylalanine by glutamic acid at sixth position of alpha chain
- (d) none of these

5. Which of the following was not related with Darwin's theory of evolution?

- (a) Struggle for existence
- (b) Genetic drift
- (c) Over production
- (d) Speciation



6. Which of the following does not tend to promote speciation?

- (a) Natural selection
- (b) Inheritance of acquired characters
- (c) Founder effect
- (d) Reproductive isolation

7. For the MN-blood group system, the frequencies of M and N alleles are 0.7 and 0.3, respectively. The expected frequency of MN-blood group bearing organisms is likely to be

- (a) 42%
- (b) 49%
- (c) 9%
- (d) 58%

8. Presence of gills in the tadpole of frog indicates that

- (a) fishes were amphibious in the past
- (b) fishes evolved from frog-like ancestors
- (c) frogs will have gills in future
- (d) frogs evolved from gilled ancestors

9. The most accepted line of descent in human evolution is

- (a) Australopithecus → Ramapithecus → Homo sapiens → Homo habilis
- (b) Homo erectus → Homo habilis → Homo sapiens
- (c) Ramapithecus → Homo habilis → Homo erectus → Homo sapiens
- (d) Australopithecus → Ramapithecus → Homo erectus → Homo habilis → Homo sapiens

10. Which of the following is regarded as the most recent ancestor of modern man?

- (a) Homo erectus
- (b) Cro-Magnon man
- (c) Ramapithecus
- (d) Homo habilis

SECTION – B

[2X3= 6]

11. WRITE SHORT NOTE ON EMBRYOLOGICAL EVIDENCES SUPPORTING EVOLUTION .



12. DEFINE SALTATION. WHO BELIVED IT CAUSES SPECIATION ?

13. EXPLAIN ANTIBIOTIC RESISTANCE OBSERVED IN BACTERIA IN LIGHT OF DARWINIAN SELECTION THEORY.

SECTION-C

[3X 3= 9]

14. EXPLAIN DIVERGENT EVOLUTION IN DETAIL. WHAT IS THE DRIVING FORCE BEHIND IT ?

15. WHAT ARE THE KEY CONCEPTS IN EVOLUTION THEORY OF DARWIN ? EXPLAIN THEM.

16. DEFINE ADAPTIVE RADIATION & TAKING AN EXAMPLE DESCRIBE THE PHENOMENON.

SECTION-D

[5X1= 5]

17. WHAT ARE THE 5 FACTORS THAT ARE KNOWN TO AFFECT HARDY-WEINBERG EQUILIBRIUM ? EXPLAIN EACH OF THEM.

CASE STUDY

[1X5= 5]

18. When the reptiles came down, mammals took over the earth. There' were mammals in South America, which resembled some of the modern day mammals. But due to continental drift, they disappeared whereas the pouched mammals of Australia flourished and evolved into the various forms of pouched mammals that we see today.

1. What unique type of mammals flourished and evolved in Australia?

- A) Rodents
- B) Primates
- C) Pouched mammals
- D) Hoofed mammals

2. Why did pouched mammals specifically thrive in Australia, according to the passage?

- A) Lack of competition with other mammals



- B) Favourable climate conditions
- C) Protection from continental drift
- D) The passage does not specify

3. Continental drift refers to:

- A) The migration of animals between continents
- B) The slow movement of Earth's continents over geological time
- C) The rapid sinking of continents into the ocean
- D) The growth of continents due to volcanic activity

4. Which era in Earth's history is commonly associated with the dominance of reptiles?

- A) Paleozoic Era
- B) Mesozoic Era
- C) Cenozoic Era
- D) Proterozoic Era

5. What is one of the effects of continental drift on the distribution and evolution of species?

- A) It prevents species from migrating between continents
- B) It causes instant changes in climate
- C) It encourages hybridization between different species
- D) It leads to the simultaneous evolution of identical species on different continents

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