

Chapter – 6 | Evolution

QUIZ PART-04

1. The essence of Darwinian theory of evolution is:
A. Mutation
B. Natural selection
C. Use and disuse of organs
D. Inheritance of acquired characters (B)

Explanation : Darwin's theory mainly explains evolution through natural selection.

2. Adaptive ability of organisms has:
A. No genetic basis
B. Only environmental basis
C. Genetic basis
D. Chemical basis only (C)

Explanation : Adaptations are inherited characteristics and have a genetic basis.

3. Fitness is the result of:
A. Random movement
B. Ability to adapt and get selected by nature
C. Mutation only
D. Artificial selection (B)

Explanation : Fitness represents the ability of an organism to survive and reproduce successfully under natural selection.

4. Lamarck proposed the theory of:
A. Natural selection
B. Mutation theory
C. Inheritance of acquired characteristics
D. Genetic drift (C)

Explanation : Lamarck suggested that acquired traits during an organism's lifetime could be inherited by offspring.

5. According to Lamarckism, evolution occurs due to:
A. Use and disuse of organs
B. Mutation only
C. Natural selection only
D. Genetic recombination (A)

Explanation : Lamarck believed that organs used frequently become stronger while unused organs degenerate.

6. Darwin's theory of natural selection was influenced by the work of:
A. Hugo de Vries
B. Thomas Robert Malthus
C. Weismann
D. Mendel (B)

Explanation : Malthus proposed ideas about population growth and limited resources that influenced Darwin.

7. Natural selection favours organisms that:
A. Cannot reproduce
B. Have beneficial heritable variations
C. Have acquired traits only
D. Never show variation (B)

Explanation : Organisms with useful inherited variations survive better and leave more offspring.

8. Hugo de Vries proposed the:
A. Theory of natural selection
B. Theory of mutation
C. Theory of acquired characters
D. Theory of use and disuse (B)

Explanation : Hugo de Vries proposed mutation theory based on his work on evening primrose.

9. According to Hugo de Vries, mutations are:
A. Small and directional
B. Random and directionless
C. Always beneficial
D. Caused by environment only (B)

Explanation : De Vries considered mutations to be sudden, large, random and directionless changes.

10. The large evolutionary changes proposed by Hugo de Vries are called:
A. Adaptation
B. Saltation
C. Variation
D. Selection (B)

Explanation : Saltation refers to large evolutionary changes caused by massive mutations.