

## Mission MBBS

Date: 10/11/2022

Subject: ZOOLOGY

Topic : Evolution L 5

Class: Standard XII

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1. Which of the following statements is FALSE based on Darwin's theory of evolution?
  - A. Natural selection is the driving force of evolution
  - B. New characters are acquired by the living beings either due to the use or disuse of the organs
  - C. Gradual accumulation of useful variations results in the origin of new species
  - D. Fitness is measured in terms of reproductive success
  
2. According to Neo-Darwinism, evolution occurs through the accumulation of genetic variations in
  - A. one particular individual
  - B. a population
  - C. few individuals
  - D. a species
  
3. In sexually reproducing organisms, mutations occurring in the \_\_\_\_\_ will be transmitted to the offspring.
  - A. RNA of somatic cells
  - B. DNA of somatic cells
  - C. RNA of germ cells
  - D. DNA of germ cells

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4. Which of the following processes cannot introduce variations in the population?
- A.** Genetic recombination
  - B.** Gene mutation
  - C.** Asexual reproduction
  - D.** All of these
5. Mutations are considered directionless because
- A.** these occur in all organisms of a species
  - B.** these can be useful, harmful or neutral
  - C.** these occur at a specific time
  - D.** these can cause evolutionary change in a single generation
6. State whether the following statements are true (T) or false (F).
- I - Darwin believed that saltation is the key to evolution  
II - Neo-Darwinism explains the cause behind the appearance of variations  
III - The mutation theory of evolution states that evolution is a continuous process
- A.** I - T, II- T, III- F
  - B.** I- F, II - T, III - F
  - C.** I - F, II - F, III - T
  - D.** I - T, II - F, III - F

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7. Which among the following statements are correct regarding Neo-Darwinism?
- I. It explains how variations appear in a population
  - II. It explains the difference between somatic and germinal variations
  - III. Dobzhansky, Fisher, Mayr, Stebbins, Haldane and Wright proposed the modern synthetic theory of evolution

- A. Only I
- B. I and III
- C. Only II
- D. I, II and III

8. Match column I with column II and choose the correct option.

Column I	Column II
A. Saltation	I. Spores
B. Darwin	II. Neo-Darwinism
C. Stebbins	III. Evening primrose
D. Panspermia	IV. Finches

- A. A-III, B-IV, C-II, D-I
- B. A-III, B-II, C-I, D-IV
- C. A-III, B-IV, C-I, D-II
- D. A-I, B-IV, C-II, D-III

9. Identify the mismatch from the following pair of terms given below

- A. Hugo de Vries: *Oenothera lamarckiana*
- B. H.M.S. Beagle: Alfred Wallace
- C. Father Suarez: theory of special creation
- D. Pesticide-resistant pests: anthropogenic action

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10. Read the following statements and choose the correct option.

Statement 1: Evolution is not a directed process in the sense of determinism

Statement 2: Evolution is a random process based on chance events in nature and chance mutation in organisms

- A.** Statement 1 is true but statement 2 is false
- B.** Statement 1 is false but statement 2 is true
- C.** Both statements are true
- D.** Both statements are false