

## 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?

- It explains how variations appear in a population
- It explains the difference between somatic and germinal variations
- 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