

## MISSION MBBS

Date: 03/11/2022

Subject: ZOOLOGY

Topic : Evolution L 3

Class: Standard XII

---

1. Mutation theory is able to provide an explanation for the
  - A. appearance of short legged Ancon sheep
  - B. hornless cattle developed from the horned cattle
  - C. production of the seedless oranges
  - D. All of these
  
2. Hugo de Vries proposed “mutation theory of evolution” while working on
  - A. *Pisum sativum*
  - B. *Drosophila melanogaster*
  - C. *Oenothera lamarckiana*
  - D. Rats
  
3. Mutations are \_\_\_A\_\_\_ while Darwinian variations are \_\_\_B\_\_\_.
  - A. A- random and continuous, B- discontinuous
  - B. A- minor and directional, B- major and directionless
  - C. A- small and directionless, B- random and directional
  - D. A- random and directionless, B- small and directional

## MISSION MBBS

4. Which of the following is the correct option?

- A. De Vries believed that evolution is caused by mutation while Darwin believed that evolution is not caused by minor inheritable variations
- B. According to de Vries, mutations are not random while according to Darwin, random mutations lead to evolution
- C. Mutations are directional as per deVries but variations are directionless according to Darwin
- D. Saltation causes evolution as per deVries while evolution is gradual according to Darwin

5. Read the following assertion and reason statements and choose the correct option.

Assertion: Evolution in *Escherichia coli* can occur in few days

Reason: The rate of evolution depends on the life-span of an organism

- A. Both assertion and reason are true and the reason is the correct explanation of the assertion
- B. Both assertion and reason are true but reason is not the correct explanation of the assertion
- C. Only the assertion is true
- D. Both assertion and reason are false

6. Single step large mutation leading to speciation is termed as (i) \_\_\_\_\_ by (ii) \_\_\_\_\_.

- A. (i)-saltation, (ii)-Darwin
- B. (i)-saltation, (ii)-Hugo de Vries
- C. (i)-variation, (ii)-Hugo de Vries
- D. (i)-natural selection, (ii)-Darwin

## MISSION MBBS

7. How many of the following statements are true regarding Neo-Darwinism?

- I - According to Neo-Darwinism, all useful variations are inheritable
- II - Ernst Mayr was one among a group of scientists that proposed the theory of Neo-Darwinism
- III - It does not take the gene pool of a population into consideration
- IV - It is the theory of origin of species proposed by Darwin

**A.** 1  
**B.** 2  
**C.** 3  
**D.** 4

8. \_\_\_\_\_ is the synthesis of ideas from the theory of natural selection, the mutation theory and Mendel's principles of heredity.

**A.** Darwinism  
**B.** Neo-Darwinism  
**C.** Synthetic theory of evolution  
**D.** both b and c

9. The theory of Neo-Darwinism was proposed by many scientists together. Who among the following was not a part of that group of scientists?

**A.** Dobzhansky  
**B.** Ernst Mayr  
**C.** Stebbins  
**D.** Darwin

## MISSION MBBS

10. According to Neo-Darwinism, \_\_\_\_\_ is the unit of evolution.

- A.** species
- B.** individual organism
- C.** cell
- D.** population