

## MISSION MBBS

Date: 03/11/2022

Subject: ZOOLOGY

Topic : Evolution L 3

Class: Standard XII

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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

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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

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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

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

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