

NEET EVOLUTION — THEORIES OF EVOLUTION: LAMARCK, DARWIN (NATURAL SELECTION), DE VRIES (MUTATION) — PYQS**Max. Marks: 52****Questions: 13****Section A (MCQ) — 13 questions**

Q.1 Select the correct statement regarding mutation theory of evolution. [NEET (UG) 2022 (Phase 2)]

- (1) Large differences due to mutations arise gradually in a population
- (2) This theory was proposed by Alfred Wallace
- (3) Variations are small directional changes
- (4) Single step large mutation is a cause of speciation

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Q.2 Variations caused by mutation, as proposed by Hugo de Vries, are : [NEET (UG) 2019]

- (1) small and directional
- (2) small and directionless
- (3) random and directional
- (4) random and directionless

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Q.3 According to Hugo de Vries, the mechanism of evolution is [NEET 2018]

- (1) multiple step mutations
- (2) saltation
- (3) phenotypic variations
- (4) minor mutations

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Q.4 According to Darwin, the organic evolution is due to - [NEET 2013]

- (1) Reduced feeding efficiency in one species due to the presence of interfering species
- (2) Competition within closely related species
- (3) Intraspecific competition
- (4) Interspecific competition

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Q.5 The idea of mutations was brought forth by : [AIPMT 2012 (Mains)]

- (1) Charles Darwin, who observed a wide variety of organisms during sea voyage
- (2) Hugo de Vries, who worked on evening primrose
- (3) Gregor Mendel, who worked on *Pisum sativum*
- (4) Hardy and Weinberg, who worked on allele frequencies in a population

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Q.6 Given below are four statements (A-D) each with one or two blanks. Select the option which correctly fills up the blanks in two statements.

- (i) Wings of butterfly and birds look alike and are the results of (i) _____ evolution
- (ii) Miller showed that CH_4 , H_2 , NH_3 and (i) _____, when exposed to electric discharge in a flask resulted in formation of (ii) _____.
- (iii) Vermiform appendix is a (i) _____ organ and an (ii) _____ evidence of evolution.
- (iv) According to Darwin evolution took place due to (i) _____ and (ii) _____ of the fittest.

[AIPMT 2010 (Mains)]

- (1) C - (i) vestigial, (ii) anatomical, D - (i) mutations, (ii) multiplication
- (2) D - (i) small variations, (ii) survival, A - (i) convergent
- (3) A - (i) convergent, B - (i) oxygen, (ii) nucleosides
- (4) B - (i) water vapour, (ii) amino acids, C - (i) rudimentary, (ii) anatomical

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Q.7 In the case of peppered moth (*Biston betularia*) the black-coloured form became dominant over the light-coloured form in England during industrial revolution. This is an example of - [AIPMT 2009]

- (1) Natural selection whereby the darker forms were selected
- (2) Protective mimicry
- (3) Inheritance of darker colour character acquired due to the darker environment
- (4) Appearance of the darker coloured individuals due to very poor sunlight

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Q.8 Which one of the following scientist's name is correctly matched with the theory put forth by him?

[AIPMT 2008]

- (1) Mendel — Theory of pangenesis
- (2) de Vries — Natural selection
- (3) Pasteur — Inheritance of acquired characters
- (4) Weismann — Theory of continuity of germplasm

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Q.9 De Vries gave his mutation theory on organic evolution while working on -

[AIPMT 2005]

- (1) *Althaea rosea*
- (2) *Oenothera lamarckiana*
- (3) *Pisum sativum*
- (4) *Drosophila melanogaster*

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Q.10 Which one of the following sequences was proposed by Darwin and Wallace for organic evolution?

[AIPMT 2003]

- (1) Variations, natural selection, overproduction, constancy of population size
- (2) Overproduction, constancy of population size, variations, natural selection
- (3) Variations, constancy of population size, overproduction, natural selection
- (4) Overproduction, variations, constancy of population size, natural selection

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Q.11 Darwin in his 'Natural Selection Theory' did not believe in any role of which one of the following in organic evolution ?

[AIPMT 2003]

- (1) Survival of the fittest
- (2) Parasites and predators as natural enemies
- (3) Discontinuous variations
- (4) Struggle for existence

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Q.12 Some bacteria are able to grow in streptomycin containing medium due to

[AIPMT 2002]

- (1) natural selection
- (2) induced mutation
- (3) reproductive isolation
- (4) genetic drift.

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Q.13 Darwin's theory of pangenesis shows similarity with theory of inheritance of acquired characters then what shall be correct according to it

[AIPMT 2001]

- (1) There should be some physical basis of inheritance
- (2) Size of organs increase with aging
- (3) Useful organs become strong and developed while useless organs become extinct. These organs help in struggle for survival
- (4) Development of organs is due to will power

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	4	4	2	3	2	2	1	4	2	2	3
Ques.	12	13									
Ans.	1	1									