SmartKalike

CBSE Class 12 · Biology

Evolution

10 most probable questions for Boards 2027

Q1. 0.5 marks · Very short answer

What is the proposal that life or life-spores reached Earth from outer space called?

Answer

Panspermia is the proposal that life-spores were transferred to Earth from outer space.

Q2. 1 mark · Very short answer

Name the naturalist who reached conclusions about natural selection similar to Darwin's around the same time.

Answer

Alfred Wallace, a naturalist working in the Malay Archipelago, reached conclusions similar to Darwin's around the same time.

Q3. 1.5 marks · Short answer

Approximately when did life appear on Earth, and how long after Earth formed was this? (1.5)

Answer

Earth was supposed to have been formed about 4.5 billion years back. Life appeared 500 million years after Earth formed, i.e., almost four billion years back. There was no atmosphere on early earth.

Q4. 2 marks · Short answer

Explain how natural selection acts on heritable variations that improve survival and reproductive fitness in an environment. (2)

Answer

A population has built-in heritable variation. Individuals whose characteristics enable better survival under natural conditions have greater reproductive fitness, leave more progeny, and are selected by nature, driving evolution.

Q5. 3 marks · Medium answer

Describe the Big Bang theory and state how the expansion and cooling of the universe led to the formation of hydrogen, helium and galaxies. (3)

Answer

1. The Big Bang theory explains the origin of the universe as a singular huge explosion, unimaginable in physical terms. The universe expanded, and its temperature came down; hydrogen and helium formed sometime later.
2. Gases condensed under gravitation and formed the galaxies of the present-day universe.

Galaxies contain stars and clouds of gas and dust.

Q6. 5 marks · Long answer

Explain how analogous structures differ from homologous structures and identify the type of evolution associated with analogy. Give two examples of analogous structures and explain how similarities in proteins and genes can provide evidence of common ancestry.

Full answer on SmartKalike: https://smartkalike.com/cbse/class-12/biology/evolution

Q7. 1 mark · Multiple choice

Which statement correctly describes the conclusion of Karl Ernst von Baer's study of vertebrate embryos?
(A) Embryos pass through the adult stages of other animals.
(B) Embryos never pass through the adult stages of other animals.
(C) Embryos have no features in common.
(D) Embryos prove that all vertebrates are identical.

Full answer on SmartKalike: https://smartkalike.com/cbse/class-12/biology/evolution

Q8. 2 marks · Short answer

How do fossils preserved in different sedimentary layers provide evidence for evolution? (2)

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Q9. 3 marks · Medium answer

What did the theory of spontaneous generation propose? Briefly state how Pasteur's experiments refuted it. (3)

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Q10. 1 mark · Multiple choice

Mammalian forelimbs with the same basic bones but different functions are an example of:
(A) analogous structures (B) homologous structures (C) vestigial structures (D) acquired characters

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