

8. The Paths Traversed by Life

Let us assess

1. Question

Which concept is put forward by the theory of natural selection?

- A. Origin of life
- B. Origin of species
- C. Origin of eukaryotes
- D. Chemical evolution of life

Answer

The concept of Origin of Species is put forward by the theory of Natural Selection published by Charles Darwin. It is considered to be the foundation of evolutionary biology.

2. Question

List the main concepts that indicate how the biodiversity seen today has been developed from prokaryotes.

Answer

- Chemical Evolution in the Primitive Earth lead to the formation of organic compounds through which lead to the origin of Primitive Prokaryotic Cells
- These Primitive Prokaryotic Cells having no membrane bound organelles as well as no nucleus evolved over the period of time to give rise to Eukaryotic Cells having membrane bound organelles as well as nucleus.
- This lead to the formation of Colonies of Eukaryotic Cells and subsequently the formation of Multicellular Organisms

3. Question

How does the interference of human beings in nature influence the process of evolution? How do these affect the existence of other organisms?

Answer

Human Beings are last arriving species on earth which was formed as a result of evolution over a period of million years . Nowadays Human activities have caused lot of climate changes which can interfere with the process of evolution, apart from that Human intervention has led to extinction of various organisms thus disturbing the balance of the ecosystem .

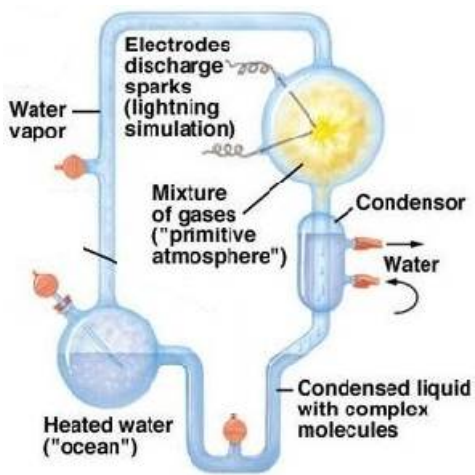
Extended activities

1. Question

Prepare and exhibit a model of the experimental set up constructed by Urey – Miller to scientifically prove the theory of chemical evolution.

Answer

Urey-Miller recreated the atmosphere of Primitive Earth in the Lab to understand the scientific basis behind the hypothesis of origin of Life. The diagram below shows the experiment conducted by them:-



2. Question

Prepare a chart illustrating the evolutionary tree of man.

Answer

