

Q. What do you understand by continental drift theory? Discuss along with the evidences that support the theory. (150 words)

Ans:-

Introduction

Continental drift theory deals with the distribution of the oceans and the continents. It was first suggested by a German meteorologist, Alfred Wegener in 1912.

Body

According to the theory, all the continents formed a single continental mass- Pangea and mega ocean- Panthalassa surrounded it.

Around 200 million years ago Pangaea started splitting and broke down into two large continental masses as Laurasia and Gondwanaland forming the northern and southern components respectively.

Subsequently, Laurasia and Gondwanaland continued to break into various smaller continents that exist today.

Evidence that supports the theory

The Matching of Continents (Jig-Saw-Fit): The shorelines of Africa and South America facing each other match remarkably.

Rocks of Same Age Across the Oceans: radiometric dating methods have correlated the rock formation in different continents.

Tillite: The glacial tillite found in Gondwana system of sediments has its resemblance to six different landmasses of the Southern Hemisphere. Counterparts of this succession are found in Africa, Falkland Island, Madagascar, Antarctica and Australia besides India.

Placer Deposits: The placer deposits of gold in the Ghana coast do not have source rock in the region. The gold deposits of Ghana have been derived from the Brazil plateau when the two continents lay side by side

Distribution of Fossils: identical species of plants and animals adapted to living on land or in freshwater are found on either side of the marine barriers. For example remains of Mesosaurus, a freshwater crocodile-like reptile that lived during the early Permian (between 286 and 258 million years ago), are found solely in Southern Africa and Eastern South America.