

## Concept of Isostasy / rats view and Airys view

Q: Describe the concept of Isostasy. 10

What is Isostasy ?

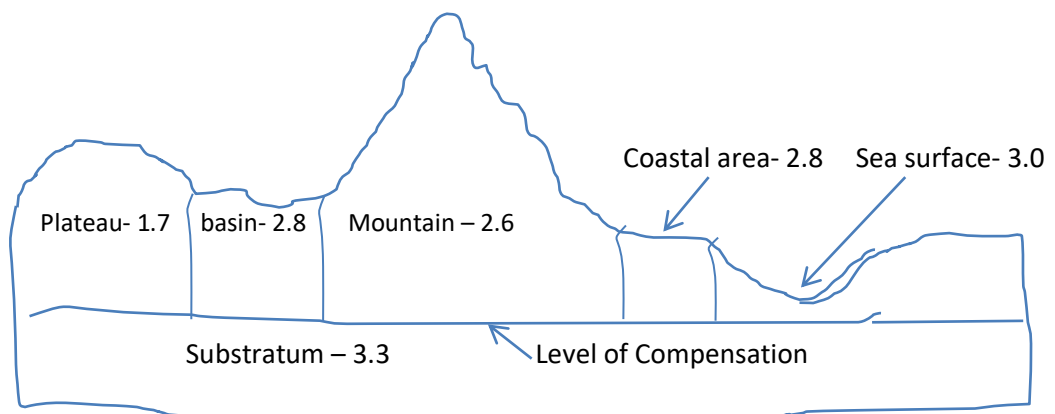
Isostasy is a Greek word which means “equal standing”. It is the state of gravitational equilibrium between earth’s crust and the mantle. Continents are balanced in heavy SIMA in the same way as a piece of ice is balanced in water.

James Dutton first used the word “Isostasy” in 1889. It explains how different topographical heights can exist on the earth’s surface. The earth’s crust is floating on underlying mantle (SIMA) in a balanced way

When a certain area of earth’s surface attains the state of Isostasy, it is called “Isostatic Equilibrium”.

Pratt’s View :

- According to Pratt- the density of mountains, plateaus and plains are less than the density of the Substratum.
- Different density masses floating on the substratum (density 3.3) making a level of compensation
- Density of plateau 2.7; basin 2.8; mountain 2.6; coastal area 2.8 and sea surface 3.0

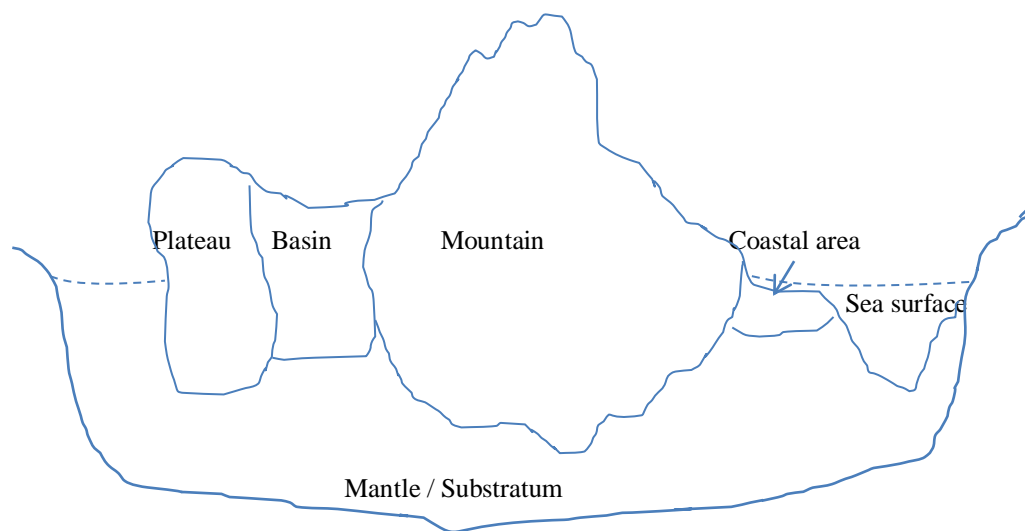


Pratt: Floatation of mountains, plains and plateaus on Substratum

## Airy's View:

He believed that-

- The density of plains, plateau and mountains are same
- Same density masses are balanced with different height on the earth's surface
- Higher height lower density ; lower height higher density



Airy: Blocks of equal density and different volume are floating on the substratum

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