

ENVIRONMENT SEGMENTS:

Environment is divided into four segments.

- a) Atmosphere b) Hydrosphere
- c) Lithosphere d) Biosphere

A) ATMOSPHERE:

1. The layer of air present around the earth is called the atmosphere.
2. Atmosphere act as a protective layer to the earth. It absorbs a portion of electromagnetic radiations coming from the sun and transmit near U,V., visible and near infrared radiation.
3. Atmosphere maintains the heat balance on earth.

B) HYDROSPHERE:

1. The portion of water present on the earth is called hydrosphere.
2. Water occupies 4/5th of the earth surface.
3. In the hydrosphere 97% is present in the form of sea water,3% is in the form of ice in polar ice caps and traces of water left for drinking and agriculture purposes.
4. Though sea water is not used for drinking, many of the marine animals and plants survive in sea water.

C) LITHOSPHERE:

1. Except hydrosphere the rest of the earth space is in the form of land. It is called Lithosphere.
2. The lithosphere is occupied by plants, animals human beings,
3. The surface inner layers of the earth contain minerals.
4. The deeper inner layers contain oil and natural gas.

D) BIOSPHERE:

1. All living organisms like plants, animals and human beings constitute the biosphere.
2. Biosphere and other segments of the environment are inter related.
The relationship between all the living systems and their surroundings is called ecosystem.
3. The level of oxygen and CO₂ depend on the plants animals, and human beings present in the biosphere.
4. Biosphere and other segments of environment are interrelated.
The main reasons for environmental pollution are
 - i) Increase in population ii) Industrialization
 - iii) Urbanization iv) Deforestation

Atmosphere is divided into four parts

- i) Troposphere (0-11km)
 - ii) Stratosphere (11-50km)
 - iii) Mesosphere (50-85km)
 - iv) Thermosphere (85-500km)
- i) **Troposphere (0-11km):**
- i) It is up to 11 kilometers from the earth.
 - ii) It is the main portion of atmosphere and contains air.
 - iii) The density of air and temperature decreases with the increase in the altitude.
 - iv) Troposphere is homogeneous due to constant circulation of air.
- ii) **Stratosphere: (11-50km)**
- i) This part is present from 11 to 50 km above the earth. Ozone layer is present in it.
 - ii) Ozone layer absorbs the U.V. radiations coming from sun and prevents it from falling on the earth. So it acts as a protective layer.
- iii) **Mesosphere:**
- i) It is present in between 50-85km above the earth.
 - ii) Sound waves cannot propagate in this region.
 - iii) O_2^+ , NO^+ ions are present in this region.
- Temperature decreases with increase in the altitude.
- iv) **Thermosphere (Ionosphere):**
- i) It is present between 85-500km above the earth.
 - ii) O_2^+ , O^+ , NO^+ ions are present.
 - iii) In this region temperature rises as we go up and reaches a maximum of 1473K.
 - iv) Here atmospheric oxygen undergoes ionization after the absorption of solar radiation.