



## VI - OCTOBER MONTH NOTES

### 5. Major Domains of the Earth

#### I. TECHNICAL WORDS :

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|----------------|---|---|
| 1. Lithosphere | - | The hard crust that forms the outer solid surface of the earth we live. |
| 2. Hydrosphere | - | The part of the earth covered with water is known as the hydrosphere.   |
| 3. Atmosphere  | - | The layer of gases that surround our planet is called the atmosphere.   |
| 4. Biosphere   | - | It is narrow zone of contact between land, air, and water.              |
| 5. Oceans      | - | Vast Stretches of water.  |
| 6. Wind        | - | Movement of air is called wind.   |

#### II. SHORT ANSWER TYPE QUESTIONS :

**1. How many domains are present on the earth? Give their names.**

The earth is composed of four main domains. These are the lithosphere, hydrosphere, atmosphere and biosphere.

**2. Mention any three features of the continent Asia.**

Features of the continent Asia are as follows (any three):

Asia is the largest continent of the world.

- The Mt. Everest, the highest mountain peak of the world is situated in Asia continent.
- It is home to half of the world's population and India lies in Asia continent.
- It lies in the northern and eastern hemispheres and covers about 1/3rd of the total land area of the earth's surface.
- It is surrounded by the Pacific Ocean in the east, Indian Ocean in the south and Arctic Ocean in the north.
- Tropic of Cancer ( $23\frac{1}{2}^{\circ}$  N) and the Equator ( $0^{\circ}$  latitude) pass through this continent.

**3. Why is Earth called the Blue Planet?**

The earth is called the blue planet because 3/4th of its surface is covered with water.

**4. What do you mean by biosphere? Differentiate between biotic and abiotic biospheres.**

Biosphere refers to the part of the earth where land, air and water meet. It is

made up of biotic and abiotic environments

- i. **Biotic environment:** Plants, animals and human beings are the part of biotic environment.
- ii. **Abiotic environment:** Land, air and water together form abiotic environment.

### III. LONG ANSWER TYPE QUESTIONS :

**1. Biosphere is essential for the organisms. Justify this statement.**

Biosphere is a part of the earth in which life exists. For the evolution and survival of life we need land, air and water. All these essential things are found in biosphere. Thus, biosphere is a zone where life that makes this planet unique is found. Human beings are the essential part of the biosphere. Biosphere is found on and in the ground in water and in the air. It extends from less than 11 km below the sea level. Biosphere is made up of biotic and abiotic environments. There are about 10,00,000 varieties of animals and 3,00,000 varieties of plants presents in the biosphere. The biosphere is broadly divided into plants, animals and microbes.

**2. Write a note on the composition of the atmosphere.**

The atmosphere can be defined as the layer of gases that surrounds our planet. It provides us air to breathe and protect us from the harmful effects of sun's rays. The atmosphere is composed of various gases, dust particles and water vapours. Nitrogen, oxygen, argon, carbon dioxide, neon, helium, ozone, hydrogen, etc. are the main gases of the atmosphere.

Following table shows the composition of the atmosphere.

Gases	Volume %
Nitrogen	78.08
Oxygen	20.94
Argon	0.93
Carbon dioxide	0.03
Neon	0.0018
Helium	0.0005
Ozone	0.00006
Hydrogen	0.00005

**3. Differentiate between the lithosphere and the atmosphere.**

Lithosphere	Atmosphere
1. The hard crust forms the outer solid surface of the earth on which we live	The layers of gases that surround our planet are called the atmosphere
2. It includes the rocks of the earth's crust and the thin layers of soil.	It consists of various gases, water vapours and dust particles
3. The soil contains various nutrients that help to grow the vegetation.	It provides us oxygen to breathe.
4. Lithosphere is also called the crust	It is also called the blanket of gases

5. Lithosphere has two divisions, i.e., oceans and continents.	The atmosphere is found in five layers, i.e., troposphere, stratosphere, mesosphere, thermosphere and exosphere.
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**4. Human activities are disturbing our natural environment. How?**

It is true that the human beings are affecting our environment on a large scale. Today, men are exploiting the environment to meet their demands. To feed the growing population, natural resources are being exploited to meet this purpose, they are cutting trees, digging, minerals, cleaning the forest areas, etc. All these activities disturb the natural balance between various components of the biosphere. It is harmful for human beings. Thus, it is the need of the hour to protect our natural environment so a balance of nature must be maintained to support our survival and growth.

**5. “There is an interaction of the spheres of the earth”. Justify this statement.**

Lithosphere, hydrosphere and atmosphere interact with one another. It is a continuous process. Life is possible only where the land, water and air interact with each other. Interaction of these spheres provide favourable conditions for the growth of various organisms. These favourable conditions are found in the biosphere. Extending from the earth’s lithosphere and hydrosphere into the atmosphere, the biosphere is the planet’s narrow zone of life. Each life directly or indirectly depends upon the biosphere. Life cannot be imagined in the absence of biosphere. Thus, it is essential to save life.

**IV. Picture Study :**

The following picture shows the major domains of the earth.

**1. Identify the major domains of the earth and write them in appropriate places.**

Lithosphere, hydrosphere, atmosphere and biosphere.

**2. Draw a similar picture on another sheet of paper.**

Do yourself.

**V. Source Based Questions:**

**Topic:** Two Main Divisions of the Earth’s Surface

**Continents**—the large landmasses: The Highest Mountain Peak on this earth is Mount Everest. The current official elevation is 8,848 metres above sea level. The elevation was measured and established by an Indian survey conducted in 1955. The border between Nepal and China runs across its summit points.

**Ocean basins**—the huge water bodies: Mariana Trench is the deepest Oceanic trench on the Earth. The deepest portion is at 11,034 metres. Mariana Trench is located in the Pacific Ocean. Mariana Trench is 69 km in width and 2550 km in length. Mariana Trench derives its name from the nearby Mariana Islands which is located at around 200 km from the Mariana Trench in the Pacific Ocean.

**Choose the correct alternative for each question.**

**1. The continent through which both the Tropic of Cancer and the Tropic of**

Capricorn pass, is Africa.

- 2.** The percentage of oxygen in the air we breathe, is 21.
- 3.** The Pacific is the largest ocean but the busiest ocean from the point of view of trade, is Atlantic Ocean.
- 4.** Depth of ocean or height of land is measured from Sea level.