

Worksheet

Soils of India

Question 1: Fill in the blanks

- Alluvial soils allow the growth of rice, wheat, sugarcane.
- Health of the soil depends on organic matter and minerals.
- Red soils allow the growth of cotton, wheat, pulses
- Soil is the upper layer Topsoil
- Black soils allow the growth of wheat, jowar and castor
- Mountain soils allow the growth of rice, tea, beans

Tips:

- They are mostly flat and regular soils and are best suited for agriculture. They are best suited to irrigation and respond well to canal and well/tube-well irrigation. They yield splendid crops of rice, wheat, sugarcane, tobacco, cotton, jute, maize, oilseeds, vegetables and fruits.
- The soil is made up of air, water, decayed plant residue, organic matter, and minerals, such as sand, silt, and clay. Increasing soil organic matter typically improves soil health, as this organic matter affects several critical soil functions.
- Some of the crops suitable for red soils are cotton, wheat, rice, pulses, millets, tobacco, oilseeds, potatoes, and fruits. The red soils are mostly loamy and therefore cannot retain water like the black soils.
- Topsoil is the upper, outermost layer of soil. It has the highest concentration of organic matter and microorganisms and is where most of the Earth's biological soil activity occurs. Topsoil is composed of mineral particles, organic matter, water, and air.
- These soils are best suited for cotton crops. Hence these soils are called as regur and black cotton soils. Other major crops grown on the black soils include wheat, jowar, linseed, virginia tobacco, castor, sunflower and millets.
- The mountain soil is highly rich soil that is composed of the fertile land tracks and crops like the rice, tea, beans corn and squash and various varieties of the vegetable are grown and these mountains.

Question 2: Answer the questions briefly

(a) What natural forces erode mountain soils?

Answer: It is the natural process of wearing away of the topsoil, but human activities have accelerated the process. It is usually caused due to the removal of vegetation, or any activity that renders the ground dry. Farming, grazing, mining, construction and recreational activities are some of the causes of soil erosion.

(b) What conservation methods are used in desert soils?

Answer: Conservation methods used in desert soils are:

- Afforestation: One of the best ways to conserve soil is to increase the area under forests.
- Checking Overgrazing
- Constructing Dams: One of the scientific methods to check soil erosion
- Changing Agricultural Practices

(c) How can soils on mountain slopes be conserved?

Answer: Terracing and contour bunding across the hill slopes is a very effective and one of the oldest methods of soil conservation.

Question 3: Write true/false for the following statements

- Steep part of mountains does not allow any deposit of soil. **(True)**
- Potatoes are grown on slopes of a hill, as well as in a valley. **(True)**
- Mountain Soils are formed from the small broken pieces of stones. **(False)**
- Contour ploughing and terracing are practiced to conserve soil. **(True)**
- Orchards can be planted even on the slope of a hill. **(False)**

Tips:

- Deposits flow down the mountain, where they collect and stay in flatter, more level areas. This is why the soil on the steep parts of a mountain is thinner.
- Potatoes are a staple crop that can feed you almost all year because they store well in a root cellar or cool basement.
- They are formed by the deposition of organic matter derived from forest growth and are heterogeneous in nature.

- Contour ploughing mitigates the impacts of floods, storms and landslides on the crops by reducing soil erosion up to 50 percent, controlling runoff water, increasing moisture infiltration and retention and thus enhancing soil quality and composition.

Question 4: Tick the correct word

- Black soil is formed from volcanic lava
- Red soils are formed from Granite and other stones
- Alluvial soil is good to grow all the crops
- Alluvial soil is formed from silt
- Black soil is good to grow cotton

Tips:

- Black soil is formed by the weathering or breaking of igneous rocks and also by the cooling or solidification of lava from the volcano eruption. Therefore, it is also called lava soil.
- It is formed by the weathering of ancient crystalline and metamorphic rocks, particularly acid granites and gneisses, quartzitic rocks, and feldspathic rocks.
- Alluvial soil is good for crop growth because it is fertilised and has minerals and nutrients in it.
- Alluvial soils are formed mainly due to silt deposited by Indo-Gangetic-Brahmaputra rivers. It often contains gravel, sand and silt. Alluvial Soils – The fragmented sediments of rocks transported by water are settled on river bed and surroundings.
- Black soil is ideal for growing crops that are cotton, sugarcane, tobacco, wheat, millets, and oilseeds.

Question 5: List natural causes of soil erosion: Overgrazing, Deforestation

Question 6: List man created causes of soil erosion: Construction, Mining