

2. ii. What is a mineral?

Mineral is a homogeneous, naturally occurring substance with a definable internal structure.

2. iii. How are minerals formed in igneous and metamorphic rocks?

In igneous and metamorphic rocks the minerals may occur in cracks, crevices, faults or joints. The smaller occurrences are called veins and the larger are called lodes. They are formed when minerals in liquid / molten and gaseous forms are forced upward through cavities towards the earth's surface. They cool and solidify as they rise. Mineral like copper, zinc and lead are obtained from veins and lodes.

2. iv. Why do we need to conserve mineral resources?

We need to conserve mineral resources because:

- i. Minerals are non-renewable and exhaustible.
- ii. Minerals are unevenly distributed.
- iii. Minerals are needed for industrialization and economic development.
- iv. Minerals are depleting faster. So, they have to be conserved for the present and future generation.

3. Answer the following questions in about 120 words.

i. Describe the distribution of coal in India.

In India coal occurs in rock series of two main geological ages, namely Gondwana deposits (200 millions years ago) and Tertiary deposits (55 million years ago).

Gondwana coal deposits are located in Damodar valley (West Bengal-Jharkhand), Jharia, Raniganj and Bokaro coal fields.

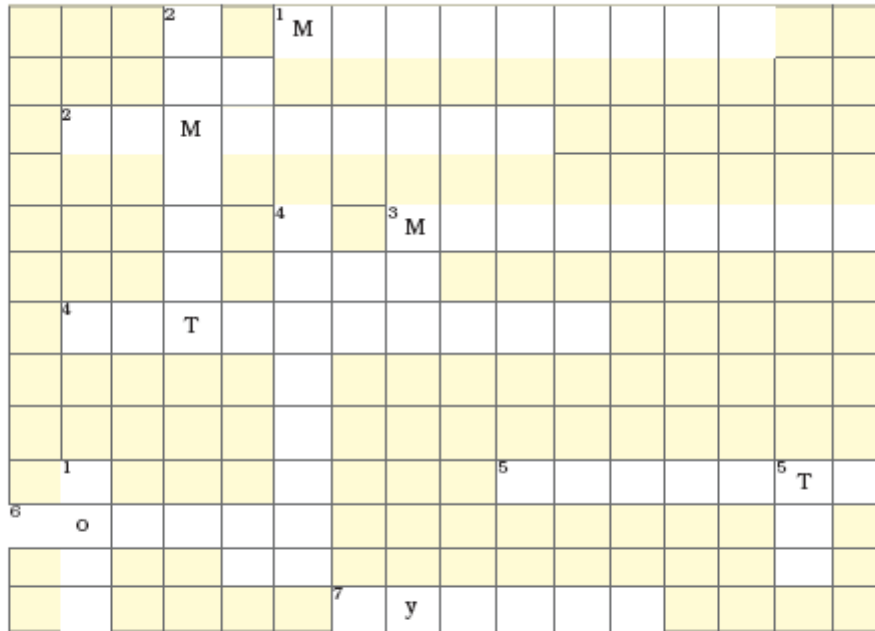
Tertiary coal deposits occur in north-eastern states of Meghalaya, Assam, Arunachal Pradesh and Nagaland.

3. ii. Why do you think that solar energy has a bright future in India?

Since India is a tropical country, it has ample sunshine throughout the year. India has enormous possibilities of tapping solar energy. The solar energy is renewable and eco-friendly. India has acquired photovoltaic technology to convert sunlight into electricity. To produce and utilize the solar the technology is available in India. In rural areas the solar energy is used for cooking, heating of water, space heating, lighting of homes and streets. In Bhuj district of Gujarat, the solar energy is used for sterilizing the milk cans.

ACTIVITY

Fill the name of the correct mineral in the crossword below:



ACROSS

1. A ferrous mineral (9)
2. Raw material for cement industry (9)
3. Finest iron ore with magnetic properties (9)
4. Highest quality hard coal (10)
5. Aluminium is obtained from this ore (7)
6. Khetri mines are famous for this mineral (6)
7. Formed due to evaporation (6)

DOWN

1. Found in placer deposit (4)
2. Iron ore mined in Bailadila (8)
3. Indispensable for electrical industry (4)
4. Geological Age of coal found in north east India (8)
5. Formed in veins and lodes (3)

Answers:

Across:

1. Manganese
2. Limestone
3. Magnetite
4. Anthracite
5. Bauxite
6. Copper
7. Gypsum

Down:

1. Gold
2. Hematite
3. Mica
4. Tertiary
5. Tin