NCERT Solutions Class 10
Social Science - Geography
Chapter 5: Minerals and Energy Resources

1.Multiple choice questions.

(i) Which one of the following minerals are formed by the decomposition of rocks, leaving a residual mass of weathered material?

(a) Coal

(b) Bauxite

(c) Gold

(d) Zinc

Answer: (b) Bauxite

(ii) Koderma, in Jharkhand, is the leading producer of which one of the following minerals?

(a) Bauxite

(b) Mica

(c) Iron Ore

(d) Copper

Answer: (b) Mica

(iii) Minerals are deposited and accumulated in the strata of which of the following rocks?

(a) Sedimentary Rocks

(b) Metamorphic Rocks

(c) Igneous Rocks

(d) None of the above

Answer: (a) Sedimentary Rocks

(iv) Which one of the following minerals is contained in the Monazite sand?

(a) Oil

(b) Uranium

(c) Thorium

(d) Coal

Answer: (c) Thorium

2. Answer the following questions in about 30 words.

(i) Distinguish between the following in not more than 30 words.

a. **Ferrous and non-ferrous minerals**

b. **Conventional and non-conventional sources of energy**

Answer:

a. Difference between ferrous and non-ferrous minerals:

Ferrous minerals	Non-ferrous minerals
Metallic minerals which contain iron are called ferrous minerals. For example - iron ore, manganese, nickel, cobalt, etc.	Metallic minerals which do not contain iron are called non-ferrous minerals. For example - copper, bauxite, tin, etc.

b. Difference between conventional and non-conventional sources of energy:

Conventional sources of energy	Non-conventional sources of energy
The sources of energy which are being used since the early times are considered as the conventional sources of energy. For example - firewood, cattle dung cake, coal, petroleum, natural gas, etc.	The sources of energy which have been invented in the recent times and are more efficient and comfortable are considered as the non-conventional sources of energy. For example - solar, wind, tidal, geothermal, biogas, nuclear energy, etc.

(ii) What is a mineral?

Answer: A mineral can be defined as a homogenous, naturally occurring substances with a definable internal structure. Minerals are found in varied forms in nature, ranging from the hardest diamond to the softest talc.

(iii) How are minerals formed in igneous and metamorphic rocks?

Answer: In igneous and metamorphic rocks, minerals may occur in the cracks, crevices, faults or joints. The smaller deposits are called veins and the larger ones are called lodes. When the minerals in liquid/ molten and gaseous forms are forced upward through cavities towards the earth's surface, they cool down and solidify to form veins or lodes. Metallic minerals like tin, copper, zinc and lead etc. are obtained from veins and lodes.

(iv) Why do we need to conserve mineral resources?

Answer: We need to conserve mineral resources as they are limited on the earth. It takes billions of years for them to be replenished in nature. Continued extraction of ores leads to increasing costs of extraction and a decrease in quality as well as quantity. It takes millions of years for the formation of minerals. Thus, as compared to the current rate of consumption, the rate of replenishment of minerals is very slow.

3. Answer the following questions in about 120 words.

(i) Describe the distribution of coal in India

Answer:

In India, major coal deposits are found on the eastern side of the country. Some of the main sites of coal are described below:

- In India, coal occurs in rock series of two main geological ages Gondwana (200 million years old) and tertiary (55 million years old).
- The major resources of Gondwana or metallurgical coal are located in the Damodar valley (West Bengal, Jharkhand), Jharia, Raniganj and Bokaro.
- The Godavari, Mahandi, Son and Wardha valleys also contain coal deposits.
- Tertiary coals occur in the north-eastern states of Meghalaya, Assam, Arunachal Pradesh and Nagaland.

(ii) Why do you think that solar energy has a bright future in India?

Answer:

Solar energy is a renewable source of energy produced from the sunlight. It has a bright future in India due to the following reasons:

- India is a tropical country due to which it receives abundance of sunlight throughout the year.
- Solar plants can be easily established in rural and remote areas of the country.
- It will reduce the dependence of rural households on firewood and dung cakes which will ultimately reduce the pollutions and help to conserve the environment.