Social Studies

Class 10th

(Geography)

Chapter 5: Minerals and Energy Resources

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Exercises

Que 1. Multiple Choice Questions

(i) Which one of the following minerals is formed by the decomposition of rocks leaving a residual mass of weathered material?
(a) Coal. (b) Bauxite. (c) gold. (d) zinc
Ans:- (b) Bauxite.

(ii) Koderma located in Jharkhand is the leading producer of which of the following minerals?
(a) Bauxite. (b) mica (c) iron ore. (d) copper
Ans:- (b) Mica.

(iii) In which of the following rocks, deposits and accumulation of minerals take place in the strata of the rock?
(a) Sedimentary rocks. (b) Igneous rocks.
(c) metamorphic rocks. (d) none of these.
Ans:- (a) Sedimentary rocks.

(iv) Which one of the following minerals is found in monazite sand?
(a) Mineral oil. (b) Uranium. (c) Thorium. (d) Coal.
Ans:- (c) Thorium.

Que 2. Answer the following questions in about 30 words.

(i) Differentiate the following in 30 words
(a) Ferrous and non-ferrous minerals
(b) Conventional and non-conventional energy resources

Ans: (a) Ferrous and non-ferrous minerals

Ferrous minerals	Non-Ferrous minerals
(i) Ferrous minerals contain iron. (ii) It helps in infrastructural development of industries. (iii) Examples of iron minerals are iron ore, manganese chromite.	(i) Non-ferrous minerals do not contain iron. (ii) It is essential for mineral refining, engineering and electrical industries. (iii) For example- gold, silver, copper.

(b) Conventional and non-conventional energy resources

Conventional energy resources	Non-Conventional energy resources
1. Energy sources that have been used by man for a long time are conventional energy resources. 2. These sources have limited reserves. 3.These are non-renewable energy sources. 4. Use of these energy resources causes pollution.	1. Man is looking for new sources of energy as an alternative to conventional energy sources, they are non-conventional energy resources. 2. There is an unlimited stock of these sources. 3. They are renewable sources of energy. 4. The use of these energy sources does not cause pollution.

(ii) What are minerals?
Ans: Minerals are those natural resources which are under the earth. According to geologists, a mineral is a naturally occurring homogeneous element having a definite internal structure. Many types of minerals are found in nature like diamond which is hard and lime which is dharma.

(iii) How are minerals formed in igneous and metamorphic rocks?
Ans: Many minerals are found in cracks, joints, faults and cracks of igneous and metamorphic rocks. Small deposits are found as veins and large deposits are found as layers. Most of the minerals are also formed when they are pushed towards the earth's surface through cracks in liquid or gaseous state. Coming up, they cool down and freeze. The main metallic minerals found in the form of veins and deposits are zinc, copper, zinc and lead etc.

(iv) Why do we need to conserve minerals?
Ans:- We need to conserve minerals because

1. Only one percent of our earth's crust is in the form of minerals.
2. The formation of these mineral resources takes millions of years.
3. Thus these mineral resources are limited and non-renewable.
4. Continuing mining increases its cost because with increasing depth it is more expensive to extract it.
5. For this, minerals have to be used in a planned and sustainable manner.

Que 3. Answer the following questions in about 120 words.

(i) Describe the distribution of coal in India.
Ans: Coal is found in abundance in India. There are mainly four types of coal found in India
Peat - The coal produced by the decay of plants in swamps is called peat coal. It has low carbon, high moisture content and low heat capacity.
Lignite:- It is a low grade brown coal. It is soft and more moisturized.
Bituminous:- Coal that is deeply buried and affected by high temperature is called bituminous coal.
Ethesite - This is the best type of coal in which the carbon content is more than 80 percent. It is solid black and hard.

Coal is found in India in two forms.
(1) Gondwana:- Gondwana whose age is a little more than 200 lakh years. The major resources of Gondwana coal, which are metallurgical coals, are located in Damodar Valley (West Bengal and Jharkhand), Jharia, Raniganj, Bokaro which are important coalfields. Coal deposits are also found in the Godavari, Mahanadi, Son and Wardha river basins.
(2) Tertiary:- Tertiary deposits which are about 55 lakh years old. Tertiary coalfields are found in the north-eastern states of Meghalaya, Assam, Arunachal Pradesh and Nagaland.

(ii) The future of solar energy in India is bright. Why?
Ans: The future of solar energy in India is very bright because

1. India is a tropical country. There are immense possibilities of harnessing solar energy here.
2. In India, sunlight is directly converted into electricity by photovoltaic technology.
3. Solar energy is becoming increasingly popular in rural and remote areas of India.
4. Large solar power plants are being set up in India.
5. It is also making a significant contribution to environmental protection.