Multiple choice questions.

(i) Which one of the following minerals is formed by 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 stratas 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

Q2 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

Answer:- <u>Ferrous Minerals:-</u> *Minerals containing iron are called ferrous minerals, e.g., iron ore and manganese.*

<u>Non-Ferrous Minerals:-</u>*Minerals which do not contain iron are called non-ferrous minerals, e.g., bauxite, lead and gold.*

(b) Conventional and non-conventional sources of energy

Answer:- Conventional sources of energy *are generally exhaustible and polluting, e.g., wood, coal and petroleum.*

Non conventional sources of energy *are usually inexhaustible and non-polluting, e.g., solar, wind, tidal and atomic energy.*

(ii) What is a mineral?

Answer:- *A mineral is a homogeneous, naturally occurring substance with a definable interior structure. Minerals are formed by a combination of elements and the mining of some minerals is very profitable.*

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

Answer:- *In igneous and metamorphic rocks, molten/liquid and gaseous minerals are forced upwards through cavities towards the earth's surface. They then solidify and form veins (smaller occurrence) or lodes (larger occurrence). Examples; Tin, Copper, Zinc, Lead, etc.*

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

Answer:- *Mineral resources need to be conserved because they are limited. It takes billions of years for them to be replenished in nature. Compared to the present rate of consumption, the replenishment rate of minerals is very slow; also we know minerals resources are finite and non-renewable. Due to this it is important to conserve these valuable resources.*

Q3 Answer the following questions in about 120 words.

(i) Describe the distribution of coal in India.

Answer. The distribution of coal in India is more abundant on the eastern side of the country. In India, coal occurs in rock series of two main geological ages—Gondwana and tertiary. While Gondwana coal is about 200 million years old, tertiary deposits are approximately 55 million years old. The major resources of Gondwana (metallurgical) coal are located in the Damodar valley (West Bengal, Jharkhand), Jharia, Raniganj and Bokaro. The Godavari, Mehndi, 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:- *Being a tropical country, India receives abundant sunshine throughout the year with little cloud cover. Therefore, it has enormous possibilities of tapping solar energy. Solar energy is a non-conventional source of energy, but it is gaining popularity in rural and remote areas whose households' dependence is mainly on conventional or traditional sources of energy.*

The largest solar plant of India is located at Madhapur, near Bhuj, where solar energy us used to starlise milk cans. It is expected that use of firewood and dungcakes, which in turn will contribute in conserving environment and ensuring an adequate supply of manure in agriculture.

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