

Q1. Answer the following questions:

(i) Name any three common minerals used by you every day .

Three common minerals used every day:

- (a) Copper – Electric wires
- (b) Talc – Talcum powder
- (c) Lead – Batteries

(ii) What is an ore? Where are the ores of metallic minerals generally located?

Ores are the rocks from which minerals are mined. The ores of metallic minerals are generally found in igneous and metamorphic rock formations that form large plateaus.

(iii) Name two regions rich in natural gas resources.

Russia and the United Kingdom are the two regions rich in natural gas resources.

(iv) Which sources of energy would you suggest for

(a) Rural areas

(b) Coastal areas

(c) Arid regions

- (a) Biogas energy for rural areas
- (b) Hydel and tidal energy for coastal areas
- (c) Wind and solar energy for arid regions

(v) Give five ways in which you can save energy at home.

Five ways in which energy can be saved at home:

- (a) Switching off lights, fans and other electrical appliances when not in use
- (b) By seeing to it that electrical devices are operating efficiently; for example, defrosting refrigerator regularly and not keeping the refrigerator door open for longer than necessary
- (c) Using energy-efficient devices such as fluorescent bulbs and tubes
- (d) Using energy efficiently while cooking; for example, keeping the lids of pans on while cooking
- (e) Unplugging electrical devices when not in use prevents leakage of electricity; thus saving energy

Q2. Tick the correct answer .

(i) Which one of the following is not a characteristic of minerals?

(a) They are created by natural processes.

(b) They have a definite chemical composition.

(c) They are inexhaustible. ✓

(d) Their distribution is uneven.

(ii) Which one of the following is not a producer of mica?

(a) Jharkhand	(c) Rajasthan
(b) Karnataka ✓	(d) Andhra Pradesh

(iii) Which one of the following is a leading producer of copper in the world?

(a) Bolivia	(c) Chile ✓
(b) Ghana	(d) Zimbabwe

(iv) Which one of the following practices will not conserve LPG in your kitchen?

(a) Soaking the dal for some time before cooking it.
(b) Cooking food in a pressure cooker.
(c) Keeping the vegetables chopped before lighting the gas for cooking.
(d) Cooking food in an open pan kept on low flame. ✓

Q3. Give reasons –why ?

(i) Environmental aspects must be carefully looked into before building huge dams.

Dams help in creating hydroelectric power, which solves the energy problems of a region. They also help farmers as the water released from dams is used for irrigation. However, dams have a negative impact on the environment as well. They adversely affect the surrounding ecosystems by destroying the local flora and fauna, by displacing the local community, by changing the natural course of rivers, etc. Therefore, before a dam is built at a site, it should be ascertained whether its benefits justify the damages that it would inevitably cause to the various ecosystems. If they do justify, then steps should be taken to minimise the damages to the flora and fauna, and to relocate the local community. But if they don't, then environmental conservation should be given the priority over the building of the dam.

(ii) Most industries are concentrated around coal mines.

Coal is the most abundant fossil fuel. It is widely used as a source of energy. It is also used as a raw material in several industries. Most industries are located around coal mines as being situated close to coal mines proves to be cost effective. Coal can easily be transported from the mines to the industries, and this reduces both time and cost of transportation.

(iii) Petroleum is referred to as 'black gold'.

The term “black gold” is used with reference to petroleum and its various derivatives. The word “black” refers to the colour of petroleum in its crude form. The word “gold” implies that petroleum and all the various products of petroleum (like diesel, petrol, kerosene, wax, plastics and lubricants) are as valuable to human society as the metal gold.

(iv) Quarrying can become a major environmental concern .

Quarrying is an extraction process by which minerals lying near the Earth’s surface are dug out. This process can adversely affect the environment in different ways. The digging involves clearing of vegetation. This destroys the top soil, which contains the humus required for plant growth. The quarrying process involves the use of explosives and earth-moving equipments. These cause noise pollution, and may also damage nearby buildings, dams or other such structures. The dust generated during quarrying and the fossil fuels burnt while operating the equipments contribute to air pollution, which in turn affects the health of the miners and the local population.

Q4.Distinguish between :

(i)

Conventional sources of energy	Non-conventional sources of energy
Have been in common use for a long time	Are not commonly used
Are generally exhaustible	Are generally inexhaustible
Are mostly polluting	Are mostly non-polluting
Example: Firewood, coal	Example: Solar energy, nuclear energy

(ii)

Biogas	Natural gas
Formed using organic wastes such as dead plant and animal matter, animal dung and kitchen waste	Found along with petroleum deposits and gets released when crude oil is brought to the surface
Is a non-conventional source of energy	Is a conventional source of energy
Is easily available, especially in rural areas	Is not easily available; very few countries have sufficient natural gas reserves of their own
Is polluting; causes greenhouse effect as it releases carbon dioxide	Is a cleaner fuel

Used as a domestic fuel for cooking and lighting	Used as a domestic fuel as well as an industrial fuel
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(iii)

Ferrous mineral	Non-ferrous mineral
A metallic mineral that contains iron	A metallic mineral that does not contain iron
Example: Iron ore, manganese	Example: Gold, silver

(iv)

Metallic mineral	Non-metallic mineral
A mineral containing metal in raw form	A mineral not containing metal
Example: Bauxite, iron ore	Example: Limestone, gypsum