

Minerals and Energy Resources

Case Study Based Questions

Source 1

Read the source given below and answer the questions that follow by choosing the most appropriate option:

India is fortunate to have fairly rich and varied mineral resources. However, these are unevenly distributed. Broadly speaking, peninsular rocks contain most of the reserves of coal, metallic minerals, mica and many other non-metallic minerals. Sedimentary rocks on the Western and Eastern flanks of the peninsula, in Gujarat and Assam have most of the petroleum deposits. Rajasthan with the rock systems of the peninsula, has reserves of many non-ferrous minerals. The vast alluvial plains of North India are almost devoid of economic minerals. These variations exist largely because of the differences in the geological structure, processes and time involved in the formation of minerals.

Q1. Where are most of the reserves of coal, metallic minerals, mica and many other non metallic minerals found?

- a. Igneous rocks
- b. Sedimentary rocks
- c. Peninsular rocks
- d. Metamorphic rocks

Q2. Which part of India is devoid of economic minerals?

- a. Gujarat
- b. Assam
- c. Rajasthan
- d. Vast alluvial plains of North India

Q3. Why is there uneven distribution of mineral resources in India?

- a. Lack of economic minerals
- b. Differences in geological structure
- c. Different processes and time involved in minerals formation
- d. Both b. and c.

Q4. Which mineral resources are found in abundance in the sedimentary rocks on the Western and Eastern flanks of the peninsula?

- a. Metallic minerals
- b. Non-metallic minerals
- c. Petroleum deposits
- d. Non-ferrous minerals

Q5. In which of the following places most of the petroleum deposits are found?

- a. Gujarat
- b. Assam
- c. Western and Eastern flanks of peninsula
- d. All of the above

Q6. Two statements are marked as Assertion (A) and Reason (R). Read the statements and choose the correct option.

Assertion (A): Minerals are an indispensable part of our lives.

Reason (R): Minerals have a universal use and they are used to manufacture everything we use in our day-to-day lives.

- a. Both Assertion (A) and Reason (R) are correct and Reason (R) is the correct explanation of Assertion (A).
- b. Both Assertion (A) and Reason (R) are correct, but Reason (R) is not the correct explanation of Assertion (A).
- c. Assertion (A) is true, but Reason (R) is false.
- d. Assertion (A) is false, but Reason (R) is true.

Answers

- 1. (c)
- 2. (d)
- 3. (d)
- 4. (c)
- 5. (d)
- 6. (a)

Source 2

Read the sources given below and answer the questions that follow:

Source A: Petroleum

Most of the petroleum occurrences in India are associated with anticlines and fault traps in the rock formations of the tertiary age. In regions of folding, anticlines or domes, it occurs where oil is trapped in the crest of the upfold. The oil bearing layer is a porous limestone or sandstone through which oil may flow. The oil is prevented from rising or sinking by intervening non-porous layers.

Source B: Solar Energy

India is a tropical country. It has enormous possibilities of tapping solar energy. Photovoltaic technology converts sunlight directly into electricity. Solar energy is fast becoming popular in rural and remote areas. The largest solar plant of India is located at Madhapur, near Bhuj, where solar energy is used to sterilise milk cans. It is expected that use of solar energy will be able to minimise the dependence of rural households on firewood and dung cakes, which in turn will contribute to environmental conservation and adequate supply of manure in agriculture.

Source C: Conservation of Energy Resources

Energy is a basic requirement for economic development. Every sector of the national economy-agriculture, industry, transport, commercial and domestic-needs inputs of energy. The economic development plans implemented since independence necessarily required increasing amounts of energy to remain operational. As a result, consumption of energy in all forms has been steadily rising all over the country.

Source A: Petroleum

Q1. Highlight the regions of occurrence of petroleum in India.

Ans. Petroleum occurs in India in the following regions:

- (i) Anticlines and fault traps in the rock formations of tertiary age.
- (ii) In the crest of the upfold where oil is trapped in the regions of folding, anticlines or domes.

Source B: Solar Energy

Q2. Why is solar energy fastly becoming popular in rural and remote areas of India?

Ans. Solar energy is fastly becoming popular in rural and remote areas of India due to the following reasons:

- (i) Solar plant can be easily established in rural and remote areas.
- (ii) It minimises the dependence of rural households on firewood and dung cakes which contributes to environmental conservation. Source C: Conservation of Energy Resources

Q3. Why does the consumption of Energy steadily rising all over the country?

Ans. The consumption of energy is steadily rising all over the country due to the following reasons:

- (i) Every sector of the national economy such as agriculture, industry, transport, commercial and domestic require inputs of energy.
- (ii) The economic development plans implemented since independence necessarily require increasing amounts of energy to remain operational.