

Minerals and Energy Resources Class 10 Questions and Answers Pdf

Q: What are minerals?

A: Minerals are naturally occurring, inorganic substances with a definite chemical composition and crystalline structure. They are found in the Earth's crust and are essential for various industrial processes.

Q: Name two types of minerals based on their use.

A: Minerals can be classified into two main types based on their use:

- **Metallic minerals** (e.g., iron ore, copper)
- **Non-metallic minerals** (e.g., limestone, gypsum)

Q: What is the importance of minerals in daily life?

A: Minerals are crucial for several aspects of daily life including construction (e.g., sand, gravel), energy production (e.g., coal, uranium), and manufacturing (e.g., aluminum, copper).

Q: What are fossil fuels?

A: Fossil fuels are natural energy resources formed from the remains of ancient plants and animals buried under sedimentary rocks. They include coal, oil, and natural gas.

Q: Describe the process of coal formation.

A: Coal is formed from the remains of ancient plants that accumulated in swampy areas. Over millions of years, these remains were buried under sediment and subjected to heat and pressure, resulting in the formation of coal.

Q: What is an ore?

A: An ore is a naturally occurring rock or sediment from which metal or valuable minerals can be extracted profitably. Examples include iron ore and bauxite.

Q: What are renewable energy resources?

A: Renewable energy resources are natural resources that can be replenished or regenerated quickly compared to the rate at which they are consumed. Examples include solar energy, wind energy, and hydroelectric energy.

Q: Name two non-renewable energy resources.

A: Two non-renewable energy resources are coal and petroleum (oil). These resources take millions of years to form and cannot be replenished quickly.

Q: What is the significance of bauxite?

A: Bauxite is the primary ore of aluminum. It is significant because aluminum is widely used in the manufacturing of various products including transportation vehicles and packaging materials.

Q: Explain the term 'mineral resource'.

A: A mineral resource refers to a concentration of naturally occurring solid, liquid, or gaseous material in or on the Earth's crust that can be extracted and utilized for economic gain.

Q: What is uranium used for?

A: Uranium is primarily used as a fuel in nuclear power plants to produce electricity. It is also used in nuclear weapons and for medical purposes.

Q: What are the environmental impacts of mining?

A: Mining can have several environmental impacts including habitat destruction, soil erosion, water pollution, and air pollution due to dust and emissions.

Q: Describe the process of oil extraction.

A: Oil extraction involves drilling into underground reservoirs to pump out crude oil. The crude oil is then refined to produce various products like gasoline, diesel, and lubricants.

Q: What is the role of mineral resources in the economy?

A: Mineral resources play a vital role in the economy by providing raw materials for various industries, creating jobs, and contributing to exports and economic development.

Q: What are metallic minerals?

A: Metallic minerals are minerals that contain metals and are valuable for extracting those metals. Examples include iron ore, copper ore, and gold ore.

Q: How is natural gas extracted?

A: Natural gas is extracted by drilling wells into underground rock formations that contain gas deposits. The gas is then brought to the surface and processed for use.

Q: What is the difference between a mineral and a rock?

A: A mineral is a naturally occurring inorganic substance with a specific chemical composition and crystalline structure, while a rock is a solid aggregate of one or more minerals or mineraloids.

Q: What are the advantages of solar energy?

A: Advantages of solar energy include its renewability, low environmental impact, reduction in electricity bills, and the ability to generate power in remote areas.

Q: What is the significance of iron ore in industrial development?

A: Iron ore is crucial for industrial development as it is the primary raw material for producing steel, which is essential for construction, manufacturing, and transportation industries.

Q: What measures can be taken to reduce the environmental impact of mining?

A: Measures to reduce the environmental impact of mining include implementing sustainable mining practices, reducing waste, recycling materials, and restoring mined areas to their natural state.