NCERT Solutions

Class 10 Geography

Chapter 5 Minerals and Energy Resources

1. Fill in the blanks:

a. **Minerals are found in_____.**

b. **_____is the only rock that has a single mineral.**

c. **_____is the backbone of industrial development.**

2. True or false:

a. **Metamorphic rock is a type of rock.**

b. **Minerals are found in the form of beds and layers in igneous rocks.**

c. **Alluvial deposits are also known as placer deposits.**

3. One-word answer:

a. **Name one conventional energy resource which could be used in agriculture as manure.**

b. **Name the oldest oil-producing state in India.**

c. **Name the electricity which is generated by running water.**

4. How do minerals become inseparable parts of our life?

5. Why are minerals so varied?

6. What are the characteristics of minerals?

7. Which factors do we consider before extracting minerals?

8. Mention any two hazards of mining.

9. What are the ways by which we can conserve minerals?

10. How are conventional energy resources different from non-conventional energy resources?

11. Explain the formation of coal?

12. How is hydroelectricity generated?

13. **Write any four differences between renewable resources and non-renewable resources.**

14. **How do hot springs occur?**

15. **Write ways by which minerals can be extracted.**

16. **How can we conserve energy resources?**

17. **How is solar energy helpful in rural and remote areas?**

18. **Why should we use renewable energy rather than non-renewable resources?**

19. **How is natural gas formed?**

20. **What is rat hole mining?**

21. **How do we recognize a material?**

22. **Name some energy resources.**

23. **How do we generate electricity?**

24. **How do we classify minerals?**

25. **How are ores different from minerals?**

Answers

1. Fill in the blanks:

   a. Minerals are found in the earth's crust.

   b. Limestone is the only rock that has a single mineral.

   c. Iron ore is the backbone of industrial development.

2.True or False:

   a. True

   b. False

   c. True

3. One-word answer:

a. Cow dung cakes

b. Assam

c. Hydroelectricity

4.Minerals have become an inseparable part of our life.

- Our life is surrounded by minerals from a safety pin to a car, minerals are used.
- The food we eat contains minerals such as iron, calcium, phosphorus, etc.

5.Minerals vary in shape, color, size, luster, etc. The formation of minerals depends on the physical and chemical conditions in which they form.

6.Following are the characteristics of minerals.

- **Hardness:** some minerals possess hardness such as diamonds.
- **Luster:** Some minerals possess luster or shiny appearances such as gold and silver.

7.Following are the factors we consider before extracting minerals:

- **Concentration of mineral:** Before extracting the mineral we look at its concentration. If the concentration is more than the other elements such as impurities, then it will be extracted as it has economic value.
- **Ease of extraction:** Before extracting the mineral, we look at how far or deep the mineral is.

8.The two hazards of mining are given below

- During the mining process, dust and noxious fumes are released, which causes severe diseases.
- There is always a risk of collapsing mine roofs.

9.We can conserve minerals in the following ways.

- Use of renewable resources in place of non-renewable resources.
- Use recycling and reuse methods.

10. Difference between conventional and non-conventional energy resources.

Conventional energy resources	Non-conventional energy resources
These energy resources have been used since ancient times.	These resources are recently developed.
These are known as non-renewable resources	They are known as renewable resources except nuclear energy
Examples are firewood, coal, etc.	Examples are solar energy, wind energy, etc.

11.Coal is formed when remains of dead plants and animals are buried under the soil for over a hundred years and they get converted into coal due to extreme heat and pressure inside the earth.

12. Hydroelectricity is generated when mechanical energy is converted into electrical energy due to the flowing water.

13.The difference between Renewable and Non-renewable resources are given below:

Renewable resources	Non-renewable resources
These include the resources which get renewed.	These include resources that do not get renewed in a short span of time.
These have unlimited stock.	These have limited stock
These are not much affected by human consumption.	These resources are much affected by human consumption.
Examples are solar and wind energy.	Examples are coal and petroleum.

14. When the groundwater comes into contact with rocks, buried under depth of earth where extreme heat is present, the groundwater becomes hot and comes out on the earth's surface in the form of steam or hot water. The occurrence of hot water is hot spring.

15. Minerals can be extracted in the following ways.

- Mining- Majorly digging process is undertaken for extracting mineral ore under mining.
- Drilling-Under this process, minerals are extracted from the deeper of the earth surface.
- Quarrying-Under this process, minerals are extracted from the earth's surface directly by removing sand and rocks.

16. We can conserve energy resources.

- Use limited resources judiciously
- Use public transport such as buses instead of private vehicles.

17. Solar energy is useful in rural and remote areas

- Minimizes use of fossil fuels.
- Cheapest source of energy
- It doesn’t create pollution.

18. Renewable resources get renewed easily. We get them unlimitedly and aren't affected much by human consumption.

19. When remains of dead plants and animals are buried under the soil for over a hundred years, they release naturally occurring gas due to extreme heat and pressure inside the earth, which is called natural gas.

20. Rat hole mining is the process in which long narrow tunnels are dug to extract the minerals such as coal, iron ore, etc, by family members or communities.

21. We recognize a material by its properties such as its color, shape, size, luster, hardness, etc. for example, diamond possesses hardness while talc is the softest material.

22. Energy resources are classified into conventional and non-conventional energy resources. Conventional energy resources include firewood, cattle dung,

coal, etc. Non-conventional energy resources include solar energy, wind energy,etc.

23. We can generate electricity in two ways.

- Through flowing water
- By burning fuels such as coal,petroleum etc.

24.We classify minerals into metallic minerals and non-metallic minerals. Metallic minerals contain metal whereas non metallic minerals do not contain metal.

25.Difference between the minerals and ores are given below:

Minerals	**Ores**
It occurs naturally in the earth's crust	Metal is present in minerals
It does not necessarily contain metal.	It contains metal
An example is a clay	Example is bauxite