8 th Chapter 6 **Resource utilization and sustainability**

1. What is resources ?

Answer :

- Anything that is environmentally available, technologically accessible, culturally acceptable and capable of meeting our needs is called a resource.
- Resources include not only material things like water, air and soil but also non-material things like knowledge and health.
- Human skills are also used as resources. This is called human resource

2. What are the two classification of the resources ?

Answer :

- **Natural resources** **:** Resources obtained from nature. E.g., air, minerals
- **Man-made resources :** Resources made by human beings E.g., road, machinery

3. Resources can be classified into two categories based on their renewable potential. Explain each.

Answer :

Renewable Resources

- Resources that do not get depleted after use and can be reused are renewable resources.
- These resources are continuously produced in nature and always readily available.
- Sunlight, wind and waves are examples of such resources.

Non-Renewable Resources

- Non-renewable resources have been formed over millions of years and they decrease in quantity with use.
- Examples of such resources include iron, gold, coal, and petroleum.

4. What is minerals ?

Answer:

- Minerals are naturally forming organic and inorganic substances with chemical and physical properties.
- Examples include petroleum, iron ore, and bauxite. We can't use these minerals directly.
- Minerals which will be mixed with impurities are mined from the earth in raw form. This is called ore.

5. What are the two types of minerals based on their composition and physical characteristics ?

Answer :

Metallic Minerals

- Metallic minerals containing iron
- Metallic minerals not containing iron

Non-Metallic Minerals

- Organic minerals
- Inorganic minerals

6. What are the characteristics of the metallic minerals ?

Answer :

- Metallic minerals are naturally occurring substances in nature that contain traces of metal.
- The metal extracted from the metallic minerals through the refining process is usually hard and lustrous.
- An example of this is the extraction of aluminium from bauxite.

Ferrous metals	Non-ferrous metals
• appear grey	• appear in different colours
• magnetic in nature	• non-magnetic
• heavy	• relatively light weight

7. What are the characteristics of the nonmetallic minerals?

Answer:

- Minerals that do not contain metals are called non-metallic minerals.
- For non-metallic minerals properties such as hardness, lustre and ductility are relatively low.
- Non-metallic minerals are classified into two groups--organic minerals and inorganic minerals.
- Biominerals such as coal and petroleum contain organic components
- Inorganic minerals such as graphite and clay contain inorganic components

8. What are the classifications of manufacturing industries on the basis of raw material ?

Answer :

- Agro-based industry - E.g., Sugar industry
- Mineral-based industry - E.g., Iron and steel industry
- Chemical industry - E.g., Petroleum industry

- Forest-based industry - E.g., Paper industry
- Animal-based industry - E.g., Leather industry

9. "The iron and steel industry plays an important role in the growth of the Indian economy" Analyse the statement. OR 'Iron industry is the foundation of the Indian economy.' Discuss and write notes.

Answer :

- The extent of industrial growth of each country is determined on the basis of iron and steel consumption.
- The iron and steel industry is called a basic industry and also known as heavy industry.
- India is one of the largest producers of iron and steel in the world.
- The iron and steel industry supports the other industries and service sectors and increases the country's income.
- In addition, by creating employment opportunities, the standard of living of the people is also raised.
- The beginning of the modern iron and steel industry in India dates back to 1907 when the Tata Iron and Steel Company (TISCO) was established at Sakchi (Jamshedpur).
- Indian Iron and Steel Company (IISCO) came into existence in West Bengal in 1919 and Mysore Iron and Steel (Visvesvaraya Iron and Steel) Company in Karnataka in 1923.
- After independence, the iron and steel industry in India grew rapidly.
- During the Second Five-Year Plan, three integrated iron and steel projects were started at Bhilai, Rourkela and Durgapur with the help of the Soviet Union, Germany and Britain respectively.
- Later, the management and responsibility of these were taken over by the government organisation, Steel Authority of India Limited (SAIL).

10. What ware the reasons for the growth of the iron and steel industry in Odisha compared to other states of India ?

Answer :

- Odisha's geographical location and, mineral and water availability have led to the growth of the iron and steel industry.
- High grade iron ore deposits are found in Keonjhar, Sundargarh and Mayurbhanj districts and coal in the Talcher region.
- An excellent railway network and highways connecting the factories of Rourkela and Kalinganagar with the main markets of India facilitated industrial development.
- Moreover, the long coastline and ports facilitated domestic and international trade, making odisha the centre of the iron and steel industry.

11. Write a note about the factors Influencing the Distribution of Manufacturing Industries.

Answer :

- **Geographical factors -** Topography , weather , water , energy and raw materials
- **Non-geographical factors -** Capital , organisation ,market , transportation and availability of labourers

12. What is pollution and explain the various types of pollutions ?

Answer :

- Pollution is the undesirable consequences on the physical, chemical or biological characteristics of air, water and soil.
- Unscientific human activities cause pollution.

Air Pollution

- The smoke emitted from industries which contain toxic gases such as sulphur dioxide, carbon dioxide, carbon monoxide and methane, pollute the atmosphere.

Water Pollution

- Waste water discharged from industries and toxins from chemical industries pollute rivers, lakes and other water bodies.
- It harmfully affects aquatic life and humans.

Soil Pollution

- The waste and e-waste emitted from industries alter the natural structure of the soil.

Noise Pollution

- Excessive noise emitted from industries adversely affects the physical and mental health of the people in the surrounding areas.

13. How does the growth of industries affect human life and society ?

Answer :

Resource Depletion

- Unscientific use of resources in industries to increase production leads to resource depletion and environmental problems.
- Examples :- deforestation, loss of soil fertility, and shortage of water

Regional Inequality

- The unbalanced distribution of natural resources and insufficient basic facilities have resulted in a concentration of industrial development in certain regions.
- This causes regional disparity in industrially backward areas

Migration

- Migration is the permanent or temporary movement of people from one region to another.

- People migrate from less developed areas to developed industrial areas for employment and better living conditions.

Urbanisation

- Urbanisation is the increase in size and population of cities as a result of migration from rural areas to urban areas and natural population growth in cities.
- This has led to a massive increase in population of cities and it results in socio-economic and environmental changes

14. What is conservation of resource and write any four method of resource conservation ?

Answer :

- Conservation of resources is the process of ensuring their availability by avoiding over-exploitation through judicious use.
- The objectives of conservation of resources are to conserve resources for future generations, maintain the balance of the environment, and minimise impacts on nature and human beings
  - recycling of resources
  - water conservation
  - energy conservation
  - forest conservation

15. Which policy followed by the countries to conserve resources. Explain.

Answer :

- Sustainable development is the policy followed by the countries to conserve resources.
- Sustainable development aims to meet the needs of the present without compromising the ability of future generations to meet their own needs.
- Recycling, reducing usage, and reusing resources are ways to achieve sustainable development.
- The Sustainable Development Goals are a collection of seventeen goals proposed by the United Nations in 2015 to achieve them by 2030.