

MODULE III

3.3 Mineral resources

3.3.1 Uses and exploitation of minerals

3.3.2 Environmental effects (or) impacts of extracting and using mineral resources

3.3.3 Management of mineral resources



3.3 Mineral resources

Minerals

Minerals are naturally occurring substances, having definite chemical composition and physical properties

Ores

Ores are minerals (or) combination of minerals from which useful substances, such as metals, can be profitably extracted and used for manufacture.

3.3.1 Uses and exploitation of minerals

Minerals are used in a large no. of ways in everyday in domestic, agricultural, industrial and commercial sectors.

The economy and political power of the country is determined from the no. of reserves of minerals.

Uses

- i. Development of industrial plants & machinery. (ex) Fe, Al, Cu.
- ii. Construction, housing, settlements. (Ex) Fe, Al, Ni.
- iii. For energy generation. (ex) lignite, coal, uranium.
- iv. Designing defence equipments, weapons, ornaments.
- v. For making jewels (ex) Au, Ag, Pt, diamond.
- vi. For making alloys (ex) phosphorites.
- vii. For making communication devices (ex) Telephone wires, cables, electronic devices.
- viii. For preparing medicine (ex) sulphur pyrites.
- ix. For making fertilizers, seed dressings fungicides .

3.3.2 Environmental effects (or) impacts of extracting and using mineral resources

1. Depletion of minerals
2. Devegetation and defacing of landscape
3. Ground water contamination
4. Surface water pollution
5. Air pollution
6. Subsidence of land
7. Over exploitation of mineral resources leads to wastage of resources.
8. Needs heavy energy requirement.

3.3.3 Management of mineral resources

1. The efficient use & protection of mineral resources.
2. Modernize the mining industries.
3. Search for new deposit.
4. Reuse & recycle the metals.
5. Minimizing impacts by adopting & ecofriendly modern technology
6. Harvesting.

