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Subject: Geography Class: X Teacher: Mini Arora
 Topic: Chapter 8: Mineral and Energy Resources.-I

MINERAL RESOURCES

Minerals are natural substances of organic or inorganic origin with definite chemical and Physical properties.

Minerals.

Metallic Minerals

Non-metallic Minerals

Ferrous
(Iron Ore and
Manganese)

Non-ferrous
(Copper and
Bauxite)

Organic or
Energy
(Coal and
Petroleum)

Inorganic
(Mica,
Graphite,
Limestone)

The economic development of a country is influenced by availability of minerals as it forms the base for several large scale industries. India has a rich variety of minerals due to its varied geological structure.

1. IRON Ore: India is the largest producer of iron in Asian continent and is one of the largest iron producing countries in the world. Iron ore deposits are found in close proximity to areas producing coal, dolomite, limestone and manganese. So, they are well utilised in Iron and Steel Plants.

Types

1.1 Haematite: It is reddish in colour and is known

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as 'Red Ore'. Contains 60-70% of pure iron and is found in Odisha, Jharkhand, Chhattisgarh, Karnataka and Maharashtra.

1.2 Magnetite: It is dark brown to blackish and known as 'Black ore'. It is best quality ore with 72% of pure iron. Since it possesses magnetic property, it is called magnetite. It is found in Tamil Nadu and Karnataka.

1.3 Limonite: It is yellow or light brown in colour and contain 40 to 60% pure iron. It is found in Raniganj (WB); Mirzapur (UP); Garhwal (Uttarakhand) region.

1.4 Siderite: It is an inferior ore and has many impurities. It has 10-40% of pure iron found in Gujarat, Rajasthan, Himachal Pradesh.

Uses of Iron ore:

- i> About 90% of iron ore is used to make steel.
 - ii> Powdered iron is used in metallurgy products, magnets, high frequency cores, auto parts and catalysts.
 - iii> Radioactive iron is used in medicine as trace element and in biochemicals.
 - iv> Limonite type is used in paints, printing inks, cosmetics, paper dyeing etc.
 - v> Black iron oxide is used as pigment in polishing compounds, metallurgy, medicine and magnetic ink.
- (Refer the table given on page 179 for Distribution of Iron)

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2. MANGANESE: Manganese is a black, hard and iron like metal which occurs as natural oxide. It is an important raw material for smelting of iron ore and used for manufacturing ferro alloy.

Uses of Manganese:

- i) It is used to make steel tough and rust-resistant.
- ii) Manufacturing of black enamel, in chemical industries for manufacturing bleaching powder and glass industry.
- iii) Use to form number of alloy.
- iv) Used in dry cell batteries.
- v) Preparation of organic and inorganic chemicals.

Distribution: Manganese ore found in India is of good quality and is in great demand in the world.

Odisha is the leading producer of Manganese in India.

3. BAUXITE: Bauxite is an oxide of aluminium, found associated with laterite soil occurring in Peninsular India and coastal tracts of the country.

Uses: i) It is the main source of Aluminium, which is lightweight, strong and rust resistant metal.

- ii) Aluminium is used in aircrafts, automobiles, rail waggons, coaches, shipping industry and household appliances.
- iii) Used in electrical equipment industry as it is a good conductor of electricity.

Distribution: It is found (available) in Odisha;

Jharkhand, Madhya Pradesh, Maharashtra. Refer Page 180. and Fig 8.3 India - Distribution of Bauxite.

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4. COPPER: It is an important non-ferrous metal and the earliest metal used by man. In nature, copper occurs in native form and in three combinations as, Sulphides, oxides and carbonates.

Uses:

- i> It is a good conductor of electricity, hence used for making electric wires and other equipment.
- ii> Used in automobile and defence industries.
- iii> It is alloyed with iron and nickel to make stainless steel use to make utensils.
- iv> It is alloyed with zinc to form Brass and tin to form Bronze.

Distribution: India is deficient in copper and has to depend on exports for its needs. It is found in Madhya Pradesh, Rajasthan, Maharashtra states.

Home Work: On the basis of the above summary do the following questions of the back Exercise 1, 4, 6, 7, 8, 9, 10, 11.

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