

Classwork

Wednesday, Jan 22, 25

Topic: Mining Processes

Adit Mining:-

- An adit is an opening or passage. ✓
- It is used in hilly areas. ✓
- coal is dug out of the opening.
- miners create a passage to go deeper into the hill to extract more coal.
- the passage may be horizontal or may slope up and down. ✓
- The passage eventually connects to the mineral seam.
- Horizontal tunnels are dug to reach minerals. ✓

Shaft Mining:-

- Vertical shafts are dug down to the mineral seam. ✓

- It is done to extract coal.
- Coal is carried back along the tunnels and up the shaft. ✓
- The method is dangerous and expensive.

Challenges in adit and shaft mining

- There are problems of ventilation and underground transport. ✓
- These methods are expensive and dangerous.
- Flooding is another hazard. ✓
- There is risk of explosion of the poisonous gas. ✓
- The explosions might cause the roofs of the tunnels to collapse.

~~10~~
22/1/25

Good!

Neat with
no spelling
mistakes

C.W

Friday, January 24, 2025

Topic: Metallic and non-Metallic minerals.

Q. Write down the characteristics of metallic and non-metallic minerals.

Ans: ^{↳ have metallic elements} Metallic minerals resemble a metal, while non-metallic minerals are rocks and are rough. Metallic minerals are more valuable because they shine and can be compressed into different shapes. Metallic minerals are tough and they are used daily. While Non-metallic minerals are economically less valuable and may not shine. They are rough and can't be compressed except natural gas, which can be compressed into liquid by cooling.

6/6
11/24/1

IC-W

Saturday, Jan 25, 2024

Topic: Metellic and non-Metellic minerals

Q: Write 3 uses of Metellic and non-metellic minerals.

Ans: Uses of metellic minerals:

- 1: Copper is used as money in coins. ✓
- 2: Steel is used to make crockery. ✓
- 3: Gold is used as jewelery. ✓

Uses of non-metellic minerals:

- 1: Salt is used for cooking. ✓
- 2: Coal is used for fuel. ✓
- 3: Petroleum and natural gases are used on daily basis for fuel and cooking. ✓

$\frac{6}{6}$ ✓
 $\frac{4}{20/1/24}$ ✓

C.W

Wednesday, Jan 29, 2025

Mining and Economic development- Uses/Importance of minerals

① → Industrial Uses

Metallic: Raw material in high value industries. ✓

Non-metallic: Used for construction.

Economic Development: It will boost infrastructure → Increases the industrial development → generates revenue. ✓

② → Agricultural Uses:

Metallic: Used for making tractors, gates of barrages. ✓

Non-metallic: - Cement is used to line canals.
- build dykes in agricultural fields. ✓

Economic development: Agriculture can be developed on modern lines. ✓

③ → Improving (BOP):

- Export: increase foreign exchange earnings
- If all minerals are produced domestically
Save Pakistan's foreign exchange.

④ → Employment in Mining Industries :-

Development of mining Industries:
Providing jobs to more people.

⑤ → Electricity generation :-

Some of the minerals e.g.: coal, oil, natural gas are used to produce thermal electricity. That coal field can help to avoid the electricity crisis in Pakistan.

⑥ → Development of remote areas:

Extraction of minerals in these areas will increase their value.
areas like Balochistan plateau.

⑦ → Increase in GDP:

Production of minerals will increase domestic income of Pakistan.

H.W

Wednesday, Jan 29, 25

Economical gains through minerals

QIA

Q: How minerals are important in the economic growth of the country? (6)

Ans: Minerals are important for the economic growth of Pakistan as non-metallic minerals are used for ~~ex~~ construction which improves infrastructure. Metallic minerals can be used for agriculture. For example: Tractors, gates for barrages. With this agriculture can be developed on modern lines. If all minerals are produced domestically, then it will save Pakistan's foreign exchange. If Pakistan develops mining industries, then unemployment can be fixed. Non-metallic minerals can be used like: cements to line canals or build dykes in agricultural fields.

1/1/25 → focus is on uses only & also

Add few lines about how these uses of minerals are adding/boosting the economic development.

C.W

Friday, Jan 31, 2025

Uses of metallic and non-metallic minerals.

Pg #88, 89

Uses of Metallic minerals:

- 1- Chromite: Gives hardness and electrical resistance to steel. Used for bridges and railway carriages. Also as a lining in metallurgical furnaces and for making engineering tools and stainless steel.
- 2- Iron Ore: Steel-making, construction and transport industry.
- 3- Copper: Making electrical wires and other electrical appliances, especially switches that carry current; also in making alloys, water pipes and tanks.
- 4- Manganese: Used in making dry batteries, paints, vital in making steel, flares and flash bulbs.
- 5- Bauxite: Chief source of aluminium, a valuable metal used in utensils, cans

and many other products.

6- Celestite: Found in cavities in sedimentary rocks. Used in tracer bullets, fireworks, ceramics, paints, ~~plastics~~ plastics.

Uses of Non-metallic Minerals:

1- Limestone: Limestone is a major sedimentary deposit and is widespread in Pakistan. It is the main raw material for cement. It is also used in the manufacture of bleaching powder, glass, soap, paper, paints and lime. It is used to treat sugarcane waste to produce alcohol fuel. It is painted on barks of trees to counter pests and termite attacks. Also used to create aerate soil and treat salinity.

2- Coal: Pakistan has low-quality coal. Coal is mainly used in brick kilns, some is used to make coke and coal briquettes and a small percentage is used for power generation. A new thermal power station is using coal from a new coalfield in Thar District.

3- Natural Gas: Domestic and Industrial uses are discussed in detail in Unit 8- "Power Resources"

4- ~~Gypsum~~ Gypsum: Found in grey, white and pink colour. It is used in the manufacture of paints, fertilizers and pre-fabricated construction boards. White gypsum is used for making cement and plaster of Paris. Spread on saline soil to help land reclamation for farming.

5- Marble: Found in bands of white, grey, yellow and brown. It is used in buildings and for making chips for flooring and decorative pieces

H.w

Sunday, Feb 2, 2025

Topic: Mining of Minerals

Q/Ans

Q:1 What are minerals? (1)

Ans: Minerals are inorganic natural substances obtained from under the surface of earth. They are among the natural resources of a country.

Q:2 Describe the formation of minerals. (3)

Ans: Most minerals are formed underground when heat and pressure transform one form of rock into another. Some are formed from hot magma which contains minerals. When the magma cools, mineral crystals appear.

or on
Some minerals are formed near the surface, when mineral-rich fluids such as silica-bearing water evaporate. They can also be formed when volcanic rocks are broken down by the action of water and wind.

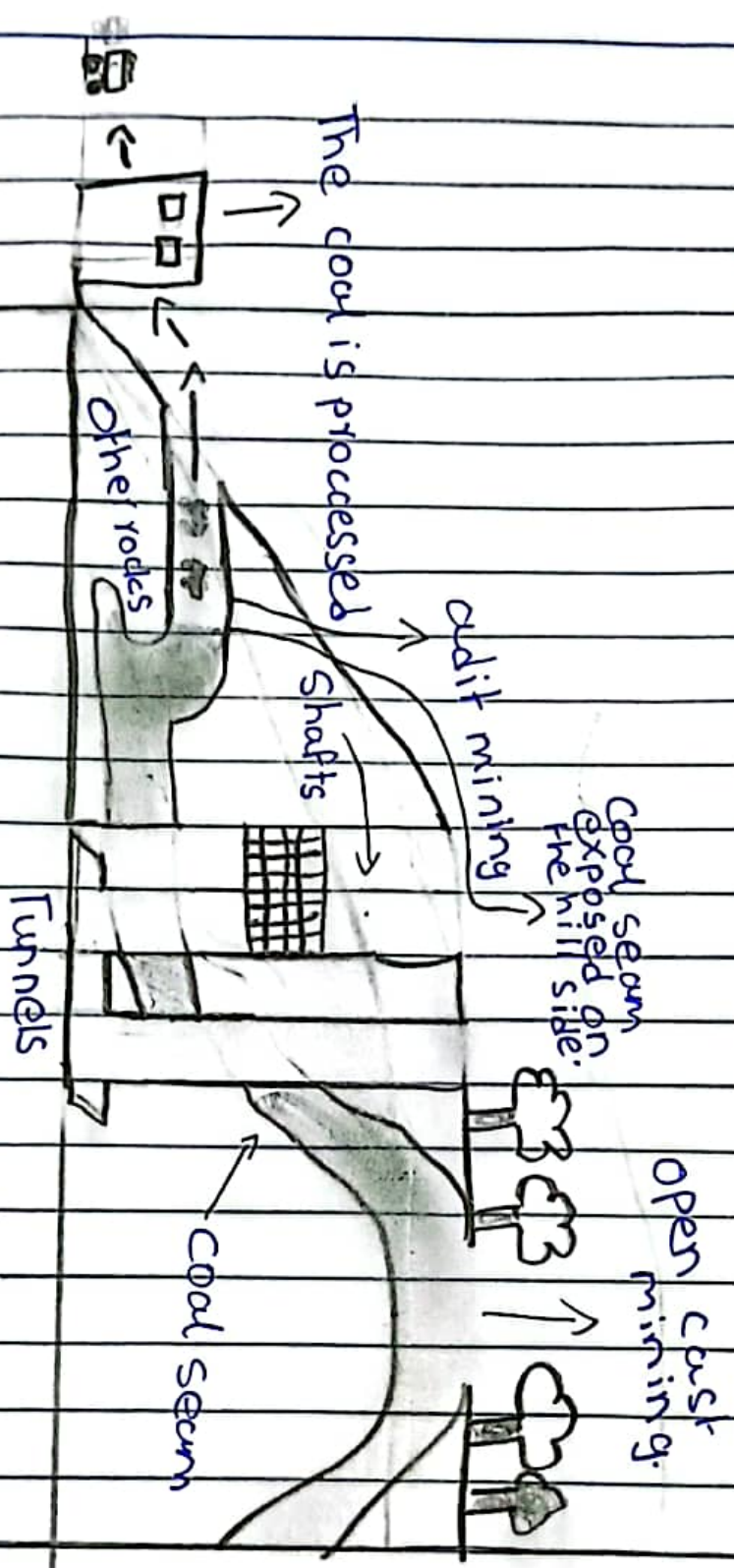
Many minerals form crystals. The shape of a crystal is determined by the arrangement of its atoms. If the crystals form slowly, they may become gemstones.

Q:3a Define mining. (2)

Ans: Mining is the process of digging rocks and minerals from the earth. Minerals are found at different depths.

Q:3b Outline different methods of mining. (3)

Ans: Some minerals, like coal and iron, often lie near the surface. Open-cast mining scoops them up from near the surface. The mineral bearing rocks are stripped off by giant excavators and power shovels which then load the material into lorries or railway wagons to be carried away. Minerals underground may be accessed by adit or shaft mining.



Unit-5 Mineral Resources

Topics: Mining and Economic Development

Name: _____

Grade: _____

Question 1: How minerals are important in the economic growth of a country?

Answer: Minerals play an important role in country's economic growth by supporting various industries. Metal minerals are used in high value industries like steel making, construction and electrical appliances, boosting infrastructure and industrial development. Non-metallic minerals like limestone, gypsum and coal aid in construction, agriculture and electricity development. The mining sector creates jobs, reduces import costs and increases exports, improving the balance of payments. Additionally, mineral extracts promote the development of remote areas and contribute to GDP growth by increasing domestic income.

Question 2: What are the challenges and hazards faced by miners and the mining industry?

Answer: Miners in mining industries face numerous challenges including poor working conditions, inadequate safety measures and lack of proper training. Many miners are exposed to hazardous materials such as dust and toxic gasses, which can lead to respiratory diseases and other health issues. Additionally, miners often work long hours in extreme temperatures with minimal payment (wages) and benefits. The mining industry is also suffering because of illegal mining practices for example child labor. Moreover, the miners use old traditional methods which are extremely dangerous.

Problems of Mining Industry	Solutions to the Problems of Miners	Environmental Impacts of Mining	Protecting the Environment from the Effects of Mining
Poor Working Conditions	Good Infrastructure	Soil Erosion	Waste Management (Proper disposal of all waste)
Traditional Methods	More interest by government	Land Degradation (Deforestation)	Reforestation (Planting more trees)
Inaccessibility of Minerals	Enforce labor law	Water Pollution (Chemical Contamination, Heavy Metal Pollution, Acid Mine Drainage)	Safer Mining Practices (Introducing new, safe methods)
Regularity Issues (Corruption, Illegal mining)	Proper ventilation & lighting	Air Pollution (Dust & Toxic Gas Emissions)	Land Reclamation (Leveling/reclaiming land after mining)
Mismanagement by Department	Should be given life insurance	Habitat Destruction	Flood Prevention (Building proper drainage systems)
Safety & Security Concerns	Use modern methods	Loss of Biodiversity (Extinction of Species)	
Exploitation (Low wages, High hours, Child labor)	Training & Education programs	Soil & Groundwater Contamination	
Low Priority to Mining	Enhance safety measures	Noise & Vibration Pollution (Noise from Blasting/Machinery, Vibration from Drilling/Excavation)	
Lack of Technical Experts	Good means of communication		
	Should be given more wages		

classwork

Wednesday, Feb 12, 25

Geography.

Q: Mention 5 basic differences between metallic and non-metallic minerals with examples.

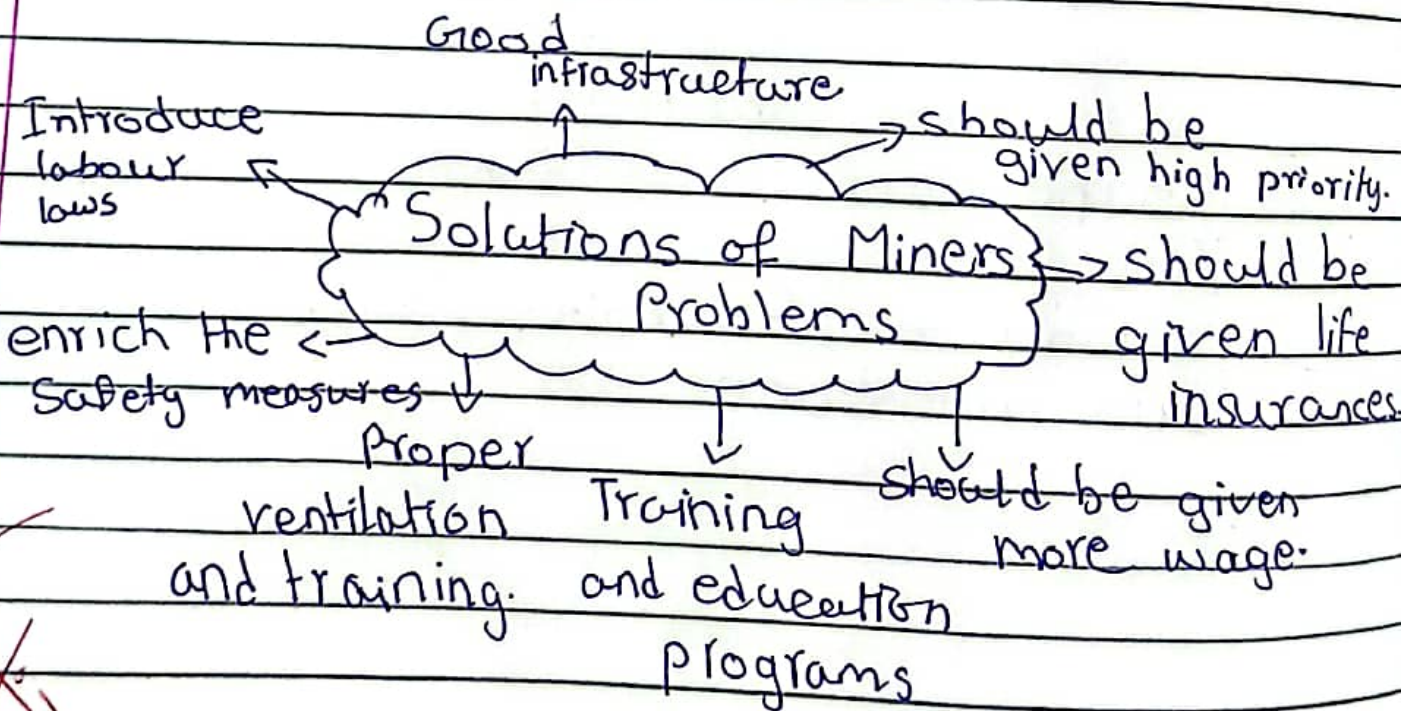
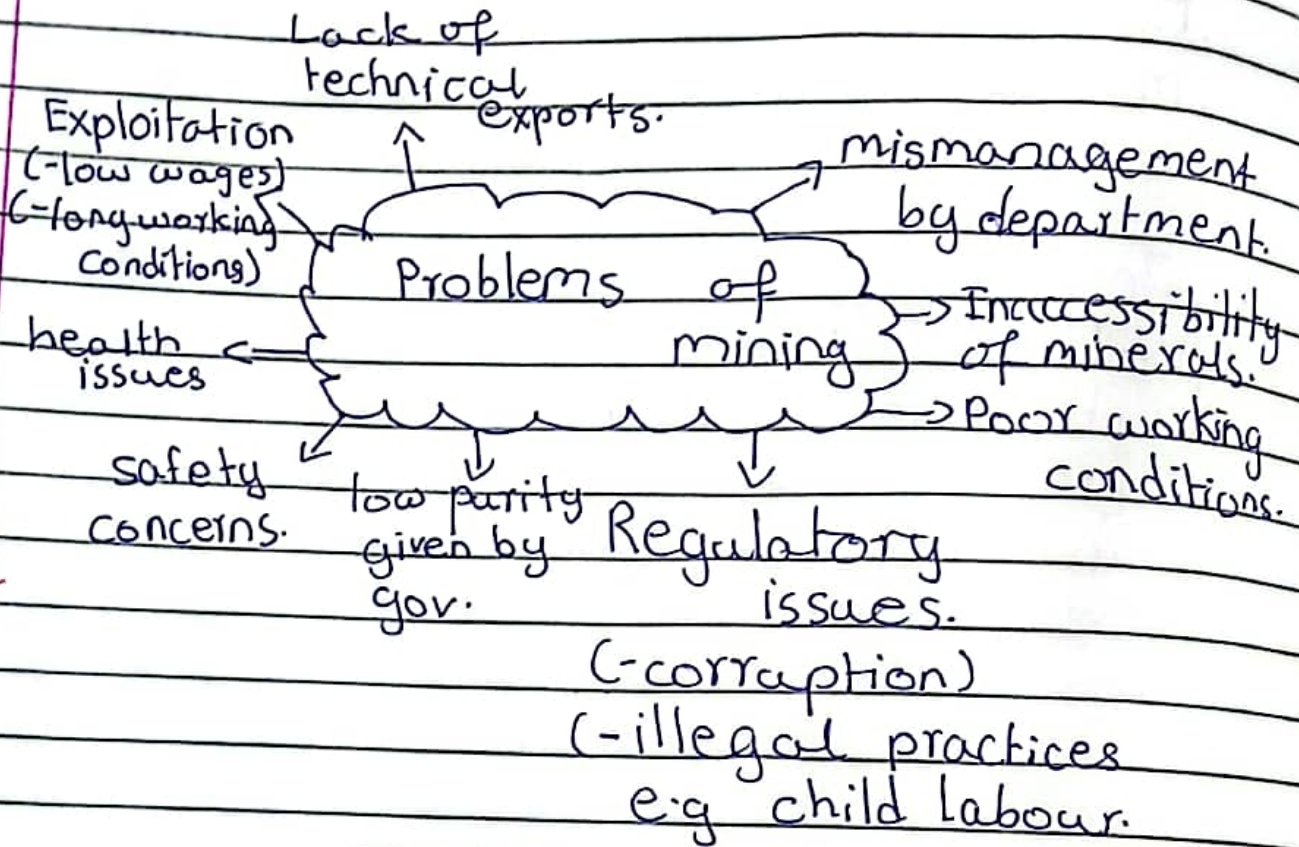
Ans: Metallic minerals are economically more valuable. They are very reactive with water and acid. They are also very shiny, and they can also be shaped into various designs for jewelry, machinery etc. They are also good conductors of electricity. Example: iron ore, gold, chromite etc. Non metallic minerals are economically less valuable except oil and gas. They are less reactive with water and acid. They are rough and may not shine. Their shape cannot be changed or compressed. They are also not very good electricity conductors. Examples: clay, marble, gypsum, and limestone.

*

C:W

Wednesday, Feb 12, 2025

The Plight of coal miners



C.W

Friday, Feb 7, 2025

Topic: Problems of the Mining Industries

Q What are the challenges and hazards faced by the miners in the mining industry?

Ans Miners in the Mining Industries face numerous challenges, including poor working conditions, inadequate safety measures and lack of proper training. Many miners are exposed to hazardous materials such as dust and toxic gases which can lead to respiratory diseases and other health issues. Additionally, miners often work for long hours in extreme temperature with minimum wages (payments) and benefits. The mining industry is also suffering because of illegal practices. Moreover, the miners use old traditional methods which are extremely dangerous.

~~X~~
12/2/2024

H.W

Wednesday, Feb 19, 2025

Marine fishing

Q. Difference between subsistence fishing and commercial fishing.
Define subsistence fishing and explain how it is different from commercial fishing.

Ans. The difference between commercial fishing and subsistence fishing is:

Subsistence fishing:

Subsistence fishing is a fishing in which the fisherman catches the fish to feed themselves and their family. Some fishing communities on the coast are engaged in subsistence fishing as fish is the main component in their diet and they don't sell it for money.

Commercial fishing:

Commercial fishing is a fishing in which people catch fish for selling in the market and make money. In Pakistan two main fishing centers of commercial fishing are Karachi and Gwadar.

Difference:

Subsistence fishing is small and for personal use

and diet for their families, not for selling.

Commercial fishing is large and for business purposes, fishes are caught in large quantities and sold in the market to earn money.

Q2. Describe the methods and technologies used for commercial fishing. How do these methods impact fish populations.

Ans. ~~Some metho~~ The methods and techniques used for commercial fishing are.

1. Trawling:

Trawling involves dragging a large net through the water to catch fish. In this technique the fisher men catch large numbers of fish but this may also harm the sea floor and catch unwanted species.

2. Long-lining:

Long lining is a method where a long line with many hooks is placed in the water. The hooks are often baited to attract fish, this method is used to catch bigger fish and it also catches other sea animals like turtles by mistake.

3. Purse seining:

In this method there is a huge net that is set around the group of fishes. Once the fishes are surrounded, the bottom of the net is ^{pulled} tight like a draw string to trap the fish. This method is effective for catching fish that swim close together.

Impact of fish population:

These modern fishing methods of fishing ~~methods~~ allow for the catching of a lot of fish quickly but they can also cause problems like overfishing in which too many fishes are caught and reduce fish population, bycatch in which dolphins, turtles and sharks are caught accidentally, habitats are damaged by these methods because these methods disturb the underwater habitat.