

COAL AND PETROLEUM QUESTION AND ANSWERS. -

****1. Explain, Why are fossil fuels exhaustible natural resources?****

Fossil fuels (like coal, petroleum, and natural gas) are called **exhaustible natural resources** because they are formed over millions of years from the remains of dead plants and animals. Since they take such a long time to form and are being consumed faster than they are naturally replaced, their supply is limited and can run out.

****2. Describe how was coal formed from dead vegetation? What is this process called?****

Coal was formed millions of years ago when dense forests in swampy areas got buried under soil due to natural calamities. The dead vegetation was compressed under high pressure and temperature over millions of years. This process, where plant material slowly turns into coal, is called carbonisation.

****3. What happens when coal is heated in air? State the uses of coal.**

When coal is heated in the presence of air, it burns and releases carbon dioxide gas, heat, and light. This combustion process provides energy.

Uses of coal:

- * As a fuel in homes and industries
- * In thermal power plants to generate electricity
- * To make coke, which is used in the extraction of metals
- * As a source of coal tar and coal gas

****4. What are the constituents of coal gas? State one use of coal gas.****

****Constituents of coal gas****: Hydrogen, methane, carbon monoxide, and other gases.

****Use****: It is used as a fuel for lighting and heating.

****5. What are the major products of petroleum refining? Give one use of each.****

Petroleum refining yields several fractions:

- * ****Petroleum gas**** – Used as LPG for cooking
- * ****Petrol (Gasoline)**** – Used as fuel in cars and motorcycles
- * ****Diesel**** – Used in trucks, buses, and trains
- * ****Kerosene**** – Used for cooking and lighting (mainly in rural areas)

- * **Lubricating oil** – Used to reduce friction in machinery
- * **Paraffin wax** – Used in making candles, ointments, etc.
- * **Bitumen** – Used for road surfacing

6. State the various uses of natural gas.

- * Used as **CNG** (Compressed Natural Gas) in vehicles
- * As a fuel in homes and industries
- * In electricity generation
- * As a raw material in the manufacture of chemicals and fertilizers

7. What are the advantages of using LPG as fuel?

- * It burns **cleanly** without producing smoke or harmful gases
- * It has **high calorific value**, meaning more energy is released
- * Easy to transport and store in cylinders
- * Leaves no residue after burning

8. Which material is called 'black gold'? Why?

Petroleum is called **'black gold'** because of its blackish appearance and high economic value. It is a crucial raw material for fuels and various products, making it very valuable.

9. State one use of each of the following products of petroleum:

- (a) **Petroleum gas** – Used as LPG for cooking
- (b) **Petrol** – Used as fuel in light motor vehicles
- (c) **Diesel** – Used in heavy vehicles and generators
- (d) **Lubricating oil** – Used to reduce friction in engines and machines
- (e) **Bitumen** – Used in road construction

****10. What is the major cause of air pollution? What are tips to minimize petrol/diesel wastage while driving?****

****Major cause of air pollution**:** Burning of fossil fuels (like petrol and diesel) in vehicles and industries.

****Tips to minimize fuel wastage:****

- * Maintain proper air pressure in tires
- * Switch off the engine at red lights
- * Drive at a consistent, moderate speed
- * Avoid overloading the vehicle
- * Regularly service the vehicle
- * Use public transport or carpool when possible

Long type question and answers :-

1. (a) What is meant by inexhaustible natural resources? Name two inexhaustible natural resources.*

****Answer:****

Inexhaustible natural resources are resources that are not likely to run out or be depleted, no matter how much they are used, because they are continuously available from nature.

****Examples:****

- * Sunlight
- * Wind

1. (b) What is meant by exhaustible natural resources? Name any two exhaustible natural resources.**

****Answer:****

Exhaustible natural resources are resources that are limited in quantity and can be depleted if used excessively.

****Examples:****

- * Coal

- * Petroleum

2. (a) What are fossil fuels? Name three fossil fuels.**

****Answer:****

Fossil fuels are natural fuels formed from the remains of dead plants and animals buried deep in the earth for millions of years.

****Examples:****

- * Coal

- * Petroleum

- * Natural Gas

2. (b) Describe how fossil fuels were formed.**

****Answer:****

Fossil fuels were formed from the remains of ancient plants and animals. These remains were buried under layers of earth and rock. Over millions of years, due to high pressure and temperature, they slowly transformed into coal, petroleum, and natural gas.

3. (a) What is petroleum? Where does petroleum occur?**

****Answer:****

Petroleum is a thick, dark-colored oily liquid found deep below the Earth's surface. It is a fossil fuel used as a source of energy and raw material for many products.

****Occurrence:****

Petroleum occurs between layers of rocks in underground reservoirs.

3(b) Describe the process of formation of petroleum.**

****Answer:****

Petroleum was formed from the remains of tiny marine plants and animals that died millions of years ago and sank to the bottom of the sea. These remains got buried under mud and sand. Over time, heat and pressure converted them into petroleum and natural gas.

4.(a) What are petrochemicals? Name any two petrochemicals.**

****Answer:****

Petrochemicals are chemical products obtained from petroleum and natural gas.

****Examples:****

* Polythene

* Synthetic rubber

4. (b) Why are petrochemicals so important?**

****Answer:****

Petrochemicals are important because they are used to make a wide variety of everyday products such as plastics, synthetic fibers, fertilizers, detergents, and cosmetics. They are crucial for many industries and modern life.