CLASS- 8Th SCIENCE

Coal and Petroleum



1. What are the advantages of using CNG and LPG as fuels?

Ans: The advantages of using compressed natural gas (CNG) and liquified petroleum gas (LPG) as fuels is as follows:

- a) They give a lot of heat energy when burnt as compared to other fuels like kerosene, coal, etc
- b) They do not emit smoke when burnt, as they are clean fuels.
- c) They have low prices.
- d) They are easily available.
- e) They can be easily transported by cylinders or pipelines.

2. Name the petroleum product used for surfacing of roads.

Ans: Bitumen is the petroleum product used for surfacing roads.

3. Describe how coal is formed from dead vegetation. What is this process called?

Ans: Coal is made up of the remains of dead plants and animals buried in the ground, exposed to high temperatures and pressure in the absence of air. This process of formation of coal is known as carbonization.

4. Fill in the banks.

a) Fossil fuels are ______, ____and _____.

Ans: Fossil fuels are coal, petroleum and natural gas.

b) Process of separation of different constituents from petroleum is called

Ans: Process of separation of different constituents from petroleum is called refining.

c) Least polluting fuel for vehicles is_____.

Ans: Least polluting fuel for vehicles is compressed natural gas (CNG).

5. Tick True/False against the following statements.

a) Fossil fuels can be made in the laboratory.

Ans: False. Fossil fuels are made by the remains of dead plants and animals that were buried inside the earth millions of years ago and were exposed to high temperature and pressure conditions.

b) CNG is more polluting fuel than petrol.

Ans: False. CNG is an eco-friendly fuel and safe to use as it does not cause any health issues. Therefore, it is very less polluting.

c) Coke is almost pure form of carbon.

Ans: True. Coke is a fuel with few impurities and a high carbon content. That is why it is an almost pure form of carbon.

d) Coal tar is a mixture of various substances.

Ans: True. Coal tar is a mixture of various substances such as dyes, paints, explosives, drugs, etc.

e) Kerosene is not a fossil fuel.

Ans: False. Kerosene is one of the products of distillation of petroleum products.

6. Explain why fossil fuels are exhaustible natural resources.

Ans: Mineral oil is made from the dead remains of plants and animals that were buried in the ground millions of years ago under high temperatures and pressure, which cannot be synthesized in the laboratory. Therefore, fossil fuels are a complete natural resource.

7. Describe characteristics and uses of coke.

Ans: Coke is a substance produced by the destructive distillation of coal. It is a grey, hard and porous fuel with a high carbon content and few impurities. It is used to make steel and metal extraction as a reducing agent.

8. Explain the process of formation of petroleum.

Ans: Petroleum is made up of dead plant and animal fossils buried in the ground millions of years ago under high temperatures and pressure in the absence of air the dead remains are broken into smaller units to form petroleum and natural gas.

9. The following Table shows the total power shortage in India from 1991-1997. Show the data in the form of a graph. Plot shortage percentage for the years on the Y-axis and the year on the X-axis.

S.No.	Year	Shortage(%)
1	1991	7.9
2	1992	7.8
3	1993	8.3
4	1994	7.4
5	1995	7.1
6	1996	9.2
7	1997	11.5

Ans: Plot the graph from the above data taking shortage percentage on the Y-axis and the year on the X-axis:

For example, for the year 1991 we mark the point 7.9 on the Y-axis. Similarly, plotting the other points we get,



Graph of the total power shortage in India from the given data

Extended Learning -Activities and Projects

1. Get an outline Map of India. Mark the places in the map where Coal, petroleum and Natural Gas are found. Show the places Where petroleum refineries are situated..

Ans: The map of India with coal, natural gas and petroleum refineries is shown in the image.

Explanation:

India s oil industry dates back to 1889, when the country s first oil deposit was discovered near the town of Digboy in Assam.

Indias natural gas industry began with the discovery of gas fi

2. Choose any five families of your neighbourhood enquiry whether their energy consumption (coal, gas, petrol, electricity,kerosene) has increased or decreased in the last five year. enquiry also about the measures they adopt to conserve energy

Ans: Most of the people do not maintain track on energy consumption. The only thing which they complain about is increased bill every year.

Most of the people tend to employ reasonable efforts to reduce the fuel costs by purchasing the electronic setback thermostat where the temperature will be littlele

3. Find out the location of major thermal power plants in India. What could be the reasons for their being located at those places?

Ans: A thermal power station is a power plant in which heat energy is converted to electric power.

Location of major thermal power plants in India are:

- 1. NTPC Ramagundam Thermal Power plant. --- Telangana
- 2. Kothagudem --- Thermal Power plant --- Telangana
- 3.Shakti Nagar power plant raichur Karnataka
- 4.R