Coal and Petroleum

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

Answer :

CNG (compressed natural gas) is stored under high pressure as compressed natural gas (CNG). It is a very important fossil fuel because it is easy to transport through pipes. It is used for power generation. It is now being used as a fuel for transport vehicles because it is less polluting. It is a cleaner fuel. Similarly, LPG- Liquified Petroleum Gas is used as fuel for home and industry as it is less polluting and easy to transport and to use.

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

Answer:

Earlier coal-tar a black, thick liquid which is obtained from coal processing, and is a mixture of about 200 substances was mainly used for metalling or surfacing of the roads, now a days, bitumen, which is a petroleum product, is used in place of coal-tar for metalling or surfacing of the roads.

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

Answer:

Coal, petroleum and natural gas are exhaustible natural resources formed from the dead remains of living organisms (fossils). So, these are all known as fossil fuels. Fossil fuels formed many part of earth. They were formed many billion years ago. Many parts of the earth were covered with large plants growing on soil. When the vegetation died, it became dead plants and got decomposed. During the decomposition process, the plants materials gave up oxygen, hydrogen and left carbon was formed as peat. Over a long period of time, layer of sedimentary rock deposited top of the peat. Weight of layers compressed to the peat and it make to became hard. Pressure, heat and movement of layers combined to change the deposit into coal. As coal contains mainly carbon, the slow process of conversion of dead vegetation into coal is called carbonization. It is as hard as stone and is black in colour.



4. Fill in the blanks:

(a) Fossil fuels are _____, and _____.

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

(c) Least polluting fuel for vehicle is _____.

Answer:

(a) Fossil fuels are <u>Coal</u>, <u>Petroleum</u> and <u>Natural gas</u>.

(b) Process of separation of different constituents from petroleum is called refining.

(T)

(T)

(F)

(c) Least polluting fuel for vehicle is CNG (compressed natural gas) .

5. Tick True/False against the following statements:

(a) Fossil fuels can be made in the laboratory.

(b) CNG is more polluting fuel than petrol.

(c) Coke is almost pure form of carbon.

(d) Coal tar is a mixture of various substances.

(e) Kerosene is not a fossil fuel.

Answer:

(a) Fossil fuels can be made in the laboratory. (F)

(b) CNG is more polluting fuel than petrol. (F)

(c) Coke is almost pure form of carbon.

(d) Coal tar is a mixture of various substances.

(e) Kerosene is not a fossil fuel.



6. Explain why fossil fuels are exhaustible natural resources.

Answer :

The formation of fossil fuels is a very slow process, takes million of years in nature. We have limited reserves of fossil fuels in nature. Fossil fuels are exhaustible natural resources, as limited fossil fuels reserves like coal, petroleum, natural gas are being depleted very fast by human activities like rapid urbanization, industrialization and transportation.

7. Describe characteristics and uses of coke.

Answer :

Coke is a tough, porous and black substance. It is almost pure form of carbon. Coke is used in the homes for cooking, heating and in industries, for manufacturing of steel and extraction of many metals. Earlier it was also used in steam engines for rail transpiration. It is also used in thermal power plants to produce electricity.

8. Explain the process of formation of petroleum.

Answer :

Petroleum was formed from organisms living in the sea. As these organisms died, their bodies settled at the bottom of the sea and got covered with layers of sand and clay. Over millions of years, absence of air, high temperature and high pressure transformed the dead organisms into 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

Answer:









