Text Book Questions

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

Ans. Compressed Natural Gas (CNG) and Liquified Petroleum Gas (LPG) are easy to transport and use. They are less polluting and clean fuel.

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

Ans. Coal Tar.

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

Ans. Formation of Coal : Earth had dense forest in wetland areas about 300 million years ago. These forests got buried under the soil due to natural processes like flooding, earthquake, etc. As more soil deposited over them, they were compressed and sank deeper and deeper. Under high pressure and high temperature dead plants got slowly converted to coal due to carbonization.

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 .....

Ans. (a) Coal, petroleum and coal gas (b) refining (c) 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.

Ans. (a) F, (b) F (c) T (d) T (e) F

6. Explain why fossil fuels are exhaustible natural resources.

Ans. The resources which are limited in nature are called exhaustible natural resources. Fossil fuels are limited in nature so it is an exhaustible natural resource.

7. Describe the characteristics and uses of coke.

Ans. Characteristics of coke : 1. Coke is a tough, porous and black substance.

2. It is almost a pure form of carbon.

3. It is a fossil fuel.

4. It is obtained by the processing of coal.

Uses of Coke : Coke is used in the manufacturing of steel and in the extraction of many metals.

8. Explain the process of formation of petroleum.

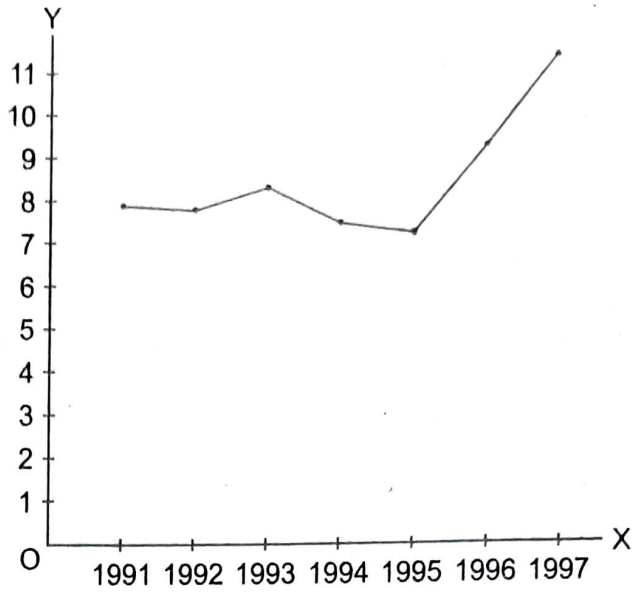
Ans. Petroleum is a fossil fuel. It was formed from organisms living in the sea. As these organisms died, their bodies settled at the bottom of the sea and got covered with layers of sand and clay. Over millions of years, absence of air, high temperature and high pressure transformed the dead organisms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

Petroleum is a dark oily liquid and is a mixture of various constituents, such as petroleum gas, petrol, diesel, lubricating oil, paraffin wax etc.

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	11.2

Ans. Scale : Along X-axis 1 unit = 1 year
Along Y-axis 1 unit = 1%



Activity 5.1

1. Observe your surroundings.
2. Make a list of various materials used by us in daily life.
3. Classify them as natural and man-made.

	Natural	Man-made
1.	Sunlight	Table
2.	Air	Chair
3.	Water	Glass
4.	Petrol	Plastic
5.	LPG	Food
6.	CNG	Electric equipments
7.	Coal	Toys
8.	Coal Tar	Black board
9.	Soil	Rubber
10.	Trees	Utensils
11.	Human	TV

Activity 5.2

1. Take some containers.
2. Fill them with popcorn/peanuts/roasted gram/toffees.
3. Make groups of students of seven each.
4. Further divide each group into three subgroups containing 1, 2, and 4 students.
5. Label them as first, second and third generation respectively.
6. These sub-groups represent the consumers.
7. As population is growing, second and third generations have larger number of consumers.
8. Put one full container for each group on a table.
9. Ask consumers of the first generation from each group to consume eatables from the container of their group.
10. Now ask the second generation consumers from each group to do the same.

11. Ask students to observe carefully the availability of eatables in each container.
12. If something is left in the containers, ask third generation from each group to consume it.
13. Now finally observe whether all the consumers of the third generation got the eatables or not.
14. Also observe if anything is still left in any of the containers.

Observation : Third generation got the items in less quantity because first two generations consumed them mostly. And nothing will be left in any container after the third generation.

Inter Text Questions (Paheli Boojho)

1. Can we use all our natural resources forever ?

Ans. We can use inexhaustible natural resources like sunlight and air forever. But exhaustible natural resource like coal, petroleum, forest, wildlife, minerals, gas etc., are limited in nature. So we cannot use these resources forever.

2. Where do we get coal from and how is it formed ?

Ans. We get coal from nature. It is a fossil fuel. It is formed by the carbonization, the slow process of conversion of dead vegetation to coal.

3. Can coal, petroleum and natural gas be prepared in the laboratory from dead organisms ?

Ans. No, coal, petroleum and natural gas are fossil fuels. They require the dead organisms and millions of year to get converted into these fuel. Their formation is a very slow process and conditions for their formation can not be created in the laboratory.

Exercise