

Subject –Science

Class- 8

Topic – chapter -5

EXERCISES

Use Cordova Smart Class Software on smart board in class to do these exercises.

A. Tick (✓) the correct options:

- Which of the following is not an exhaustible natural resource?
(a) forest (b) minerals (c) air (d) wildlife
- _____ is a hard fossil fuel.
(a) Petroleum (b) Natural gas (c) Coal (d) Wood
- Which of the following is not obtained by the destructive distillation of coal?
(a) coke (b) petrol (c) coal tar (d) ammoniacal liquor
- Which of the following is used as aviation fuel in jet aeroplanes?
(a) coke (b) petroleum (c) CNG (d) kerosene
- Which of the following is used for making road surfaces?
(a) fuel oil (b) paraffin wax (c) bitumen (d) lubricating oil
- Which of the following is a renewable source of energy?
(a) hydroenergy (b) coal (c) natural gas (d) petroleum
- Which of the following causes respiratory problems in humans?
(a) land pollution (b) water pollution (c) air pollution (d) noise pollution

Fill in the blanks:

- Coke is obtained by the _____ of coal.
- _____ is a constituent of petroleum and is used in making cosmetics.
- _____ is also known as 'black gold'.
- CNG stands for _____.
- _____ has a boiling point of 250 °C-350 °C.

6. _____ is used in rubber industries as a strengthening agent.

7. Natural gas consists mainly of _____.

C. Very Short Answer Questions:

1. Where is coal mainly found in India?
2. Name any two constituents of petroleum.
3. In which delta, natural gas is found in India?
4. Name a liquid fossil fuel.
5. Name the product formed, when carbon monoxide combines with haemoglobin in our blood.
6. Name the fuel that is non-polluting and used in vehicles.

D. Short Answer Type-I Questions:

1. What is meant by carbonisation?
2. Give any two uses of coal.
3. Give two limitations of fossil fuels.
4. What is meant by 'refining of petroleum'?
5. Why is petroleum called 'black gold'?

E. Short Answer Type-II Questions:

1. What are petrochemicals? Write their two uses.
2. How do fossil fuels cause air pollution?
3. Nitika goes with her father to a car showroom. Her father is confused whether to buy a CNG model or a petrol model.
 - (a) What would you suggest him and why?
 - (b) What do we learn from his wise choice?
4. (a) What is meant by 'destructive distillation of coal'?
 - (b) What are the products obtained by the destructive distillation of coal?

F. Long Answer Questions:

1. (a) How is petroleum formed? (b) How do we obtain it?
2. Distinguish between inexhaustible natural resources and exhaustible natural resources on the basis of the following parameters : (a) availability and (b) effects of human activities. Give two examples of inexhaustible and exhaustible natural resources.

G. HOTS (Higher Order Thinking Skills) Questions:

1. Why don't we use coal gas as a cooking fuel?
2. Why does petroleum float in water?

Chapter 5: Coal and Petroleum

Multiple Choice Questions

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1. (b) 2. (a)

EXERCISES

A. Tick (✓) the correct options:

1. (c) 2. (c) 3. (b) 4. (d) 5. (c) 6. (a)
7. (c)

B. Fill in the blanks:

1. destructive distillation 2. Paraffin wax 3. Petroleum
4. Compressed Natural Gas 5. Diesel 6. Carbon black
7. methane

C. Very Short Answer Questions:

1. In India, coal is mainly found in Bihar, Jharkhand, West Bengal, Odisha and Madhya Pradesh.

2. Petrol and kerosene/petroleum/diesel/fuel oil/lubricating oil/paraffin wax/bitumen
3. Krishna-Godavari delta
4. Petroleum
5. Carboxyhaemoglobin
6. CNG

D. Short Answer Type-I Questions:

1. The slow chemical process of the conversion of the dead vegetation into coal, under the influence of high temperature and pressure is called carbonisation.
2. (i) Coal is used in thermal power plants to produce electricity.
(ii) Coal is also used as fuel in homes.
3. (i) Limited availability (ii) Air pollution
4. The process of separating various constituents or useful fractions of petroleum is called refining of petroleum.
5. Petroleum is called 'black gold' because of its great commercial importance.

E. Short Answer Type-II Questions:

1. Many useful substances that are obtained from petroleum and natural gas are called petrochemicals.
Two uses of petrochemicals are :
(i) They are used in the manufacture of synthetic fibres.
(ii) They are used in the manufacture of drugs.
2. Burning of fossil fuels produces gases like carbon dioxide, sulphur dioxide, carbon monoxide and smoke that cause air pollution.
3. (a) I would suggest him to buy a CNG model because CNG is a cleaner fuel. Burning of petrol causes air pollution.
(b) We learn to be environment friendly in all our actions by opting a CNG model.
4. (a) Destructive distillation is the process of breaking of coal by heating it to a high temperature in the absence of air.
(b) The products obtained by the destructive distillation of coal are coke, coal tar, ammonium compounds and coal gas.

Long Answer Questions:

1. (a) Petroleum is formed by the decomposition of the dead remains of plants and animals buried under the sea millions of years ago. Over this time period, under high pressure and temperature and in the absence of air, the dead remains slowly get converted into petroleum.
(b) We obtain petroleum by drilling holes into the earth's crust by machines called 'drilling rigs'. Pipes are inserted until they reach the petroleum deposits. By using certain pumps, petroleum is pumped out.

S.No.	Parameters	Inexhaustible natural resources	Exhaustible natural resources
(a)	Availability	Inexhaustible natural resources are present in unlimited quantity in nature.	Exhaustible natural resources are present in limited quantity in nature.
(b)	Effects of human activities	Inexhaustible natural resources are not likely to be exhausted by human activities.	Exhaustible natural resources are exhausted by uncontrolled human activities.
Examples		sunlight, air, water	forests, coal, petroleum

G. HOTS (Higher Order Thinking Skills) Questions:

- We don't use coal gas as a cooking fuel in spite of the fact that it has a high calorific value because coal gas is produced by destructive distillation of coal and coal is an exhaustible fossil fuel that takes millions of years to be formed.
- Petroleum floats in water because it has less density than water, i.e., it is lighter than water.

