
NCERT Exemplar Class 8 Science Chapter 5: Coal and Petroleum

Multiple Choice Questions**Question 1**

Various materials which are obtained from nature are called natural resources. Which of the following is not a natural resource? (a) minerals

- (b) water
- (c) soil
- (d) plastic

Answer: (d) plastic

Explanation: Minerals, water and soil are natural resources whereas plastic is a man made substance.

Question 2

Air is a natural resource and cannot be exhausted by human activities. It is known as inexhaustible natural resource. Which of the following is another inexhaustible natural resource? (a) coal

- (b) petroleum
- (c) sun-light
- (d) minerals

Answer: (c) sun-light

Explanation: Petroleum and minerals are non-renewable sources of energy which can get exhausted whereas sunlight is a renewable resource.

Question 3

Which of the following is a pair of exhaustible natural resources? (a) coal and soil

- (b) air and sun-light
- (c) water and petroleum
- (d) wild life and minerals

Answer: (d) wild life and minerals

Explanation: In option a there is soil, In option b there is sunlight and in option c there is water which will not get exhausted hence option d) is right.

Question 4

Coal is processed in industries to get some useful products. Which of the following is not obtained from coal? (a) coke

- (b) coal tar
- (c) coal gas
- (d) CNG

Answer: (d) CNG

Explanation: CNG is compressed natural gas which is made by compressing the natural gas. CNG is a petroleum product whereas other options provided are obtained from coal.

Question 5

Exhaustible natural resources are: (a) unlimited in quantity.

(b) not dependent on nature.

(c) limited in quantity.

(d) not exhausted by human activities.

Answer: (c) limited in quantity.

Explanation: Exhaustible natural resources are limited and they get exhausted by human activities.

Question 6

Fossil fuels are obtained from: (a) remains of non-living materials.

(b) dead remains of birds only.

(c) dead remains of insects only.

(d) dead remains of living organisms.

Answer: (a) remains of non-living materials.

Explanation: Fossil fuels are obtained millions of years ago remains of non-living materials. Get buried under the earth.

Question 7

Coal is formed from the remains of: (a) vegetation only

(b) animals only

(c) both vegetation and animals

(d) neither vegetation nor animals

Answer: (d) neither vegetation nor animals

Explanation: Coal is formed 300 million years ago when buried plants and trees get decomposed.

Question 8

Which substance is formed by the carbonisation of dead vegetation? (a) coal

(b) coke

(c) coal gas

(d) coal tar

Answer: (a) coal

Explanation: Coal is formed 300 million years ago when buried plants and trees get decomposed.

Question 9

- Naphthalene balls are obtained from coal tar and are used as: (a) mosquito repellent
(b) honey bee repellent
(c) moth repellent
(d) snake repellent

Answer: (c) moth repellent

Explanation: Characteristic smell of naphthalene makes the insects and moth run away from naphthalene stored under clothes etc.

Question 10

- Which of the following is not a constituent of petroleum? (a) paraffin wax
(b) lubricating oil
(c) petrol
(d) coke

Answer: (b) lubricating oil

Explanation: Lubricating oil is obtained from crude petroleum.

Question 11

- Petroleum was formed from organisms: (a) living on the land
(b) living on the plants
(c) living in the sea
(d) living on the rocks

Answer: (c) living in the sea

Explanation: 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.

Question 12

- Choose the incorrect statement from the following: (a) It is difficult to transport natural gas through pipes.
(b) The disadvantage of natural gas is that it can not be used directly for burning in homes.
(c) Natural gas is stored under high pressure as compressed natural gas.
(d) Natural gas cannot be used for power generation.

Answer: (d) Natural gas cannot be used for power generation.

Explanation: Natural gas can be used for power generation hence statement d) is wrong.

Very Short Answer Questions**Question 13**

You are provided with a mixture of petroleum and water. Can you suggest a method to separate the two?

Answer: Decantation method is used to separate mixture of petroleum and water.

Question 14

What does CNG stand for and why is it considered to be a better fuel than petrol?

Answer: CNG stands for compressed natural gas. CNG burns with no smoke hence it does not cause air pollution. CNG does not produce any poisonous gas hence CNG is considered a better fuel than petrol.

Question 15

Name the petroleum product used as fuel for stoves, lamps and jet aircrafts.

Answer: Kerosene is the petroleum product used as fuel for stoves, lamps and jet aircrafts.

Question 16

Fill in the blanks in the following sentences: (a) Coal is one of the _____ used to cook food.

(b) When heated in air, coal burns and produces mainly _____ gas.

(c) Coal tar is a black, thick _____ with an _____ smell.

(d) Petroleum, _____ and _____ are fossil fuels.

(e) Forests and coal are _____ natural resources.

Answer: (a) Coal is one of the **fuel** used to cook food.

(b) When heated in air, coal burns and produces mainly **Carbon-di-oxide** gas.

(c) Coal tar is a black, thick **liquid** with an **unpleasant** smell.

(d) Petroleum, **Coal** and **natural gas** are fossil fuels.

(e) Forests and coal are **exhaustible** natural resources.

Question 17

The underlined words in the following sentences have been jumbled up. Write them in their correct form: (a) Loca is obtained from mines.

(b) Umpetlore is a fossil fuel.

(c) Rineryfe is a place where various fractions of petroleum are separated.

(d) Keenrose is a fuel used in jet crafts.

(e) Nutsgilh is an example of inexhaustible natural resources.

Answer: (a) coal

(b) petroleum

(c) refinery

(d) kerosene

(e) sunlight

Question 18

Fill in the blanks: (a) The slow process of conversion of dead vegetation into coal is called _____.

(b) Coal and petroleum are formed from the dead remains of organisms and are known as _____.

(c) The black thick liquid with _____ smell is known as coal tar.

(d) During the processing of coal to get coke, coal tar and _____ are also obtained.

(e) The process of separating the various constituents of petroleum is known as _____.

(f) Excessive burning of fossil fuels is a major cause of _____.

Answer: (a) The slow process of conversion of dead vegetation into coal is called

carbonisation.

(b) Coal and petroleum are formed from the dead remains of organisms and are known as **fossil fuels.**

(c) The black thick liquid with **unpleasant** smell is known as coal tar.

(d) During the processing of coal to get coke, coal tar and **coal gas** are also obtained.

(e) The process of separating the various constituents of petroleum is known as **refining.**

(f) Excessive burning of fossil fuels is a major cause of **air pollution.**

Question 19

Write True/False against the following statements: (a) Oxygen in air is an exhaustible natural resource.

(b) Resources which are present in unlimited quantity in nature are called exhaustible natural resources.

(c) Wildlife is an exhaustible natural resource.

(d) Under high temperature and pressure, dead plants get slowly converted to coal.

(e) CNG is less polluting fuel than petrol and diesel.

Answer: (a) **False** - Oxygen is not an exhaustible natural resource.

(b) **False** - Resources which are present in unlimited quantity in nature are called inexhaustible natural resources.

(c) **True**

(d) **True**

(e) **True**

Short Answer Questions**Question 20**

Sunlight and air are inexhaustible natural resources. Comment.

Answer: Sunlight is present in unlimited quantity and they will not get exhausted by any means. Hence Sunlight is inexhaustible natural resources.

Question 21

Some natural resources are given in a box. Classify them into the exhaustible and inexhaustible natural resources: air, coal, natural gas, sunlight, petroleum, minerals, forests, oxygen.

Answer:

Exhaustible Inexhaustible

coal air
natural gas sunlight
petroleum oxygen
minerals
forests

Question 22

Write two important uses of coke.

Answer: Important uses of coke are as follows:

- Coke is used as reducing agent in extraction of metal from its ore.
- Coke is used in the manufacture of steel.

Question 23

Write the characteristics and some important uses of coal.

Answer: Characteristics of coal:

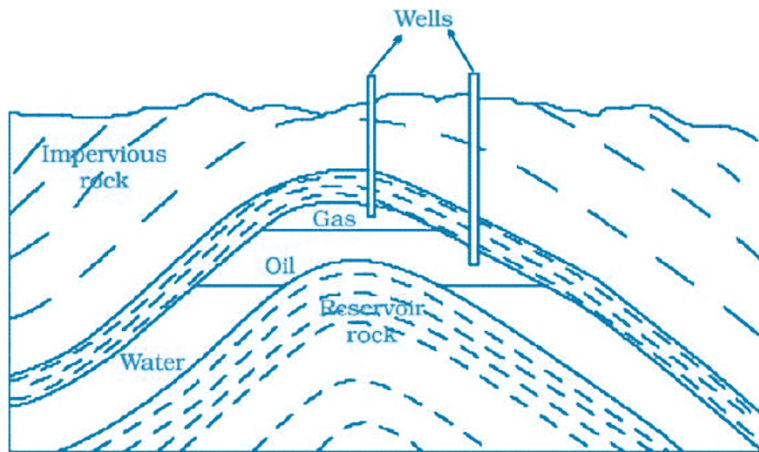
- It is as hard as stone and is black in colour.
- It is Combustible
- It is a fossil fuel
- When it is burned in air it releases CO₂.

Uses of Coal:

- Coal is one of the fuels used to cook food.
- Earlier, it was used in railway engines to produce steam to run the engine.
- It is also used in thermal power plants to produce electricity.
- Coal is also used as a fuel in various industries.

Question 24

Look at Fig. 5.1 where petroleum and natural gas deposits are shown. Why do we find oil layer above water layer?



Answer: Oil is lighter than water hence oil floats over it.

Question 25

Fill in the blanks and complete the story: About 300 million years ago the earth had dense _____ in low lying wetland areas. Due to natural processes, like _____, these forests got buried under the _____. As more _____ deposited over them, they were compressed. The _____ also rose as they sank deeper and deeper. Under high _____ and high _____, dead plants got slowly converted into coal.

Answer: About 300 million years ago the earth had dense **forests** in low lying wetland areas. Due to natural processes, like **floods**, these forests got buried under the **soil**. As more **soil** deposited over them, they were compressed. The **temperature** also rose as they sank deeper and deeper. Under high **temperature** and high **pressure**, dead plants got slowly converted into coal.

Question 26

Match the items given in Column I with the items of Column II:

Column I

- (a) Used for road surfacing
- (b) Natural gas
- (c) Petroleum
- (d) Paraffin wax

Column II

- (i) Black gold
- (ii) Vaseline and candles
- (iii) Bitumen
- (iv) CNG

Answer:

Column I

- (a) Used for road surfacing
- (b) Natural gas
- (c) Petroleum
- (d) Paraffin wax

Column II

- (iii) Bitumen
- (iv) CNG
- (i) Black gold
- (ii) Vaseline and candles

Long Answer Questions**Question 27**

Name the products obtained and their uses when coal is processed in industry.

Answer: Coke, coal tar and coal gas are obtained when we process coal. Coke is used as reducing agent in the extraction of metals. Coal tar is used as starting material for manufacturing various substances such as synthetic dyes, drugs, explosives, perfumes, paints etc. Coal gas is used as fuel.

Question 28

We say fossil fuels will last only for a few hundred years. Comment.

Answer: Fossil fuels take millions of years to get converted into these fuels. Formation of fossil fuels requires specific conditions and it doesn't happen quite often. Therefore, their limited stock will last only for a few hundred years.

Question 29

We read in newspapers that burning of fuels is a major cause of global warming. Explain why.

Answer: Burning of fuels lead to release of carbon-di-oxide, carbon-monoxide and SO_2 gases. These are the green house gases that not only increases the air pollution but also contribute for the global warming by trapping radiations from sun.

Question 30

While driving what are the tips we must follow to save petrol/diesel/natural gas?

Answer: Steps to follow while driving to save petrol/diesel/natural gas: • Drive at a constant and moderate speed as far as possible, • Switch off the engine at traffic lights or at a place where you have to wait, • Ensure correct tyre pressure. • Ensure regular maintenance of the vehicle.

Question 31

Imagine that all the exhaustible natural resources are exhausted by human activities. Do you think survival of living beings would be possible? If yes, why? If not, why not?

Answer: If all the exhaustible natural resources are exhausted by human activities then survival of living beings would be impossible. Fossil fuels are very important source of energy for us today. On burning fossil fuel and give off heat and light. Heat produced can be used to cook food or to run engines such as automobile engines. It can be used to generate electricity as in powerhouse where the most common fuel used is coal.

Question 32

Why petrol is exhaustible natural resource, whereas sunlight is not? Explain.

Answer: Petrol is a fossil fuel which is produced after years of decomposition of buried and plants deep down the earth. For producing petrol we need millions of years. If we use petrol higher than the requirement. Petrol will get exhausted. Whereas sun is a continuous and unlimited source of energy. Sun is renewable resource of energy which will not get exhausted.

Question 33

Write some important uses of the various constituents of petroleum.

Answer: Constituents of Petroleum are petroleum gas, petrol, diesel, kerosene, lubricating oil, paraffin wax and Bitumen.

Constituents of petroleum Uses

| | |
|---------------------|--|
| Petroleum Gas (LPG) | Fuel for home and industry |
| Petrol | Used as fuel for light automobiles |
| Kerosene | Fuel for lamps, stoves and jet aircrafts |
| Diesel | Used as fuel for large automobiles and electric generators |
| Lubricating oil | Used as lubricant for engines |
| Paraffin wax | Used in preparation of Ointments, candles, vaseline etc. |
| Bitumen | Used in preparation of Paints, road surfacing |

Question 34

Coal reserves are said to be enough to last for another hundred years. Do you think we need to worry in such case? Why or why not?

Answer: Coal reserves are said to be enough to last for another hundred years. Because there will be no availability of coal after the exhaust of existing coal resource. To produce coal it will take millions of years. Dead organisms should be buried in the earth and it should decompose in the absence oxygen. For all these process coal formation needs millions of years.

Question 35

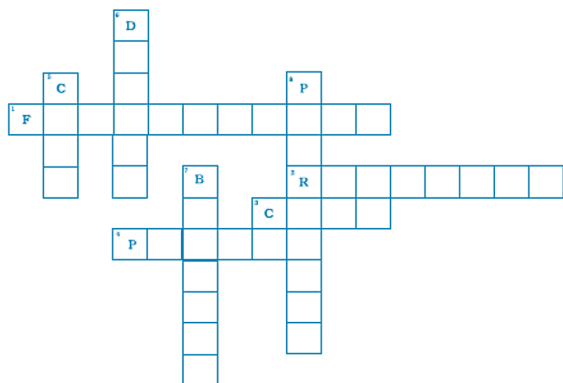
What steps would you suggest for the judicious use of fossil fuels?

Answer: Steps to take for the judicious use of fossil fuels:

- Use fossil fuels only when it is required.
- Switch off automobile engine while standing in a traffic.
- Use solar energy wherever possible.
- We can use natural gas in place of fossil fuels
- Use Alternate sources of energy like, solar, wind and biomass should be used in place of fossil fuels.

Question 36

Complete the crossword Fig with the help of the clues:

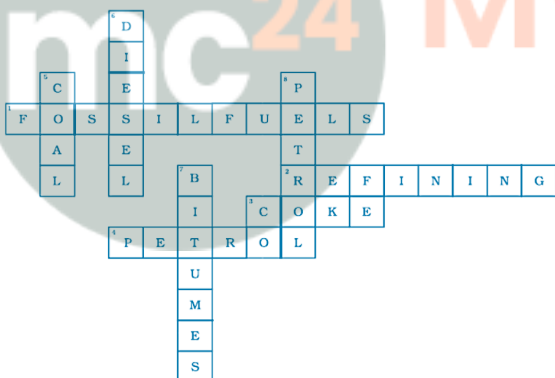


Across:

1. Fuels obtained form dead remains of living organisms. (6,5)
2. A process by which the various constituents of petroleum are separated. (8)
3. A porous black substance obtained form coal. (4)
4. Another name for motor fuel. (6)

Down: 5. The substance obtained by carbonisation. (4) 6. Fuel for heavy motor vehicles. (6)
7. A petroleum product used for road surfacing. (7) 8. Dead remains of sea animals got converted into it. (9)

Answer:



Across:

1. FOSSIL FUELS
2. REFINING
3. COKE
4. PETROL

Down: 5. COAL 6. DIESEL 7. BITUMEN 8. PETROLEUM