

## Scientific Aptitude

# Coal and Petroleum

### Check Your Concepts

#### Q.1. Match the following:

**Directions:** Given below are two columns - column I and column II. Match the two columns and write the correct answer in the given blank grid.

#### 1. Match the following:

Column – I		Column – II	
(A)	Paraffine wax	(i)	Lubrication
(B)	Lubricating oil	(ii)	Paints
(C)	LPG	(iii)	Candles
(D)	Bitumen	(iv)	Electric generators
(E)	Diesel	(v)	Fuel for home and industry

#### Q.2. Fill in the blanks:

**Directions:** Complete the following statements with an appropriate word / term to be filled in the blank space(s).

1. Burning of wood and coal causes \_\_\_\_\_ of air.
2. Petroleum gas is a mixture of ethane \_\_\_\_\_ and butane.
3. The process of separating the various constituents/fractions of petroleum is known as \_\_\_\_\_.
4. CNG is used for \_\_\_\_\_.
5. Coal is as hard as stone and is \_\_\_\_\_ in colour.
6. Coke is used in the manufacture of \_\_\_\_\_.
7. Many useful substances are obtained from \_\_\_\_\_ and \_\_\_\_\_.
8. Coal and petroleum are \_\_\_\_\_.

### Q.3. True / False:

**Directions:** Read the following statements and mark your response as true or false. Rewrite the correct statement(s) in the box provided below, in case of false statement(s).

- |    |   |        |
|----|---|--------|
| 1. | Petroleum is a fossil fuel.   | [    ] |
| 2. | Petroleum is formed by the decomposition of remains of marine organisms.  | [    ] |
| 3. | Natural gas is used in fertilizers and tyre industries.                   | [    ] |
| 4. | Coal is one of the fuels used to cook food.                               | [    ] |
| 5. | The conversion of dead vegetation into coal is a fast process.            | [    ] |
| 6. | Coke is a tough, porous and black substance.                              | [    ] |
| 7. | Petrol and diesel are obtained from a natural resources called petroleum. | [    ] |
| 8. | Petroleum is a light, oily liquid.  | [    ] |

### Q.1. Multiple choice questions:

**Directions:** Read the following questions and choose the answer that best answer the questions.

1. Select the quality that a good fuel should possess.
- |                             |                              |
|-----------------------------|------------------------------|
| (a) High calorific value    | (b) A low calorific value    |
| (c) It should burn too fast | (d) It should burn too slow. |
2. We can use coke
- |                           |                          |
|---------------------------|--------------------------|
| (a) As an oxidizing agent | (b) As an reducing agent |
| (c) In printers ink       | (d) As electrode.        |
3. Natural gas is a very important fossil fuel because
- |  |  |
|--|--|
| (a) It is easy to transport through pipes.   | (b) It is a mixture of various constituents.   |
| (c) It is used as a fuel in many industries. | (d) It is a tough, porous and black substance. |
4. Coal tar is a
- |  |                        |
|--|------------------------|
| (a) Black, thick liquid.               | (b) Dark, oily liquid. |
| (c) Tough, porous and black substance. | (d) Gas.               |

5. Now a days coal gas is used as a source of  
 (a) Light (b) Heat (c) Electricity (d) Steam
6. Natural gas is  
 (a) More polluting. (b) Pure form of carbon.  
 (c) Black thick liquid. (d) Less polluting.
7. Kerosene is used as fuel  
 (a) In home and industry. (b) For heavy motor vehicles.  
 (c) For stove, lamps and jet aircraft. (d) For electric generator.
8. Petrol and diesel are obtained from a natural resources called  
 (a) Sun (b) Petroleum (c) Coal tar (d) Coal gas
9. The process of heating coal in the absence of air is called  
 (a) Fractional distillation (b) Distillation  
 (c) Destructive distillation (d) None of these

**Q.5. Subjective questions:**

1. Why are coal and petroleum called fossil fuels?

**Ans.** .....  
 .....  
 .....

2. What are the problems associated with mining coal?

**Ans.** .....  
 .....  
 .....

3. (a) What is coal? (b) Where is coal found?

**Ans.** .....  
 .....  
 .....

4. (a) Which is the most common source of energy?  
(b) When an oil well is drilled through rocks what comes out first?

**Ans.** .....  
.....  
.....

5. What is coke? Write its uses?

**Ans.** .....  
.....  
.....

6. Explain two types of natural resources with example.

**Ans.** .....  
.....  
.....

7. Coal is as hard as stone and is black in colour. List few uses of coal.

**Ans.** .....  
.....  
.....

8. What is calorific value of fuel? What is its unit?

**Ans.** .....  
.....  
.....

9. What is fossil fuel? Give examples.

**Ans.** .....  
.....  
.....

**10.** Describe the four stages of coal formation.

**Ans.** .....  
.....  
.....

**11.** What is natural gas? Write its constituents and where it is found?

**Ans.** .....  
.....  
.....

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

**Ans.** .....  
.....  
.....

**13.** What is refining. Explain it in terms of petroleum refining.

**Ans.** .....  
.....  
.....

**14.** How petroleum is formed?

**Ans.** .....  
.....  
.....