

## 5. Coal and Petroleum

### I. Choose the correct option. (R)

1. The process of conversion of dead vegetation into coal is called \_\_\_\_\_.  
(a) Coalification (b) Carbonisation  
(c) Destructive distillation (d) Fractional distillation

**ans: Carbonisation**

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2. Which of the following is the main constituent of natural gas?  
(a) Lubricating oil (b) Petrol  
(c) Methane (d) LPG

**ans: Methane**

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3. Which process is used in refining petroleum?  
(a) Sedimentation (b) Fractional distillation  
(c) Destructive distillation (d) All of the above

**ans: Fractional distillation**

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4. Which one of the following is the least polluting fuel?  
(a) Kerosene (b) Petrol  
(c) Diesel (d) CNG

**ans: CNG**

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### II. Classify the following natural resources into exhaustible and inexhaustible resources. (An)

**air, coal, wind, natural gas, sunlight, petroleum, soil, oxygen, water**

Exhaustible natural resources	Inexhaustible natural resources
<b>Coal</b> <b>natural gas</b> <b>petroleum</b>	<b>air</b> <b>sunlight</b> <b>soil</b> <b>oxygen</b> <b>water</b>

**III. Name the following. (R)**

1. The petroleum product used as a solvent for dry-cleaning.

**ans: Petrol**

2. The variety of coal that has the highest percentage of carbon.

**ans: Anthracite**

3. An alternative source of energy

**ans: Solar energy, Wind energy, Hydro energy**

**(answer may vary, accept all correct answers)**

**IV. In the following questions, two statements are given- one labelled Assertion (A) and the other labelled Reason (R). Read the statements carefully and choose the correct alternative (A), (B), (C) and (D) as given below. (An)**

- (A) Both A and R are true and R is the correct explanation of the assertion.  
(B) Both A and R are true but R is not the correct explanation of the assertion.  
(C) A is true but R is false.  
(D) A is false but R is true.

1. **Assertion:** Coal, petroleum and natural gas are called fossil fuels.

**Reason:** Coal, petroleum and natural gas are exhaustible resources.

**ans: (A) Both A and R are true but R is not the correct explanation of the assertion.**

2. **Assertion:** LPG is a more efficient fuel than coal.

**Reason:** It causes less pollution.

**ans: (B) Both A and R are true but R is not the correct explanation of the assertion.**

**V. Answer the following questions in brief. (R, U)**

1. What steps does the PCRA recommend to save petrol and diesel while driving?

- ans:
- Drive at a constant and moderate speed
  - Switch off the car engine at signals
  - Regularly service your vehicles for maximum fuel efficiency.
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2. How does the excessive use of fossil fuels result in acid rain?

- ans:
- Oxides of sulphur and nitrogen are released into the atmosphere during the burning of fossil fuels.
  - These oxides in the presence of sunlight and moisture form sulphuric acid and nitric acid, respectively.
  - These acids fall to the Earth's surface along with rain water as acid rain.
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**VI. Give reasons for the following statements. (An)**

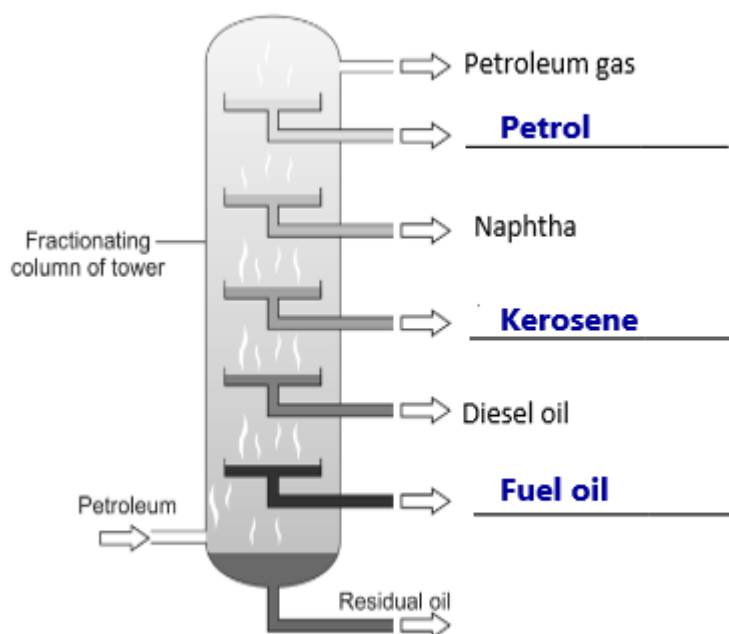
1. Burning of fossil fuels leads to global warming.

- ans: Burning of fossil fuels increases the concentration of greenhouse gases such as carbon dioxide in the atmosphere. Carbon dioxide and other greenhouse gases absorb the Sun's heat and prevent it from escaping out. This increases the temperature of the Earth's surface. This effect of the greenhouse gases is known as greenhouse effect. The greenhouse effect is leading to global warming.
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2. We should increase the use of CFL bulbs and tubes.

- ans: We should increase the use of CFL bulbs and tubes as they consume less energy.

**VII.** Given below is the diagram of refining of petroleum in a fractionating tower. Label the parts indicated. **(R)**



**VIII. Answer the following questions:**

1. What will happen if all the coal and petroleum reserves are depleted? **(Ap)**

**ans: If all the coal and petroleum reserves are depleted, we will not have fuels for our vehicles and homes as they take a very long time to replenish.**

2. What steps can be taken to prevent the depletion of coal and petroleum? **(Ap)**

**ans: We can prevent the depletion of coal and petroleum in the following ways:**

1. **Use alternative fuels**
2. **Use public transport and bicycles for short distances.**

**IX. Complete the crossword with the help of the given clues. (Ap)**

