

Class: 8	Topic: Worksheets based on ➤ Coal & Petroleum
Subject: SCIENCE	➤ Combustion and Flame ➤ Conservation of Plants and Animals

## COAL & PETROLEUM

### MULTIPLE CHOICE QUESTIONS-

- Which of the following is formed by the process of destructive distillation of coal?
  - Petrol
  - Kerosene
  - Coal tar
  - Diesel
- What do we call the process of converting dead vegetation into coal?
  - Carbonisation
  - Destructive Distillation
  - Fractional Distillation
  - Liquefaction
- Petroleum is also known as:
  - Coke
  - Black gold
  - Coal tar
  - None of these
- Which of the following is a pair of exhaustible natural resource?
  - Coal and soil
  - Air and sunlight
  - Water and petroleum
  - Wildlife and minerals
- Naphthalene balls are obtained from coal tar and are used as-
  - mosquito repellent
  - honeybee repellent
  - moth repellent
  - snake repellent
- What is the underlying principle based on which fractional distillation is carried out?
  - Different densities of each compound.
  - Different molecular weights of each compound.
  - Different boiling points of each compound.
  - Different melting points of each compound.
- PCRA stands for-
  - Pollution control research association
  - Petroleum Conservation Research Association

- c) Petroleum control research association
- d) Petrol, coal reserve association

8. The major constituent of natural gas is-

- a) Butane
- b) Methane
- c) Hydrogen
- d) Ethane

9. Assertion (A): Coal, Petroleum and Natural gas are called fossil fuels.

Reason (R): Coal, Petroleum and Natural gas are formed by dead remains of living organisms.

Choose the correct option.

- a) A and R are correct and R is the correct explanation of A.
- b) A and R are correct and R is not the correct explanation of A.
- c) A is correct and R is wrong.
- d) A is wrong and R is correct.

10. Consider the following statements regarding fossil fuels.

I. Fossil fuels are the dead remains of living organisms that have been buried for a long time.

II. Excessive use of fossil fuels causes global warming and a depletion of natural resources.

III. Earthquakes occur as a result of burning fossil fuels.

Among the given statements,

- a) Only statement I is true.
- b) Only statement III is true.
- c) Statements I and II are true.
- d) Statements II and III are true.

### FILL IN THE BLANKS.

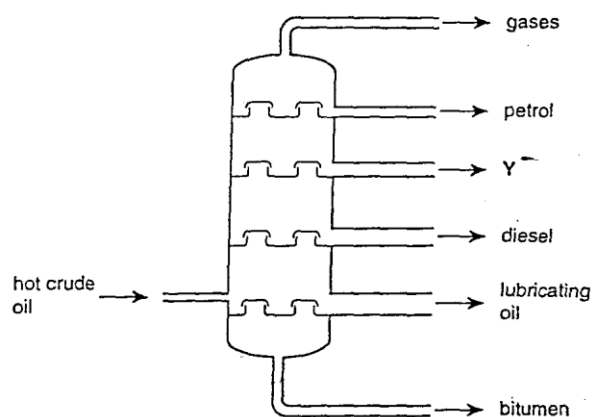
- (a) Coal is one of the....., used to cook food.
- (b) When heated in air, coal burns and produces mainly ..... gas.
- (c) Coal tar is a black, thick.....with an .....smell.
- (d) Petroleum,.....and..... are fossil fuels.
- (e) Forests and coal are ..... natural resources.
- (f) About 300 million years 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.

**MATCH THE ITEMS GIVEN IN COLUMN I WITH THE ITEMS OF COLUMN II.**

Column I	Column II
(a) Used for road surfacing	(i) Black gold
(b) Natural gas	(ii) Vaseline and candles
(c) Petroleum	(iii) Bitumen
(d) Paraffin wax	(iv) CNG

**SUBJECTIVE QUESTIONS**

- While driving what are the tips, we must follow to save petrol/ diesel/natural gas?
- Write some important uses of the various constituents of petroleum.
- Describe the harmful effects of using fossil fuels?
- Why petrol is exhaustible natural resource, whereas sunlight is not? Explain.
- Observe the diagram & answer the questions given below.



- Identify the product Y.
  - Write 2 uses of Y.
  - At what temperature this product Y is vaporized?
  - How CNG is a good fuel than petrol & diesel?
- The material X is a fossil fuel. It is formed from the buried large land plants by a very slow process Y. When X is heated in the absence of air, i.e in the process called Z, it gives three products A, B, & C. A is used as a reducing agent in the extraction of metals, B is used as an industrial fuel, whereas the product C has been traditionally used for metaling the roads. It is now

replaced by a petroleum product, bitumen.

➤ Now give the answer of the following questions.

- a) What is the material X?
- b) What is the physical state & colour of X?
- c) Name the processes Y & Z.
- d) What are the products A, B & C?

## COMBUSTION & FLAME

### FILL IN THE BLANKS:

- a. The burning of a substance in the presence of oxygen is called \_\_\_\_\_.
- b. Substances that don't catch fire in the presence of oxygen are called \_\_\_\_\_.
- c. The minimum temperature required by any substance to catch fire or burn is called \_\_\_\_\_.
- d. The flame of Bunsen burner becomes blue due to the \_\_\_\_\_ supply of \_\_\_\_\_.

### CHOOSE THE CORRECT OPTION:

1. In non-luminous zone, the wax vapours burn in the presence of \_\_\_\_\_.
  - a) Soil
  - b) Water
  - c) Air
  - d) Ice
2. Which type of fuels leave maximum residue or ash after combustion?
  - a) Solid fuels
  - b) Liquid fuels
  - c) Gaseous fuels
  - d) None of these
3. Which chemical is used in the rubbing surface provided for matchsticks?
  - a) Sulphur
  - b) Gold
  - c) Red phosphorus
  - d) White phosphorus
4. A substance which reacts with oxygen giving heat is called a combustible substance. Which one of the following is a combustible substance?
  - a) Iron nail
  - b) Glass
  - c) Stone piece
  - d) Wood
5. Which one of the following has the highest calorific value?
  - a) Kerosene
  - b) Biogas
  - c) LPG
  - d) Hydrogen

6. The calorific value of a fuel is expressed in a unit called \_\_\_\_\_.

- a) kilojoule per litre
- b) kilogram per millilitre
- c) kilojoule per gram
- d) kilojoule per kilogram

7. The ignition temperatures of four substances P, Q, R and S are  $125^{\circ}\text{C}$ ,  $270^{\circ}\text{C}$ ,  $155^{\circ}\text{C}$  and  $310^{\circ}\text{C}$  respectively. Which of the following pairs of substances catches fire at  $250^{\circ}\text{C}$  ?

- a) Q and S
- b) P and R
- c) R and S
- d) P and Q

8. The given table lists some of the fuels along with their calorific values and ignition temperatures.

Fuel	Calorific value (KJ/g)	Ignition temperature ( $^{\circ}\text{C}$ )
P	100	5
Q	80	50
R	30	60
S	20	70

Which of the following fuel is an ideal fuel?

- a) P
- b) Q
- c) R
- d) S

9. The ignition temperature of sodium is very \_\_\_\_\_ i \_\_\_\_\_.

To prevent its \_\_\_\_\_ ii \_\_\_\_\_ combustion, it is stored under \_\_\_\_\_ iii \_\_\_\_\_.

Choose the correct option which completes the given statements?

- a) i-low, ii-rapid, iii-Kerosene
- b) i-low, ii-spontaneous, iii-Kerosene
- c) i-high, ii-rapid, iii- water
- d) i-high, ii-spontaneous, iii-water

10. What is produced when charcoal is burnt in a closed room?

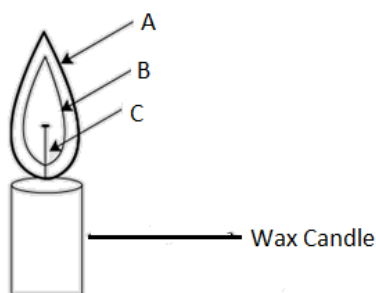
- a) Carbon dioxide
- b) Nitrogen Dioxide

- c) Carbon Monoxide
- d) All of These

11. The head of a matchstick contains a mixture of antimony trisulphide, potassium chlorate, starch and some glue. For combustion, it is struck against a rough surface made of powdered glass and red phosphorus. Which of the following substances will be the first to get ignited when the match is struck against a rough surface ?

- a) Antimony trisulphide
- b) Potassium chlorate
- c) Red phosphorus
- d) Powdered glass

Observe the diagram & answer the questions given below.



- A) Label the parts A, B & C.
- B) Which zone is the non –luminous zone of the candle flame?
- C) Which zone has the lowest temperature?

**MATCH THE ITEMS OF COLUMN A WITH COLUMN B.**

Column A	Column B
(a) Oxides of sulphur and nitrogen	(i) Fire extinguisher
(b) CNG	(ii) Incomplete combustion of coal
(c) Oxygen	(iii) Very low ignition temperature
(d) Inflammable substance	(iv) Acid rain

(e) Carbon dioxide	(v) Necessary for combustion
(f) Carbon monoxide	(vi) Fuel for automobiles

### SUBJECTIVE QUESTIONS

- Give two examples each for a solid, liquid and gaseous fuel with their uses.
- Write a short note about soda-fire extinguisher. Support your answer with a well labeled diagram.
- What do you understand by rapid & spontaneous combustion?
- People usually keep Angethi/burning coal in their closed rooms during winter season. Why is it advised to keep the door open?
- 60 kg of fuel was completely burnt for an experiment. The amount of heat energy was found to be 1,80,000 kJ. Calculate the calorific value of the fuel.

### REWRITE THE STATEMENTS CORRECTLY-

- Burning of fossil fuels release eco-friendly gases in the atmosphere.
- Crude oil is found in the same form of petrol.
- The outermost zone of a flame is the least hot zone.
- Combustion of fuels releases oxygen in the air.
- . CNG means 'Connecting Neutral Gas'.
- Water is a bad conductor of electricity.

### CONSERVATION OF PLANTS AND ANIMALS

#### MCQs

- Fauna of a particular region is:
  - Plants found in a particular region
  - Animals found in a particular region
  - Water bodies of a region
  - Both (a) and (b)
- Some species become endangered because:
  - They are at the risk of extinction.
  - They are found exclusively in a particular area.
  - Their population has reduced very much.
  - Both (a) and (b)
- Species of plants and animals which are found exclusively in a particular area are known as:

- a) Endangered species
- b) Extinct species
- c) Endemic species
- d) None of the above

4. Which of the following group indicates flora of a region?

- a) Wild mango, Cheetal, Teak, Jamun
- b) Chinkara, Pine, Teak, Wild Mango
- c) Teak, Pine, Jamun, wild mango
- d) Chinkara, Cheetal, Pine, Jamun

5. In which of the following year wildlife protection act was passed?

- a) 1972
- b) 1970
- c) 1982
- d) 1990

6. Which one of the following statements is correct?

Statement 1: People living in wildlife sanctuaries are allowed to do certain activities such as grazing by their livestock, collecting medicinal plants, firewood, etc.

Statement 2: In a wildlife sanctuary killing and capturing of wild animals is strictly prohibited.

- a) Statement 1
- b) Statement 2
- c) Both statements are correct
- d) Both statements are incorrect

7. Which one of the following statements is correct?

Statement 1: The exploitation of natural resources in a national park is strictly prohibited.

Statement 2: The human activities such as mining, hunting and fishing are allowed inside a national park.

- a) Statement 1
- b) Statement 2
- c) Both statements are correct
- d) Both statements are incorrect

Note for Question no. 8 to 10: The questions below consist of an Assertion and a Reason. Use the following key to choose the appropriate answer.

- a) If both assertion and reason are correct and reason is correct explanation of the assertion.
- b) If both assertion and reason are correct, but the reason is not the correct explanation of the assertion.
- c) If assertion is correct, but reason is incorrect.



d) If assertion is incorrect, but reason is correct.

8. Assertion: Cheetah, Gaur lion and sloth bear are vulnerable species.  
Reason: Vulnerable species are on high risk of extinction.
9. Assertion: Periodic movement of birds from the place of living to a new area and its subsequent return journey back to original place is called migration.  
Reason: Birds migrate because they do not get favorable place to breed.
10. Assertion: The process of restoring and recreating area of forest is called afforestation.  
Reason: Restoring Forests causes soil erosion.

### FILL IN THE BLANKS

- \_\_\_\_\_ is an endemic flora of the Pachmarhi Biosphere Reserve.
- \_\_\_\_\_ is a group of population which are capable of interbreeding.
- \_\_\_\_\_ is a source book which keeps records of all the endangered plants and animals.
  
- \_\_\_\_\_ is the first Reserve Forest of India.
- \_\_\_\_\_ was launched by the government to protect the tigers in India.
- \_\_\_\_\_ are the areas meant for conservation of biodiversity.
- Kaziranga is a \_\_\_\_\_.
- Satpura National Park is a part of \_\_\_\_\_ Biosphere Reserve.
- Corbett National Park is located at \_\_\_\_\_.
- \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ are names given to the areas meant for conservation and preservation of forest and wild animals.

### UNSCRAMBLE THE FOLLOWING WORDS

S. No	Jumbled word
(a)	OAPINGHC
(b)	UFANA
(c)	LORAF
(d)	SIONERO
(e)	ENMICDE

### ANSWER THE FOLLOWING QUESTIONS

- Is deforestation associated with global warming? Explain.
- Sometime, animals enter into human habitation, killing people and causing damage to materials. Why do the animals behave like this?

3. What are migratory birds? Give some examples and explain the reason for animal migration.

4. What is biological diversity?

5. Read the passage and answer the questions given below.

A great variety of plants and animals exist on earth. They are essential for the well-being and survival of mankind. To preserve biodiversity, to prevent extinction of endangered species, and to maintain ecological balance in nature, wildlife and forests should be conserved. Habitat is a place in environment where an organism lives. Today, a major threat to survival of these organisms is deforestation. We know that deforestation means clearing of forests and using that land for other purposes. Trees in the forest are cut for many purposes. Some natural causes of deforestation are forest fires and severe droughts. The answer to deforestation is reforestation.

Reforestation is restocking of the destroyed forests by planting new trees. The planted trees should generally be of the same species which were found in that forest. We should plant at least as many trees as we cut. Reforestation can take place naturally also.

- I. A place in environment where an organism lives is \_\_\_\_
- a. Home
  - b. Resort
  - c. Habitat
  - d. Reservoir

- II. Wildlife and forests should be conserved:
- a) To preserve biodiversity.
  - b) To prevent extinction of endangered species.
  - c) Maintain ecological balance in nature.
  - d) All of the above.

- III. Deforestation takes place by:
- a. Human activities
  - b. By natural calamities
  - c. Both a and b
  - d. None of these

- IV. Restocking of the destroyed forests by planting new trees is called:
- a. Deforestation
  - b. Afforestation
  - c. Reforestation
  - d. None of these



