

CLASS VIII – SCIENCE – CHAPTER 05

COAL AND PETROLEUM

Name:

Date:

01. A solid fuel formed by heating coal in the absence of air: -
(a). hydrogen (b). coke (c). methane (d). coal tar
02. Fossil fuels does not include: -
(a). coal (b). petroleum (c). biogas (d). natural gas
03. For generation of electricity in thermal power plants we need: -
(a). coal (b). petroleum (c). natural gas (d). biogas
04. Coal is a mixture of substances containing: -
(a). carbon (b). hydrogen (c). oxygen (d). all the above
05. The gas evolved when coal is heated in the absence of air: -
(a). coal gas (b). biogas (c). natural gas (d). noble gas
06. Which variety of coal is the highest in percentage of carbon?
(a). bituminous coal (b). lignite (c). anthracite (d). all contain equal
07. Coal – Volatile impurities and moisture =?
(a). coal gas (b). coal tar (c). CNG (d). coke
08. The oil which is used as a fuel for jet aeroplanes is: -
(a). crude oil (b). kerosene (c). diesel (d). Lubricating oil
09. A renewable resource that has become exhaustible due to faster use is: -
(a). air (b). sunlight (c). soil (d). groundwater
10. Non-renewable resource that can be recycled are: -
(a). Coal (b). Petroleum (c). Metals (d). Natural gas
11. The alternative source of energy in place of fossil fuels is/are: -
(a). wind (b). Biogas (c). sunlight (d). all the above
12. Natural gas is used for manufacturing: -
(a). carbon black (b). coke (c). anthracite (d). coal gas
13. All are common varieties of coal except: -
(a). peat (b). hematite (c). lignite (d). anthracite
14. Other name used for petroleum is/are:
(a). crude oil (b). black gold (c). rock oil (d). all the above
15. Petroleum is generally found accompanied by the:
(a). biogas (b). coal gas (c). natural gas (d). noble gas
16. The constituent of petroleum used as solvent for dry cleaning is:
(a). petrol (b). diesel (c). paraffin (d). kerosene
17. The fraction of petroleum used as fuel for stoves and lamps is:
(a). kerosene (b). LPG (c). diesel (d). both a & b

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18. A fuel which doesn't cause any pollution on burning is:
(a). coal (b). natural gas (c). diesel (d). petrol
19. Petroleum is separated into useful products by:
(a). fractional distillation (b). destructive distillation
(c). both a & b (d). filtration
20. Destructive distillation will not produce:
(a). coke (b). coal tar (c). coal gas (d). natural gas

Q01. Match the following:

- | | |
|-------------------------------|---|
| A.) Petroleum fraction | Uses |
| (a). Paraffin wax | i) domestic fuel |
| (b). Diesel | ii) making candles |
| (c). Kerosene | iii) making roads |
| (d). Petroleum gas | iv) stove fuel |
| (e). Bitumen | v) automobile fuel |
| B.) Products | Uses |
| (a). Coal tar | i) non-polluting automobile fuel |
| (b). CNG | ii) an industrial fuel |
| (c). LPG | iii) in metal extraction process |
| (d). Coal gas | iv) fuel for home |
| (e). Coke | v) making naphthalene balls |
| C.) Match the columns: | |
| (a). Crude oil | i) $H_2 + CO$ |
| (b). Producer gas | ii) coal |
| (c). Water gas | iii) cattle dung |
| (d). Fossil fuel | iv) black gold |
| (e). Biogas | v) $N_2 + CO$ |
| D.) Match the column: | |
| (a). Coke | i) methane rich gas |
| (b). Coal tar | ii) product of heating coal in absence of air |
| (c). Natural gas | iii) solid fuel |
| (d). Coal gas | iv) oil which serves as fuel |
| (e). Petroleum | v) thick black liquid |
| E.) Match the column: | |
| (a). Carbonisation | i) hard coal |
| (b). Lignite | ii) conversion of wood to carbon |
| (c). Anthracite | iii) solution of NH_3 in water |
| (d). Peat | iv) soft coal |
| (e). Ammoniacal liquor | v) inferior quality coal |

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Q02. Fill in the blanks:

- (a). All such substances which are used by human beings for their survival and welfare are called ____.
- (b). Petroleum is a _____ and _____ resource.
- (c). _____ resources are present in unlimited amount in nature and can be continually replenished.
- (d). A _____ is a substance that can be used to produce heat at a reasonable cost.
- (e). A _____ fuel is obtained from the remains of plants and animals that died millions of years ago.
- (f). Soil is an _____ natural resource.
- (g). Fossil fuels are valuable sources of _____.
- (h). Save electricity to save _____.
- (i). When coal is heated in the _____ of air, many useful products are formed.
- (j). When coal is burnt in the _____ of oxygen, lot of smoke and harmful gases are formed.
- (k). Useful substances obtained from petroleum and natural gas are called _____.
- (l). The constituent of petroleum added to produce Vaseline is _____.
- (m). The wise and judicious use of the fossil fuels is called _____ of fossil fuels.
- (n). Process of conversion of wood to carbon is called _____.
- (o). Process of separating the fractions of petroleum by fractional distillation is called _____ of petroleum.

Q03. State whether the following statements are true or false:

- (a). The percentage of carbon is more in coke than in coal.
- (b). Petroleum is soluble in water.
- (c). Petroleum is an exhaustible or non-renewable energy source.
- (d). Ammoniacal liquor is formed by solution of ammonia in oil.
- (e). Natural gas is a domestic and industrial fuel with high calorific value.
- (f). Oxygen is a non-renewable resource.
- (g). Natural gas is found along with petroleum in reservoirs under the ground.
- (h). Natural gas is chiefly made up of methane.
- (i). CNG is used as a domestic fuel.
- (j). Biogas is very costly and inconvenient fuel for rural areas.

Q04. Define carbonization?

Q05. How burning of coal can create serious global problems?

Q06. What can be potential effect of petroleum products on environment?

Q07. Where and how is petroleum separated into usable products?

Q08. Which one is a better fuel coal or coke? Give reason.

Q09. Describe the process through which petroleum is formed?

Q10. What are petrochemicals? Explain.

Q11. What is meant by destructive distillation of coal?

Q12. Why do we need to conserve resources?

Q13. What is anaerobic thermal degradation of wood? What is its importance?

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Q14. Classify the following resources as

(a). natural or man- made: petroleum, bleach, coal, steel, wind, alloys, water.

(b). living and non-living natural resources: plants, water, animals, microbes, soil, minerals.

(c). exhaustible and inexhaustible natural resources: wind, petroleum, coal, natural gas, sunlight, forests, water, minerals.

Q15. Pick the odd word out of the following:

LPG/CNG/Diesel/Petrol/Kerosene/Paraffin/Lubricating oil

Q16. Put the following statements in correct sequence: In a petroleum refinery -

(a). vapour rises and hydrocarbons with lower boiling points condense at different heights.

(b). hydrocarbons get separated in the fractionizing tower to form the different fractions.

(c). Crude oil is heated to 400°C in furnace.

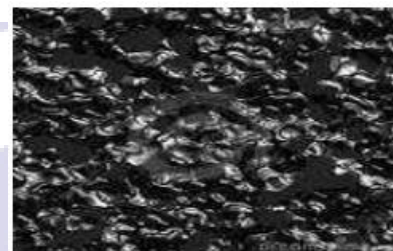
(d). hydrocarbons with highest boiling points condense first.

(e). they get collected near base of furnace.

Q17. Name the black liquid shown in the following picture?



Q20. Name this destructive distillation product of coal you are viewing in the picture?



Q21. Name the variety of coal shown in the picture at right?



Q22. Name the variety of coal shown in the picture below?

