

Chapter 9: Carbon and Its Compounds

Worksheet 1

1. Write T for true and F for false statement.

- (i) Allotropy is the self-linking property of carbon atoms to form long chains.
- (ii) Compounds having only carbon and hydrogen in them are called hydrocarbons.
- (iii) Carbon has six crystalline allotropes.
- (iv) Graphite is used as a pencil lead.
- (v) Charcoal is a pure form of carbon.

2. Fill in the blanks.

- (i) Sugar charcoal acts as a _____ agent.
- (ii) The CGS unit of calorific value of fuel is _____.
- (iii) Substances that do not burn or catch fire are called _____ substances.
- (iv) Charcoal is a _____ fuel.
- (v) _____ is the simplest hydrocarbon.

3. Define the following.

- (i) Allotropy
- (ii) Catenation
- (iii) Destructive distillation
- (iv) Combustion
- (v) Calorific value

4. Answer the following questions.

- (i) By which symbol is diamond represented?
- (ii) What happens when coal is heated in the absence of oxygen?
- (iii) Which gas is indicated by $\text{CO} + \text{N}_2$?
- (iv) Write the molecular formula of sugar.
- (v) What is formed by burning carbon in insufficient supply of oxygen?

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Worksheet 2

1. Write T for true and F for false statement.

- (i) Carbon occurs only in the combined state.
- (ii) Diamond is a nonconductor of electricity.
- (iii) Sugar charcoal is the purest form of amorphous carbon.
- (iv) Lamp black is a hard and black coloured solid.
- (v) The ignition temperature of a good fuel is below the room temperature.

2. Match the columns.

Column A

- (i) Coke
- (ii) Petroleum
- (iii) Soda water
- (iv) Allotrope of carbon
- (v) LPG

Column B

- (a) Gaseous fuel
- (b) Carbon dioxide
- (c) Fullerene
- (d) Solid fuel
- (e) Liquid fuel

3. Fill in the blanks.

- (i) Carbon dioxide gas has a _____ taste.
- (ii) Coal and charcoal are _____ forms of carbon.
- (iii) Diamond has very _____ melting point.
- (iv) Hydrocarbons consist of carbon and _____.
- (v) _____ marks the paper black.

4. Answer the following questions.

- (i) List two uses of graphite.
- (ii) What are the characteristics of a good fuel?
- (iii) Why is carbon dioxide used to extinguish fire?
- (iv) What is the substance that can burn in the presence of air to give out heat energy called?
- (v) Name one combustible substance.