

## Carbon and its Compounds - Class X - Paper Set 2

1. What is the term for compounds with the same molecular formula but different structures?
  - a) Isotopes
  - b) Isomers
  - c) Ions
  - d) Radicals
2. What is the main constituent of natural gas?
  - a) Methane
  - b) Ethane
  - c) Propane
  - d) Butane
3. Which element exhibits the property of catenation to the greatest extent?
  - a) Silicon
  - b) Carbon
  - c) Nitrogen
  - d) Phosphorus
4. Which type of hydrocarbon contains only single bonds between carbon atoms?
  - a) Alkenes
  - b) Alkynes
  - c) Alkanes
  - d) Arenes
5. What is the molecular formula of ethene?
  - a)  $C_2H_2$
  - b)  $C_2H_4$
  - c)  $C_3H_6$
  - d)  $C_2H_6$
6. Which functional group is present in aldehydes?
  - a)  $-COOH$
  - b)  $-OH$
  - c)  $-CHO$
  - d)  $-CO$
7. In the presence of which catalyst are vegetable oils hydrogenated?
  - a) Copper
  - b) Iron
  - c) Nickel
  - d) Platinum

8. Which carbon compound is a major component of biogas?
- a) Methane
  - b) Ethanol
  - c) Ethanoic acid
  - d) Propane
9. What is the main product formed when ethanol is oxidized with alkaline potassium permanganate?
- a) Methane
  - b) Ethanoic acid
  - c) Carbon dioxide
  - d) Water
10. The unique ability of carbon to form chains is called:
- a) Catalysis
  - b) Catenation
  - c) Hydration
  - d) Sublimation

**Answers:**

1. b) Isomers
2. a) Methane
3. b) Carbon
4. c) Alkanes
5. b) C<sub>2</sub>H<sub>4</sub>
6. c) –CHO
7. c) Nickel
8. a) Methane
9. b) Ethanoic acid
10. b) Catenation