

Practice test
Chapter: 4th
Carbon and compounds

- Q1:** Butanone is a four-carbon compound with the functional group
(a) carboxylic acid.
(b) aldehyde.
(c) ketone.
(d) alcohol.
- Q2:** The functional group present in propenal is:
(a) OH
(b) -CHO
(c) -COOH
(d) $\text{-C} = \text{O}$
- Q3:** I.U.P.A.C. name of acetaldehyde is:
(a) Ethanol
(b) Ethanal
(c) Methanol
(d) Methanal
- Q4:** Butanone is a four-carbon compound with the functional group:
(a) carboxylic acid
(b) aldehyde
(c) ketone
(d) alcohol
- Q5:** **Assertion (A):** The action of soaps and detergents is based on the presence of both hydrophobic and hydrophilic groups in the molecule and this helps to emulsify the oily dirt and hence its removal.
Reason (R): The cleansing action of detergent is better than soap.
- Q6:** **Assertion (A):** Covalent bonds are formed by the sharing of electrons between two atoms so that both can achieve a completely filled outermost Shell.
Reason (R): Carbon forms covalent bonds with itself and other elements such as hydrogen, oxygen, sulphur, nitrogen and chlorine.

Q7: Draw the electron dot structures for
(a) ethanoic acid.
(b) H_2S .
(c) propanone.

Q8: Explain the formation of scum when hard water is treated with soap.

Q9: What is a homologous series? Explain with an example.

Q10: Explain the nature of the covalent bond using the bond formation in CH_3Cl .

Q11: How would you distinguish experimentally between an alcohol and a carboxylic acid?

Q12: Why is the conversion of ethanol to ethanoic acid an oxidation reaction?

Q13: How many structural isomers can you draw for pentane?

Q14: A compound 'X' on heating with excess conc. sulphuric acid at 443 K gives an unsaturated compound 'Y', 'X' also reacts with sodium metal to evolve a colorless gas 'Z'. Identify 'X', 'Y' and 'Z'. Write the equation of the chemical reaction of formation of 'Y' and also write the role of sulphuric acid in the reaction.

Q15: Give a test that can be used to differentiate between saturated and unsaturated hydrocarbons.