Chapter-4

Worksheet-1

Q.1. A molecule of ammonia (NH_3) has

(a) Only single bonds
(b) Only double bonds
(c) Only triple bonds
(d) Two double bonds and one single bond

Q.2. Oils on treating with hydrogen in the presence of palladium or nickel catalyst form fats. This is an example of

(a) Addition reaction
(b) Substitution reaction
(c) Displacement reaction
(d) Oxidation reaction

Q.3. n which of the following compounds, $-OH$ is the functional group?

(a) Butanone
(b) Butanol
(c) Butanoic acid
(d) Butanal

Q.4. Identify the unsaturated compounds from the following

(i) Propane
(ii) Propene
(iii) Propyne
(iv) Chloropropane

(a) (i) and (ii)
(b) (ii) and (iv)
(c) (iii) and (iv)
(d) (ii) and (iii)

Q.5. Chlorine reacts with saturated hydrocarbons at room temperature in the

(a) Absence of sunlight
(b) Presence of sunlight
(c) Presence of water
(d) Presence of hydrochloric acid

Q.6. The fifth member of alcohol homologous series is

(a) Pentanal

(b) Pentanol

(c) Pentanone

(d) Propanol

Q.7. The property of carbon atom by virtue of which it forms bond with other carbon atoms is called

(a) Chemical bonding

(b) Polymerisation

(c) Catenation

(d) Carbonisation

Q.8. $CH_3 - CH_2 - OH \xrightarrow[Heat]{Alkaline\ KMnO_4} CH_3 - COOH$

In the above given reaction, alkaline KMnO4 acts as

(a) reducing agent

(b) oxidising agent

(c) catalyst

(d) dehydrating agent

Q.9. Carbon exists in the atmosphere in the form of

(a) carbon monoxide only.

(b) carbon monoxide in traces and carbon dioxide.

(c) carbon dioxide only.

(d) coal.

Q.10. Vinegar is a solution of

(a) 50% - 60% acetic acid in alcohol

(b) 5% - 8% acetic acid in alcohol

(c) 5% - 8%/ acetic acid in water

(d) 50% - 60% acetic acid in water

Q.11. Write the number of covalent bonds in the molecule of propane, C_3H_8.

Q.12. Which element exhibits the property of catenation to maximum extent and why?

Q.13. Give the names of the functional groups:

(i) $-OH$

(ii) $-\overset{|}{C} = 0$

Q.14. Write the molecular formula of (i) Methane and (ii) Ethanol.

Q.15. In an organic compound, which parts largely determine its physical and chemical properties?

Q.16. Why is pure ethanoic acid called glacial ethanoic acid (or glacial acetic acid)?

Q.17. What is vinegar?

Q.18. Which of the following are alkenes?

$CH_4, C_2H_6, C_2H_4, C_3H_6$ *and* C_3H_8.

Q.19. A test tube contains a brown coloured liquid. The colour of the liquid in test tube remains unchanged when methane is passed through it, but disappears when ethene is passed. Which element is present in the liquid?

Q.20. Write the name and formula of the 2nd member of homologous series having general formula C_nH_{2n-2}