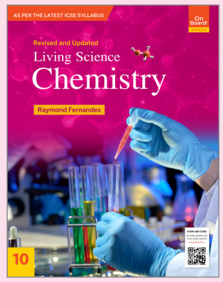
ICSE Living Science CHEMISTRY

Class 10



Multiple-Choice Questions

CHAPTER 13: ORGANIC CHEMISTRY–II

1. Lower alkanes are found naturally in association with ..... and .....
   (a) coal, petroleum.
   (b) natural gas, petroleum.
   (c) coal, natural gas.
   (d) coal, kerosene.
   Ans: a

2. ..... is the main constituent of the marsh gas.
   (a) Ethane
   (b) Ethanoic acid
   (c) Ether
   (d) Methane
   Ans: d

3. Alkanes are prepared by the ..... of acid salts.
   (a) halogenation
   (b) carboxylation
   (c) decarboxylation
   (d) hydrogenation
   Ans: c

4. Methane gas is collected by the downward displacement of water as it is
   (a) soluble in water and lighter than air.
   (b) insoluble in water and heavier than air.
   (c) soluble in water and heavier than air.
   (d) insoluble in water and lighter than air.
   Ans: d

5. The reaction between sodium propionate and sodalime is described as decarboxylation because the ..... group in sodium acetate is replaced by a ..... atom.
   (a) carboxyl, hydrogen
   (b) alkane, hydrogen
   (c) aldehyde, carbon
   (d) ketone, oxygen
   Ans: a

6. When an alkyl halide is treated with metallic sodium in the presence of dry ether, an alkane with double the number of carbon atoms present in the alkyl group is formed. This reaction is called ..... reaction.
   (a) Wartz
   (b) halogenation
   (c) Wurtz
   (d) carboxylation
   Ans: c

7. Decomposition of a compound by the application of heat is called .....
   (a) hydrolysis.
   (b) pyrolysis.
   (c) dehydration.
   (d) hydrogenation.
   Ans: b

8. Alkanes undergo complete combustion in air to form ..... and .....
   (a) carbon dioxide, water vapour.
   (b) carbon, hydrogen.
   (c) carbon monoxide, water.
   (d) carbon monoxide, hydrogen.
   Ans: a

9. All saturated hydrocarbons undergo ..... reactions.
   (a) addition
   (b) combination
   (c) substitution
   (d) hydrogenation
   Ans: c

10. Methane cannot be used to make .....
   (a) hydrogen.
   (b) carbon tetrachloride.
   (c) acetylene.
   (d) carbon monoxide.
   Ans: d

11. ..... and ..... are two examples of greenhouse gases.
   (a) Hydrogen, methane
   (b) Carbon dioxide, methane
   (c) Carbon dioxide, nitrogen
   (d) Hydrogen, nitrogen
   Ans: b

12. Alkenes are prepared by the ..... of ethyl alcohol.
   (a) dehydration
   (b) dehydrogenation
   (c) addition
   (d) halogenation
   Ans: a

13. Ethene is collected by downward displacement of water as it is a/an ..... gas and ..... in water.
   (a) flammable, soluble
   (b) flammable, insoluble
   (c) inflammable, insoluble
   (d) inflammable, soluble
   Ans: c

14. Ethene reacts with concentrated sulphuric acid to form .....
   (a) methyl hydrogensulphate.
   (b) ethyl hydrosulphate.
   (c) ethyl sulphate.
   (d) ethyl hydrogensulphate.
   Ans: d

15. ..... solution is called Baeyer's reagent.
   (a) Cold alkaline potassium permanganate
   (b) Cold acidic potassium permanganate
   (c) Cold alkaline potassium chloride
   (d) Cold acidic potassium sulphate
   Ans: a

16. Acetic acid combines with alcohols to form sweet smelling esters in the presence of dehydrating agents like anhydrous zinc chloride or concentrated sulphuric acid. This phenomenon is called .....
   (a) acetylation.
   (b) chlorination.
   (c) esterification.
   (d) dehydration.
   Ans: c

17. In dilute form, ... is used as vinegar which is used for preserving and flavouring food.
   (a) ethane
   (b) formic acid
   (c) ethyne
   (d) acetic acid
   Ans: d

18. Ethanol, on controlled oxidation in the presence of acidified potassium dichromate or finely divided copper at 300 °C, first forms ..... and then .....

(a) acetic acid, acetaldehyde.
(b) acetaldehyde, acetic acid.
(c) formic acid, acetaldehyde.
(d) acetaldehyde, formic acid.

Ans: b

19. The flame formed due to the combustion of ethyne with oxygen gives an extremely high temperature in the range of .....

(a) 100 °C.
(b) 200 °C.
(c) 300 °C.
(d) 400 °C.

Ans: c

20. Ethyne is prepared by the action of water on .....

(a) calcium chloride.
(b) calcium sulphate.
(c) calcium hydroxide.
(d) calcium carbide.

Ans: d