

SCIENCE

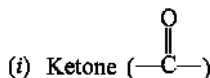
Carbon and its Compounds

VERY SHORT ANSWER TYPE QUESTIONS

4. Name the functional group present in each of the following organic compounds:

- (i) CH_3COCH_3 (ii) $\text{C}_2\text{H}_5\text{COOH}$

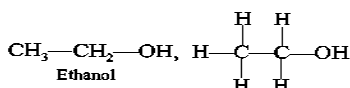
Ans:



(ii) Carboxylic acid (—COOH)

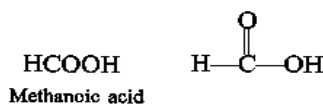
5. Write the name and formula of the second member of carbon compounds having functional group —COOH .

Ans:



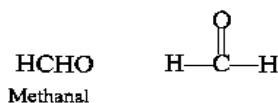
6. Write the name and formula of the first member of the carbon compounds having functional group —COOH .

Ans:



7. Write the name and formula of the first member of the carbon compounds having functional group —CHO .

Ans:



8. Write the name and formula of the 2nd member of the series of carbon compounds whose general formula is $\text{C}_n\text{H}_{2n+1}\text{OH}$.

Ans: Ethanol, $\text{C}_2\text{H}_5\text{OH}$ or $\text{CH}_3\text{CH}_2\text{OH}$

9. Write the name and formula of the 2nd member of the series of carbon compounds whose general formula is C_nH_{2n} .

Ans: C_3H_6 , $\text{H}_2\text{C}=\text{CH—CH}_3$

Propene is second member of series whose general formula is C_nH_{2n} .

10. How many covalent bonds are there in a molecule of ethane (C_2H_6)?

Ans: There are 7 covalent bonds in a molecule of ethane.

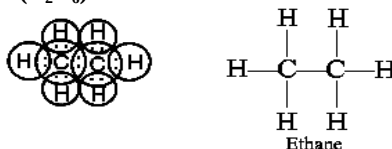
11. Write the electron dot structure of ethane molecule (C_2H_4).

Ans:



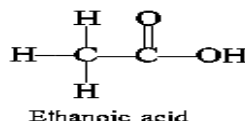
12. Write the electron dot structure of ethane molecule (C_2H_6).

Ans:



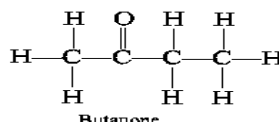
13. Draw the structure for ethanoic acid molecule, CH_3COOH .

Ans:



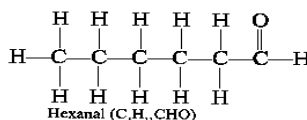
14. Draw the structure of butanone molecule, $\text{CH}_3\text{COC}_2\text{H}_5$.

Ans:



15. Draw the structure of the hexanal molecule, $\text{C}_5\text{H}_{11}\text{CHO}$.

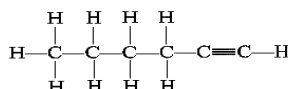
Ans:



16. Butanone is a four carbon per molecule compound. Name the functional group present in it.

Ans: Ketone

17. Name the following compound:



Ans: 1-Hexyne is IUPAC name of the compound.

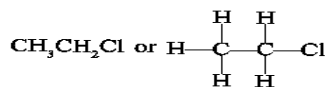
18. State two characteristic features of carbon which when put together give rise to large number of carbon compounds.

Ans: (i) Catenation

(ii) Tetravalency of carbon

19. Write the structural formula of chloroethane.

Ans:



20. Name the carbon compound which on heating with excess of concentrated sulphuric acid at 443K gives ethane.

Ans: $\text{CH}_3\text{CH}_2\text{OH}$, ethanol

