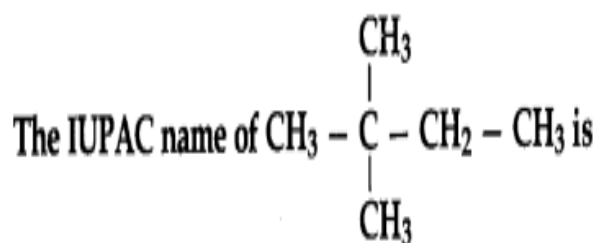


# Carbon and its Compound

1. Which of the following statements are correct for carbon compounds?
- (i) Most carbon compounds are good conductors of electricity.
  - (ii) Most carbon compounds are poor conductors of electricity.
  - (iii) Force of attraction between molecules of carbon compounds is not very strong.
  - (iv) Force of attraction between molecules of carbon compounds is very strong.
- (a) (ii) and (iv)  
(b) (ii) and (iii)  
(c) (i) and (iv)  
(d) (i) and (iii)

2.  $C_3H_8$  belongs to the homologous series of
- (a) Alkynes  
(b) Alkenes  
(c) Alkanes  
(d) Cyclo alkanes

3 .



- a) 2-ethyl-2-methyl propane  
b) 2, 2-demethyl butane  
c) 1,1,1-trimethyl propane  
d) 2, 2-methyl butane

4. Which of the following is the formula of Butanoic acid?

- (a)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{COOH}$   
(b)  $\text{COOH} - \text{CH}_2 - \text{CH}_2 - \text{CH}_2 - \text{CH}_3$   
(c)  $\begin{array}{c} \text{CH}_3 - \text{CH} - \text{CH}_2 - \text{CH}_3 \\ | \\ \text{COOH} \end{array}$   
(d)  $\text{CH}_2 - \begin{array}{c} \text{COOH} \\ | \\ \text{CH}_2 \end{array} - \text{CH}_2 - \text{COOH}$

5. Identify 'A' in the following reaction:



- (a)  $\text{CH}_3\text{COONa}$   
(b)  $\text{CH}_2(\text{Na})\text{COOH}$

- (c) NaOH
- (d)  $\text{NaHCO}_3$

6. A hydrocarbon has four carbon atoms. Give its molecular formula if it is an alkene.

- (a)  $\text{C}_4\text{H}_{10}$
- (b)  $\text{C}_4\text{H}_8$
- (c)  $\text{C}_4\text{H}_6$
- (d)  $\text{C}_4\text{H}_4$

7. In diamond, each carbon atom is bonded to four other carbon atoms to form

- (a) a hexagonal array
- (b) a rigid three-dimensional structure
- (c) a structure in the shape of a football
- (d) a structure of a ring

8. While cooking, if the bottom of the vessel is getting blackened on the outside, it means that:

- a) The food is not cooked completely
- b) The fuel is not burning completely
- c) The fuel is wet
- d) The fuel is burning completely

9. Which of the following statements about graphite and diamond is true?

- a) They have the same crystal structure
- b) They have the same degree of hardness
- c) They have the same electrical conductivity
- d) They can undergo the same chemical reactions

10. How many number of carbon atoms are joined in a spherical molecule of buckminsterfullerene?

- a) 30
- b) 60
- c) 90
- d) 120

11. Which of the followings is the major constituent of the liquefied petroleum gas?

- a) Methane
- b) Ethane
- c) Propane
- d) Butane

12. The organic compounds having functional group are known as:

- a) Aldehyde
- b) Ketone
- c) Carboxylic acids
- d) Alcohol

13. From which of the following substance pencil lead is formed?
- Charcoal
  - Wood
  - Lead
  - Graphite
14. Ester is formed by the reaction between:
- An acid and an alcohol
  - An acid and a base
  - A base and an alcohol
  - An acid and an alkene
15. What is denatured alcohol?
- Ethyl alcohol which has been made unfit for drinking purpose by adding small amount of poisonous substance
  - Methyl alcohol which has been made unfit for drinking purpose by adding small amount of poisonous substance
  - Alcohol having properties of an acid
  - Ethyl alcohol containing 60% of water by weight
16. Which of the following substance produces brisk effervescence with baking soda solution?
- Ethanoic acid
  - Table salt
  - Vinegar
  - Sunflower oil
17. The by product of soap is
- Isoprene
  - Glycerol
  - Butene
  - Ethylene glycol
18. Covalent compounds:
- Have high melting and boiling point
  - Are mostly soluble in water
  - Are formed between atoms of metals and non-metals
  - Are formed by the sharing of electrons in the bonding atoms
19. Carbon exists in the atmosphere in the form of
- Only carbon monoxide
  - Carbon monoxide in traces and carbon dioxide
  - Only carbon dioxide
  - Coal

20. Which of the following statements are usually correct for carbon compounds? These

- (a) Are good conductors of electricity.
- (b) Are poor conductors of electricity.
- (c) Have strong forces of attraction between their molecules.
- (d) Do not have strong forces of attraction between their molecules.

- A. (A) & (C)
- B. (B) & (C)
- C. (A) & (D)
- D. (B) & (D)

21. "In the given reaction, alkaline  $\text{KMnO}_4$  acts as:  $\text{CH}_3 + \text{CH}_2 + \text{OH} \rightarrow \text{Alkaline KMO}_4 + \text{Heat} \rightarrow \text{CH}_3 + \text{COOH}$ "

- a) Reducing agent
- b) Oxidising agent
- c) Catalyst
- d) Dehydrating agent

22. The soap molecule has a \_\_ Hydrophilic head and a

- a) hydrophobic tail
- b) Hydrophobic head and a hydrophilic tail
- c) Hydrophobic head and a hydrophobic tail
- d) Hydrophilic head and a hydrophilic tail

23. Complete combustion of a hydrocarbon gives

- a)  $\text{CO} + \text{H}_2\text{O}$
- b)  $\text{CO}_2 + \text{H}_2\text{O}$
- c)  $\text{CO} + \text{H}_2$
- d)  $\text{CO}_2 + \text{H}_2$

24. Buckminsterfullerene is an example of.....of carbon

- a) An isomer
- b) An isotope
- c) An allotrope
- d) A functional group

25. Which one of the given is an unsaturated hydrocarbon?

- a) Acetylene
- b) Butane
- c) Propane
- d) Decane

26. How many electrons are there in the outermost shell of carbon?

- a) 1
- b) 2
- c) 3
- d) 4

27. Functional group – COOH is present in which of the given?

- a) Carboxylic acid
- b) Alcohol
- c) Aldehyde
- d) Ketone

### **Answers**

1. b   2. c   3. b   4. d   5. a   6. b   7. b   8. b   9. d   10. b

11. d   12. c   13. d   14. a   15. a   16. a   17. b   18. d   19. c   20. d

21. b   22. a   23. b   24. c   25. a   26. d   27. a