

MCQs Chapter 4 Carbon and Its Compounds

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)

Answer: b

2. C_3H_8 belongs to the homologous series of

- (a) Alkynes
- (b) Alkenes
- (c) Alkanes
- (d) Cyclo alkanes

Answer: c

3.

The IUPAC name of $CH_3 - \begin{array}{c} CH_3 \\ | \\ C \\ | \\ CH_3 \end{array} - CH_2 - CH_3$ is

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

Answer: b

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) $\text{CH}_3-\underset{\text{COOH}}{\text{CH}}-\text{CH}_2-\text{CH}_3$
(d) $\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{COOH}$

Answer: d

5. The number of isomers of pentane is

- (a) 2
(b) 3
(c) 4
(d) 5

Answer: b

6. Which of the following will undergo addition reactions?

- (a) CH_4
(b) C_3H_8
(c) C_2H_6
(d) C_2H_4

Answer: d

7. When ethanoic acid is treated with NaHCO^{\wedge} the gas evolved is

- (a) H_2
(b) CO_2
(c) CH_4
(d) CO

Answer: b

8. Ethanol on complete oxidation gives

- (a) acetic acid/ethanoic acid
(b) CO_2 and water
(c) ethanal
(d) acetone/ethanone

Answer: b

9. Which of the following will give a pleasant smell of ester when heated with ethanol and a small quantity of sulphuric acid?

- (a) CH_3COOH
- (b) $\text{CH}_3\text{CH}_2\text{OH}$
- (c) CH_3OH
- (d) CH_3CHO

Answer: a

10. Name the functional group present in CH_3COCH_3 .

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

Answer: c

12. Addition reactions are undergone by

- (a) saturated hydrocarbons (alkanes)
- (b) only alkenes
- (c) only alkynes
- (d) both alkenes and alkynes

Answer: d

13. Identify 'A' in the following reaction:



- (a) CH_3COONa
- (b) $\text{CH}_2(\text{Na})\text{COOH}$
- (c) NaOH
- (d) NaHCO_3

Answer: a

14. Which of the following belongs to homologous series of alkynes?



- (a) C_6H_6

(b) C_2H_4

(C) C_2H_6

(d) C_3H_4

Answer: d

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

(a) C_4H_{10}

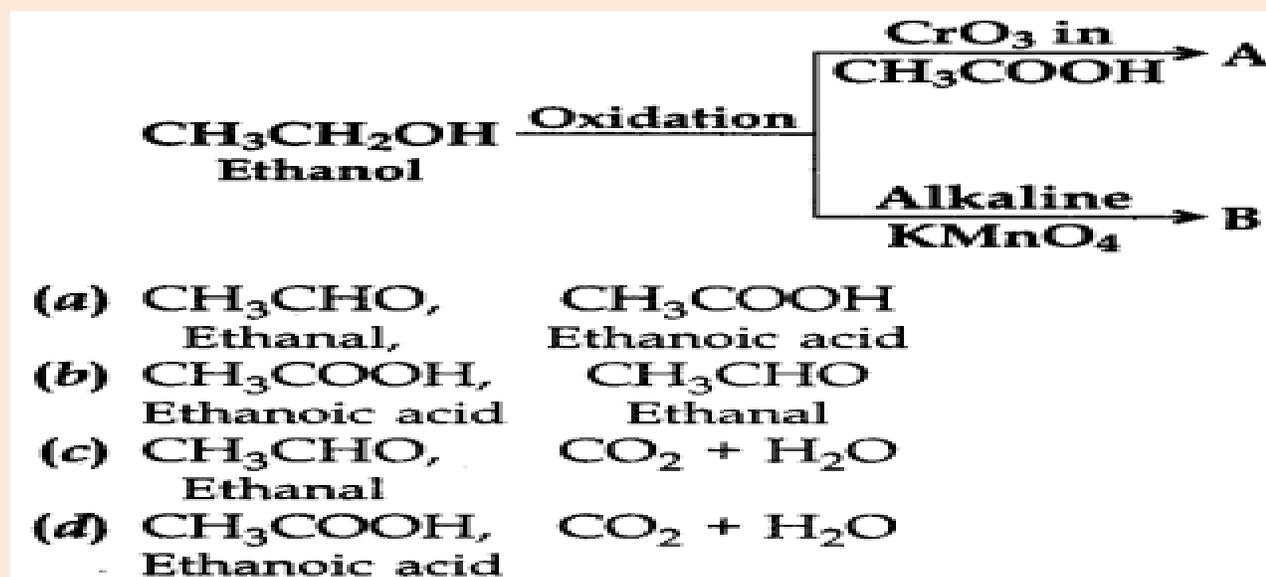
(b) C_4H_8

(C) C_4H_6

(d) C_4H_4

Answer: b

16. Identify A and B



Answer: a

17. Give the IUPAC name of $CH_3COOC_2H_5$.

(a) Ethyl ethanoic acid

(b) Butanoate

(c) Ethyl ethanoate

(d) Etyl methyl carboxylic acid

Answer: c

18. The first member of the alkyne homologous series is

- (a) propyne
- (b) ethyne
- (c) methane
- (d) ethane

Answer: b

19. 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

Answer: b

20. A soap molecule has a

- (a) hydrophobic head and hydrophobic tail
- (b) hydrophobic head and hydrophilic tail
- (c) hydrophilic head and hydrophilic tail
- (d) hydrophilic head and hydrophobic tail

Answer: d