

## **CHAPTER 4**

1. Which of the following is not a hydrocarbon?

- A) Methane
- B) Ethene
- C) Ethanol
- D) Ethyne

Answer: C) Ethanol

2. Which of the following is a saturated hydrocarbon?

- A) Methane
- B) Ethene
- C) Ethyne
- D) Propane

Answer: D) Propane

3. Which of the following is a functional group?

- A) Hydroxyl group
- B) Carboxylic acid group
- C) Amino group
- D) All of the above

Answer: D) All of the above

4. Which of the following is an unsaturated hydrocarbon?

- A) Methane
- B) Ethene
- C) Ethyne
- D) Propane

Answer: B) Ethene

5. Which of the following is an example of an alkane?

- A) Ethanol
- B) Ethanoic acid
- C) Ethene
- D) Ethane

Answer: D) Ethane

6. What is the general formula for alkenes?

- A)  $C_nH_{2n}$
- B)  $C_nH_{2n+2}$
- C)  $C_nH_n$
- D)  $C_nH_{2n-2}$

Answer: A)  $C_nH_{2n}$

7. Which of the following is an unsaturated hydrocarbon?

- A) Methane
- B) Ethene
- C) Ethyne
- D) Propane

Answer: B) Ethene

8. Which of the following is an example of an aromatic hydrocarbon?

- A) Methane
- B) Ethene
- C) Benzene
- D) Butane

Answer: C) Benzene

9. Which of the following is an example of an unsaturated hydrocarbon?

- A) Propane
- B) Ethene
- C) Methane

D) Butane

Answer: B) Ethene

10. What is the functional group present in alcohols?

A) Hydroxyl group

B) Carbonyl group

C) Carboxyl group

D) Amino group

Answer: A) Hydroxyl group

11. Which of the following is an example of an aldehyde?

A) Ethanol

B) Ethanoic acid

C) Ethene

D) Formaldehyde

Answer: D) Formaldehyde

12. Which of the following is an example of a ketone?

A) Methanol

B) Ethanoic acid

C) Acetone

D) Methanal

Answer: C) Acetone

13. What is the general formula for alcohols?

A)  $C_nH_{2n+2}$

B)  $C_nH_{2n}$

C)  $C_nH_n$

D)  $C_nH_{2n-2}$

Answer: A)  $C_nH_{2n+2}$

14. Which of the following is an example of a functional group?

- A) Hydroxyl group
- B) Carboxylic acid group
- C) Amino group
- D) All of the above

Answer: D) All of the above

15. Which of the following is an example of an alkene?

- A) Ethanol
- B) Ethanoic acid
- C) Ethene
- D) Ethane

Answer: C) Ethene

16. Which of the following is an example of a saturated hydrocarbon?

- A) Methane
- B) Ethene
- C) Ethyne
- D) Propane

Answer: A) Methane

17. Which of the following is an example of an unsaturated hydrocarbon?

- A) Propane
- B) Ethene
- C) Methane
- D) Butane

Answer: B) Ethene

18. Which of the following is an example of an aromatic hydrocarbon?

- A) Methane
- B) Ethene
- C) Benzene

D) Butane

Answer: C) Benzene

19. Which of the following is an example of an unsaturated hydrocarbon?

A) Methane

B) Ethene

C) Ethane

D) Propane

Answer: B) Ethene

20. What is the functional group present in aldehydes?

A) Hydroxyl group

B) Carbonyl group

C) Carboxyl group

D) Amino group

Answer: B) Carbonyl group

21. Which of the following is an example of a ketone?

A) Methanol

B) Ethanoic acid

C) Acetone

D) Methanal

Answer: C) Acetone

22. What is the general formula for aldehydes?

A)  $\text{RCOOH}$

B)  $\text{RCHO}$

C)  $\text{RCH}_2\text{OH}$

D)  $\text{RCOOR}$

Answer: B)  $\text{RCHO}$

23. Which of the following is an example of an ester?

- A) Methanol
- B) Ethanoic acid
- C) Acetone
- D) Ethyl acetate

Answer: D) Ethyl acetate

24. What is the functional group present in carboxylic acids?

- A) Hydroxyl group
- B) Carbonyl group
- C) Carboxyl group
- D) Amino group

Answer: C) Carboxyl group

25. Which of the following is an example of an amine?

- A) Methanol
- B) Ethanoic acid
- C) Acetone
- D) Ethylamine

Answer: D) Ethylamine

26. What is the general formula for amines?

- A)  $\text{RCOOH}$
- B)  $\text{RCHO}$
- C)  $\text{RCH}_2\text{OH}$
- D)  $\text{RNH}_2$

Answer: D)  $\text{RNH}_2$

27. What is the functional group present in ethers?

- A) Hydroxyl group
- B) Carbonyl group
- C) Ether group

D) Amino group

Answer: C) Ether group

28. Which of the following is an example of a polymer?

A) Ethene

B) Ethyne

C) Polyethylene

D) Ethanol

Answer: C) Polyethylene

29. What is the difference between saturated and unsaturated hydrocarbons?

A) Saturated hydrocarbons have double bonds, while unsaturated hydrocarbons have single bonds.

B) Saturated hydrocarbons have single bonds, while unsaturated hydrocarbons have double bonds.

C) Saturated hydrocarbons have triple bonds, while unsaturated hydrocarbons have double bonds.

D) Saturated hydrocarbons have double bonds, while unsaturated hydrocarbons have triple bonds.

Answer: B) Saturated hydrocarbons have single bonds, while unsaturated hydrocarbons have double bonds.

30. Which of the following is a saturated hydrocarbon?

a) Ethyne

b) Ethene

c) Ethane

d) Methane

Answer: c) Ethane