

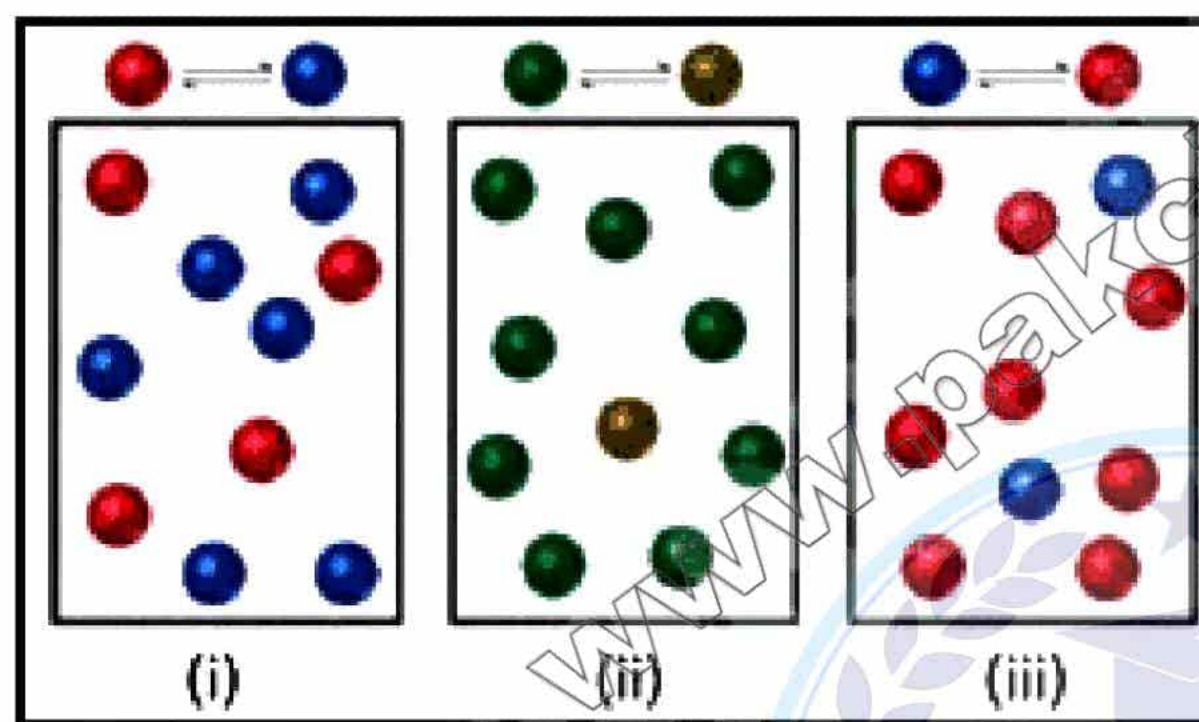
CHEMISTRY 10TH - Multiple Choice Questions

→ CHEMICAL EQUILIBRIUM

CHAPTER# 01

01. Which one of the following statements is false about dynamic equilibrium?
- It takes place in a closed container
 - Concentration of reactant and products are not changed
 - Rate of the forward reaction is equal to the rate of the reverse reaction
 - ✓ Equilibrium cannot be disturbed by any external stress
02. Consider the following reaction and indicate which of the following best describes equilibrium constant expression K_c . $4\text{NH}_3 + 5\text{O}_2 \rightleftharpoons 4\text{NO} + 6\text{H}_2\text{O}$
- ✓ $K_c = \frac{[\text{NO}]^4[\text{H}_2\text{O}]^6}{[\text{NH}_3]^4[\text{O}_2]^5}$
 - $K_c = \frac{[\text{NH}_3]^4[\text{O}_2]^5}{[\text{NO}]^4[\text{H}_2\text{O}]^6}$
 - $K_c = \frac{[\text{NH}_3][\text{O}_2]}{[\text{H}_2\text{O}][\text{NO}]}$
 - $K_c = \frac{[4\text{NO}][6\text{H}_2\text{O}]}{[4\text{NH}_3][5\text{O}_2]}$
03. A reaction which is never goes to completion is known as reversible reaction. Reversible reaction is represented by:
- doted lines
 - single arrow
 - ✓ double arrow
 - double straight line
04. When the magnitude of K_c is small, indicates:
- ✓ Reaction mixture contain most of the reactant
 - Reaction mixture contain most of the product
 - Reaction mixture contain almost equal amount of reactant and product
 - Reaction goes to completion
05. For which system does the equilibrium constant, K_c has units of concentration?
- ✓ $\text{N}_{2(g)} + 3\text{H}_{2(g)} \rightleftharpoons 2\text{NH}_{3(g)}$
 - $\text{N}_{2(g)} + \text{O}_{2(g)} \rightleftharpoons 2\text{NO}_{(g)}$
 - $\text{H}_{2(g)} + \text{I}_{2(g)} \rightleftharpoons 2\text{HI}_{(g)}$
 - $\text{CO}_{2(g)} + \text{H}_{2(g)} \rightleftharpoons \text{CO}_{(g)} + \text{H}_2\text{O}_{(l)}$

06. The unit of K_c for reaction $N_2 + O_2 \rightleftharpoons 2NO$
- (a) mol dm^{-3} (b) $\text{mol}^{-2} \text{dm}^6$
 (c) $\text{mol}^{-1} \text{dm}^3$ (d) no unit
07. The system is stable in equilibrium when:
- (a) $Q_c = K_c$ (b) $Q_c > K_c$
 (c) $Q_c < K_c$ (d) None of these
08. Q_c can be defined as:
- (a) ratio of product and reactants
 (b) ratio of molar concentration of product and reactant at specific time
 (c) ratio of molar concentration of product and molar volume of reactant
 (d) ratio of molar concentration of product and reactant raised to the power of coefficient
09. Which of the following represent backward reaction?



- (a) (i) and (ii) (b) (ii) and (iii)
 (c) (ii) only (d) (iii) only
10. The value of K_c increases when:
- (a) [Product] is less (b) [Product] is more
 (c) [Reactant] is more (d) [Reactant = product]
11. Which of these are reversible reactions?
- (a) Condensation (b) Evaporation
 (c) Condensation & Evaporation (d) None of them

12. Which one is not a reversible reaction?
- (a) Evaporation (b) Melting
(c) Freezing (d) Combustion
13. Which reactions are irreversible reactions?
- (i) Condensation (ii) Combustion (iii) Melting (iv) Rusting
- (a) (i) & (ii) (b) (iii) & (iv)
(c) (ii) & (iv) (d) (i) & (iv)
14. Many physical and chemical changes are occurring in our surrounding which may be due to:
- (a) chemical reaction (b) physical reaction
(c) Both 'a' & 'b' (d) None of these
15. Equilibrium is a state in which:
- (a) the forward reaction rate is more than the reverse reaction rate
(b) the forward reaction rate is less than the reverse reaction rate
(c) forward reaction rate and reverse reaction rate are equal
(d) forward reaction rate and reverse reaction rate become zero
16. Conversion of ice into the water by melting and conversion of water into ice by freezing is an example of:
- (a) chemical reaction (b) reversible reaction
(c) irreversible reaction (d) None of them
17. A chemical reaction is a chemical change which involves:
- (a) reactants (b) products
(c) Both 'a' & 'b' (d) None of these
18. The direction of a reaction can be predicted by the type of arrow:
- (a) dotted lines (b) single arrow
(c) double arrow (d) double straight line

19. A reversible reaction containing:
- (a) one process (b) ✓ two processes
(c) three processes (d) four processes
20. The reaction rate depends on the concentration of the:
- (a) ✓ reactants (b) products
(c) temperature (d) Both 'a' & 'b'
21. At the beginning the reaction:
- (a) quantity of reactant is lower, and the rate of product formation is lower
(b) quantity of reactant is lower, and the rate of product formation is higher
(c) quantity of reactant is higher, and the rate of product formation is lower
(d) ✓ quantity of reactant is higher, and the rate of product formation is higher
22. As the reactant amount decreases, the rate of reactant transformation:
- (a) ✓ decreases (b) increases
(c) remains the same (d) becomes zero
23. The state of dynamic equilibrium can be represented by:
- (a) Rate of the forward reaction < Rate of the reverse reaction
(b) Rate of the forward reaction > Rate of the reverse reaction
(c) ✓ Rate of the forward reaction = Rate of the reverse reaction
(d) Rate of the forward reaction = Rate of the reverse reaction = 0
24. In a reversible reaction, dynamic equilibrium is established:
- (a) after the completion of reaction
(b) ✓ before the completion of reaction
(c) it depends on the amount of reactants
(d) at any time
25. Which statement is TRUE for a forward reaction?
- (a) It is always directed from right to left in a chemical reaction
(b) Product produces reactant
(c) ✓ Initially rate is fast but gradually slows down
(d) All of them



26. Which statement is NOT true for reverse reaction?
- (a) ✓ It is always directed from left to right in a chemical reaction
(b) Product produce reactant (Reactants → Products)
(c) Initially rate is slow but gradually speeds up
(d) All of them
27. The rate at which a substance reacts is directly proportional to its:
- (a) density (b) concentration
(c) atomic mass (d) ✓ active mass
28. The rate of a reaction is directly proportional to the product of the active masses of the:
- (a) products (b) ✓ reacting substances
(c) Both 'a' & 'b' (d) None of them
29. $K_c = :$
- (a) reactant × product (b) $\frac{\text{reactant}}{\text{product}}$
(c) ✓ $\frac{\text{product}}{\text{reactant}}$ (d) reactant \rightleftharpoons product
30. It is the single factor affecting the equilibrium constant's value.
- (a) Density (b) Pressure
(c) ✓ Temperature (d) Numbers of moles
31. K_c is independent of :
- (a) Reactant concentration (b) Product concentration
(c) ✓ Both 'a' & 'b' (d) None of these
32. K_c varies with:
- (a) ✓ Temperature (b) Reactant concentration
(c) Product concentration (d) densities

33. If K_c is larger than 1, the reaction is:
- (a) in equilibrium (b) reverse reaction
(c) forward reaction (d) None of them
34. The reaction is a reverse reaction, if K_c is:
- (a) larger than 1 (b) less than 1
(c) equal to 1 (d) equal to 0
35. Which statement is true if $Q_c < K_c$?
- (a) Increase in product concentration for equilibrium.
(b) The forward reaction occurs, forming additional products
(c) Both 'a' & 'b'
(d) None of these
36. If $Q_c > K_c$:
- (a) There is increase in product concentration as the process reverses, forming more reactants.
(b) There is increase in product concentration as the process reverses, forming more products.
(c) There is decrease in product concentration as the process reverses, forming more products.
(d) There is decrease in product concentration as the process reverses, forming more reactants.
37. If K_c is very small, then:
- (a) reactions never finish
(b) reactions are virtually complete
(c) reactions are considered to be at equilibrium
(d) None of these
38. This type of reaction is known as 'Forward reaction'.
- (a) K_c is very small
(b) K_c is very large
(c) K_c is neither very small nor very large
(d) K_c is equal to 0

39. If K_c is very large, then:
- (a) the concentration of reactants and products is almost same
 - (b) the reaction has maximum reactant concentration and minimum product concentration
 - (c) ✓ the reaction has maximum product concentration and minimum reactant concentration
 - (d) None of them
40. These are the most important part of the atmosphere.
- (a) oxygen & carbon dioxide
 - (b) ✓ nitrogen & oxygen
 - (c) carbon dioxide & methane
 - (d) oxygen & ozone
-



CHEMISTRY 10TH - Multiple Choice Questions

→ ACID, BASE AND SALT

CHAPTER# 02



- Corrosive effect on skin is caused by:
(a) acid (b) base
(c) salt (d) both a & b
- Preservatives are used to preserve:
(a) acids (b) bases
(c) food (d) water
- Which of the following is not an Arrhenius acid?
(a) HCl (b) CO₂
(c) HNO₃ (d) H₂SO₄
- NH₃ can be a base according to:
(a) Arrhenius theory (b) Bronsted-Lowry theory
(c) Lewis theory (d) both b and c
- Which of the following is a Lewis base?
(a) HNO₃ (b) CN
(c) HCl (d) AlCl₃
- A substance that can donate a pair of electron to form coordinate covalent bond:
(a) Lewis acid (b) Lewis base
(c) Bronsted-Lowry acid (d) Bronsted-Lowry base
- If pH value is greater than 7, then solution is:
(a) acidic (b) basic
(c) amphoteric (d) neutral

8. Salt among following is:
- (a) HCl (b) ✓ KCl
(c) HNO₃ (d) H₂SO₄
9. Substances that react with both acids and bases are called:
- (a) conjugate acids (b) conjugate bases
(c) ✓ amphoteric substances (d) Buffers
10. The reaction of acid and base to form salt and water is called:
- (a) hydration (b) ✓ Neutralization
(c) hydrolysis (d) both a & c
11. Curd, vinegar, lemon, and orange juice have a sour flavor, they are:
- (a) ✓ acidic (b) basic
(c) amphoteric (d) neutral
12. Bitter-gourd, coffee, and chocolate have a bitter flavor, they are:
- (a) acidic (b) ✓ basic
(c) amphoteric (d) neutral
13. Alum is an example of:
- (a) acids (b) bases
(c) ✓ salts (d) neutral
14. It is used in batteries, paints, paper, fertilizer, detergent, and fertilizers.
- (a) HCl (b) ✓ H₂SO₄
(c) NaOH (d) CaOH₂
15. In our stomach, it is utilized to breakdown food.
- (a) ✓ HCl (b) H₂SO₄
(c) NaOH (d) CaOH₂
16. It is utilized in the soap and paper industries.
- (a) HCl (b) H₂SO₄
(c) ✓ NaOH (d) CaOH₂

17. Cement and plaster of Paris are both made from:
- (a) HCl (b) H_2SO_4
(c) NaOH (d) $CaOH_2$
18. It is used in the production of fertilizers.
- (a) Silver bromide (b) Calcium chloride
(c) Ammonia (d) Calcium hydroxide
19. Silver bromide is used in:
- (a) fertilizers (b) photography
(c) medicines (d) paper industry
20. It is utilized as a drying agent.
- (a) Silver bromide (b) Calcium chloride
(c) Ammonia (d) Calcium hydroxide
21. According to Arrhenius theory, when acids
- (a) hydrogen (H^+) ions (b) hydroxide ions (OH^-)
(c) protons (d) electrons
22. According to Arrhenius theory, when bases are dissolved in water, they produce:
- (a) hydrogen (H^+) ions (b) hydroxide ions (OH^-)
(c) protons (d) electrons
23. A salt is a/an:
- (a) ionic compound (b) covalent compound
(c) Both 'a' & 'b' (d) None of them
24. According to Bronsted-Lowry theory, an acid:
- (a) produces hydrogen (H^+) ions (b) produces hydrogen (H^-) ions
(c) donates a proton (H^+) (d) accepts a proton (H^+)
25. According to Bronsted-Lowry theory, a base:
- (a) produces hydrogen (H^+) ions (b) produces hydrogen (H^-) ions
(c) donates a proton (H^+) (d) accepts a proton (H^+)



26. A Lewis acid is an:
- (a) a proton donor (b) a proton acceptor
(c) an electron pair acceptor (d) an electron pair donor
27. BF_3 is a Lewis:
- (a) acid (b) base
(c) salt (d) neutral
28. Pure water is considered as a:
- (a) strong electrolyte (b) weak electrolyte
(c) strong base (d) weak base
29. pH is the measurement of the concentration of Hydrogen ions in a solution. Which is true for pH?
- (a) $\text{Log}[\text{H}^+]$ (b) $\text{Log}[\text{OH}^-]$
(c) $-\text{Log}[\text{H}^+]$ (d) $-\text{Log}[\text{OH}^-]$
30. It can be defined mathematically as $-\log[\text{OH}^-]$.
- (a) pH (b) pOH
(c) PH scale (d) pOH scale
31. pH Scale has values ranging from zero to:
- (a) 7 (b) 10
(c) 12 (d) 14
32. NH_4Cl , NaHSO_4 and NaH_2PO_4 are examples of:
- (a) acidic salts (b) basic salts
(c) neutral salts (d) All of them
33. Acidic salts solutions have pH:
- (a) zero (b) less than 7
(c) greater than 7 (d) greater than 14

34. Which one of these is a basic salt?
(a) NH_4Cl (b) NaHSO_4
(c) CH_3COONa (d) KCl
35. Which one of these has pH more than 7 ?
(a) Acidic Salts (b) Basic Salts
(c) Neutral Salts (d) None of these
36. These salts are formed by the complete neutralization of a strong base and strong acid.
(a) Acidic Salts (b) Basic Salts
(c) Neutral Salts (d) None of these
37. Which one of the following is NOT a neutral salt?
(a) NaCl (b) K_2SO_4
(c) NaNO_3 (d) K_2CO_3
38. Neutral salt solutions have pH:
(a) 7 (b) less than 7
(c) greater than 7 (d) 0
39. Most of the chemical fertilizers used in agriculture by farmers are:
(a) acids (b) bases
(c) salts (d) metals
40. It is found in plaster of Paris which is used to make plaster casts for supporting broken bones.
(a) Na_2CO_3 (b) $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
(c) CH_3COONa (d) NaNO_3
41. Foods such as meat, dairy products, eggs and grains are:
(a) acidic (b) alkaline
(c) neutral (d) All of them

42. Natural fats, starch and sugar are:

(a) acidic

(b) alkaline

(c) ✓ neutral

(d) All of them

43. Fruits, nuts, legumes and vegetables are:

(a) acidic

(b) ✓ alkaline

(c) neutral

(d) All of them

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CHEMISTRY 10TH - Multiple Choice Questions

**→ ORGANIC CHEMISTRY**

CHAPTER# 03

1. The branch of chemistry which deals with hydrocarbons and their derivatives is known as:
- (a) Organic chemistry (b) Inorganic chemistry
(c) Biochemistry (d) Physical chemistry
2. The general formula for alkanes is:
- (a) C_nH_{2n} (b) C_nH_{2n+1}
(c) C_nH_{2n+2} (d) C_nH_{2n-1}
3. Which of the following is an alcohol?
- (a) CH_3-CHO (b) $CH_3-CH_2-O-CH_3$
(c) CH_3-OH (d) $HCOOH$
4. Which of the following is a saturated hydrocarbon?
- (a) $CH_3-CH=CH_2$ (b) $CH_3-CH_2-CH_3$
(c) $CH_3-C\equiv CH$ (d) $CH_2=CH-C\equiv CH$
5. The prefix 'hept' stands for the _____ carbon atoms.
- (a) 2 (b) 5
(c) 7 (d) 9
6. The functional group $-COOH$ is used for:
- (a) alkynes (b) alcohols
(c) phenols (d) Carboxylic acids
7. Polyethene is:
- (a) oil (b) paper
(c) plastic (d) wood

8. Acetic acid is obtained from:
- (a) banana (b) dates
(c) garlic (d) ✓ vinegar
9. Alkenes:
- (a) show the same general formula as alkynes
(b) have carbon – carbon triple bond
(c) ✓ have carbon – carbon double bond
(d) are saturated hydrocarbons
10. $\text{CH}_3 - \text{CH}_2 -$ is radical.
- (a) Methyl (b) ✓ Ethyl
(c) n-propyl (d) Isopropyl
11. Vital force Theory was introduced by:
- (a) Wohler (b) Arrhenius
(c) Lewis (d) ✓ Berzelius
12. In 1828, he converted an inorganic compound ammonium cyanate into urea.
- (a) ✓ Wohler (b) Arrhenius
(c) Lewis (d) Berzelius
13. It is an organic compound excreted in the urine of mammals.
- (a) Alcohols (b) Alkynes
(c) ✓ Urea (d) Ketones
14. It is the key element in all organic compounds.
- (a) Oxygen (b) ✓ Carbon
(c) Nitrogen (d) Iron
15. In organic compounds after carbon, the most frequently used element is:
- (a) ✓ Hydrogen (b) Oxygen
(c) Nitrogen (d) Sodium

16. Which one of these statements is TRUE?
- (a) Organic compounds are insoluble in water
(b) Non-polar organic compounds are soluble in benzene
(c) None of these
(d) All of these
17. The rate of reactivity of organic compounds is:
- (a) fast (b) moderate
(c) slow (d) very slow
18. Organic compounds have _____ different sorts of formulae.
- (a) 2 (b) 4
(c) 5 (d) 6
19. Which one indicates the exact number of atoms in one molecule of an organic compound?
- (a) Molecular formula (b) Structural formula
(c) Condensed formula (d) Dot and cross formula
20. Molecular formula of butane is:
- (a) C_3H_8 (b) C_4H_{10}
(c) C_5H_{12} (d) C_6H_{14}
21. It is also known as the electronic formula, which depicts the sharing of electrons between distinct atoms in a single molecule of an organic compound.
- (a) Molecular formula (b) Structural formula
(c) Condensed formula (d) Dot and cross formula
22. Benzene is a/an:
- (a) straight chain compound (b) branched chain compound
(c) heterocyclic compounds (d) cyclic compound
23. More than _____ organic compound (carbon compounds) exist.
- (a) 1 million (b) 3 million
(c) 5 million (d) 10 million

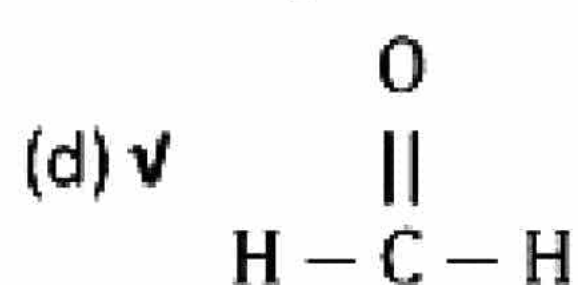
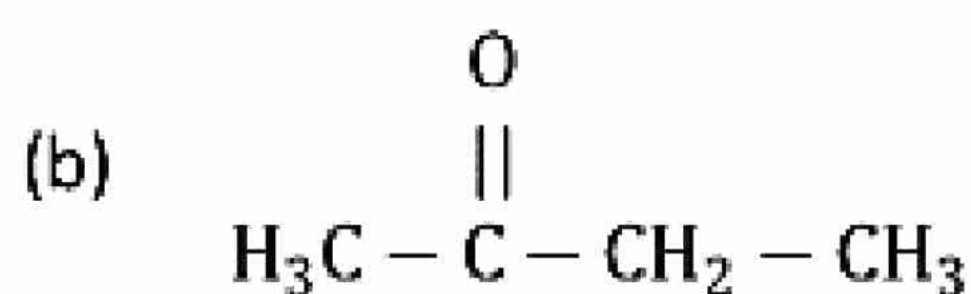
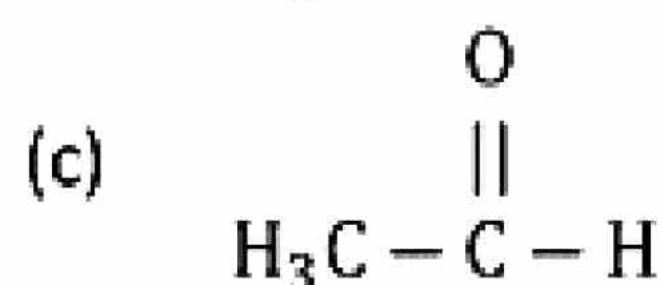
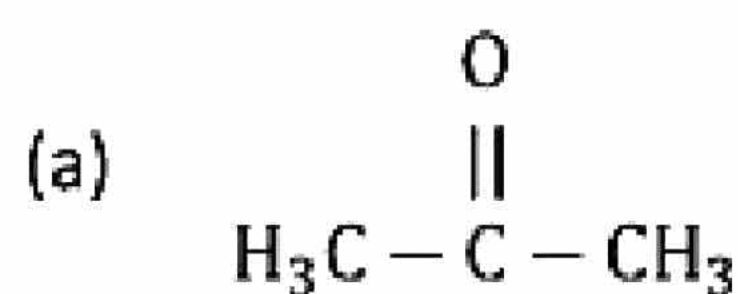
24. It is the capacity of atoms to build long chains and huge rings by linking with other similar atoms.
- (a) Homologous (b) Isomerism
(c) Catenation (d) Saturated
25. If two compounds have the same molecular formula but distinct atom arrangements in their molecules or different structural formulas, they are said to be:
- (a) isomers (b) homologous
(c) saturated (d) unsaturated
26. A cause/Causes for the abundance of organic molecules is/are:
- (a) catenation (b) isomerism
(c) None of these (d) Both 'a' & 'b'
27. Wood has a carbon content of:
- (a) 20% (b) 40%
(c) 60% (d) 90%
28. It is a major and important component of natural gas.
- (a) Methane (b) Ethane
(c) Propane (d) Butane
29. The fundamental unit of all carbohydrates is:
- (a) starch (b) cellulose
(c) glucose (d) protein
30. It is/They are formed as glucose polymerizes further
- (a) Starch (b) Cellulose
(c) None of these (d) Both 'a' & 'b'
31. Pulses and beans are high in:
- (a) vitamins (b) protein
(c) oils (d) fats

32. The general formula for alkenes is:
- (a) ✓ C_nH_{2n} (b) C_nH_{2n+1}
(c) C_nH_{2n+2} (d) C_nH_{2n-1}
33. C_nH_{2n-1} is general formula of:
- (a) alkanes (b) alkenes
(c) ✓ alkynes (d) alcohols
34. C_6H_{13} is radical.
- (a) Propyl (b) Pentyl
(c) ✓ Hexyl (d) Octyl
35. C_nH_{2n+1} is the general formula of:
- (a) alkanes (b) alkenes
(c) alkynes (d) ✓ alkyl radicals
36. Removal of terminal H from propane, termed as:
- (a) ✓ n-propyl (b) isopropyl
(c) ter-propyl (d) sec-propyl
37. Removal of central H from butane, termed as:
- (a) n-butyl (b) ✓ isobutyl
(c) ter-butyl (d) sec-butyl
38. It is produced by plants through photosynthesis.
- (a) Starch (b) Cellulose
(c) ✓ Glucose (d) Protein
39. They contain carbon-carbon double and triple bonds.
- (a) ✓ Unsaturated hydrocarbons (b) Saturated hydrocarbons
(c) Alkanes (d) Alkyl radicals
40. They have a less amount of carbon and a high amount of hydrogen.
- (a) Unsaturated hydrocarbons (b) ✓ Saturated hydrocarbons
(c) Alkanes (d) Alkyl radicals



41. Which one is less reactive?
- (a) Unsaturated hydrocarbons (b) ✓ Saturated hydrocarbons
(c) None of these (d) Both 'a' & 'b'
42. They burn with yellow and sooty flame in the air.
- (a) ✓ Unsaturated hydrocarbons (b) Saturated hydrocarbons
(c) Alkanes (d) Alkynes
43. In alcohols the, functional group is:
- (a) alkyl halide (b) alkoxy group
(c) carbonyl group (d) ✓ hydroxyl group
44. The polar hydroxyl group (–OH) in alcohols, for example, improves:
- (a) melting point (b) boiling point
(c) ✓ solubility (d) density
45. General Formula of ethers is:
- (a) C_nH_{2n-2} (b) ✓ $C_nH_{2n+2}O$
(c) $C_nH_{2n+1}X$ (d) $C_nH_{2n-1}OH$
46. Functional group of aldehydes is:
- (a) $\begin{array}{c} \diagdown \quad / \\ C = C \\ / \quad \diagdown \end{array}$ (b) $-C \equiv C$
(c) ✓ $\begin{array}{c} H \diagdown \\ C = O \\ / \end{array}$ (d) $\begin{array}{c} \diagdown \\ C = O \\ / \end{array}$
47. $\begin{array}{c} O \\ || \\ R - C - OH \end{array}$ This is the functional group of:
- (a) ✓ carboxylic acids (b) esters
(c) alcohols (d) phenols

48. Formula of formaldehyde is as follows:



49.
$$\begin{array}{c} \text{O} \\ || \\ \text{H}_3\text{C} - \text{C} - \text{CH}_3 \end{array}$$
 This is the formula of:

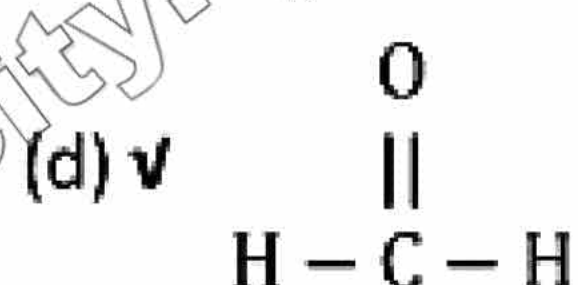
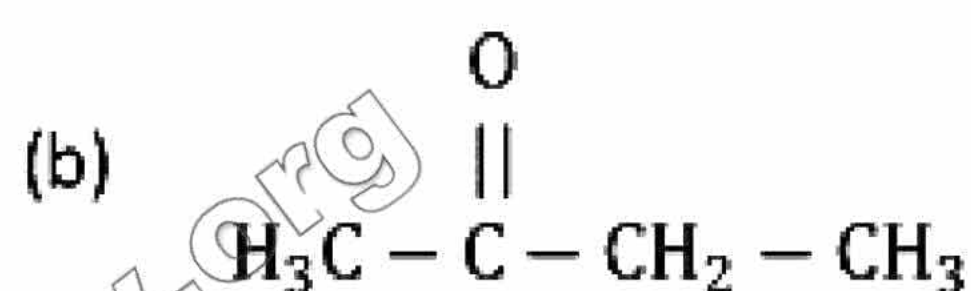
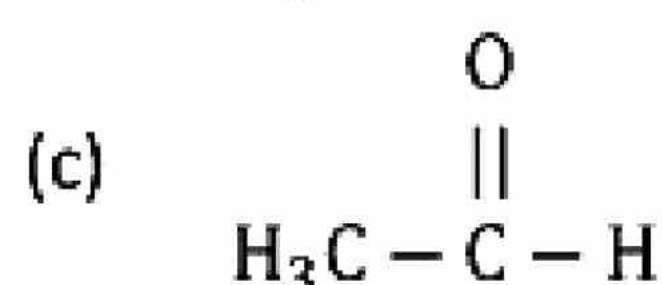
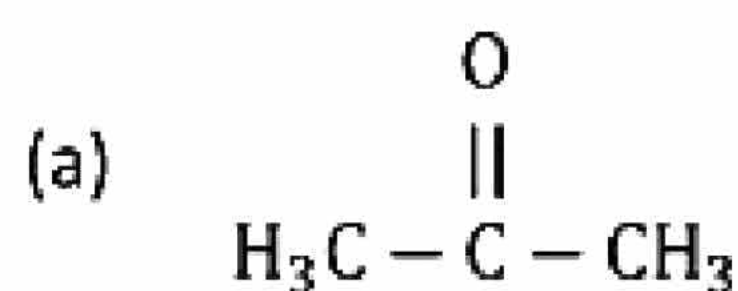
(a) acetaldehyde

(c) acetic acid

(b) ✓ acetone

(d) formaldehyde

50. Formula of formic acid is:



51.
$$\begin{array}{c} | \\ -\text{C} - \text{OH} \\ | \end{array}$$
 This is the functional group of:

(a) secondary alcohols

(c) secondary ethers

(b) ✓ tertiary alcohols

(d) tertiary ethers

52. The organic compounds containing carbon, hydrogen and nitrogen as functional group are called as

(a) ✓ amines

(c) ethers

(b) esters

(d) ketones

CHEMISTRY 10TH - Multiple Choice Questions

→ BIOCHEMISTRY

CHAPTER# 04

1. Glucose is:
- (a) vitamin (b) protein
(c) carbohydrate (d) lipid
2. The deficiency of vitamin D causes:
- (a) beriberi (b) rickets
(c) scurvy (d) hemorrhage
3. _____ encodes genetic information.
- (a) R.N.A (b) D.N.A
(c) progesterone (d) cholesterol
4. The carbohydrates which contain the aldehyde group are called:
- (a) saccharides (b) ketoses
(c) pentoses (d) aldoses
5. Amino acids are building blocks of:
- (a) nucleic acids (b) protein
(c) vitamins (d) lipid
6. Which one of the following is a polysaccharide?
- (a) Fructose (b) Maltose
(c) Starch (d) N.O.T
7. Lactose is:
- (a) grape sugar (b) honey sugar
(c) milk sugar (d) cane sugar

8. What is true about a peptide?
- (a) It is a protein (b) It is an anhydride of carboxylic acids
(c) It is an anhydride of an amine (d) it is a polyamide
9. Fats are solids at:
- (a) ordinary room temperature (b) high temperature
(c) higher than 50°C temperature (d) N.O.T
10. Cotton contains cellulose.
- (a) 30% (b) 65%
(c) 85% (d) 95%
11. The word Biochemistry means:
- (a) chemistry of cells (b) chemistry of animals
(c) chemistry of plants (d) chemistry of life
12. This branch of chemistry deals with the study of chemical and physical processes inside a living system.
- (a) Bio-chemistry (b) Organic Chemistry
(c) Inorganic Chemistry (d) Physical Chemistry
13. The first time the word biochemistry was used by German chemist Carl Neuberg in:
- (a) 1885 (b) 1890
(c) 1903 (d) 1933
14. Generally carbohydrates contain elements like:
- (a) carbon, hydrogen and nitrogen (b) carbon, hydrogen and oxygen
(c) carbon, hydrogen and alkyl halides (d) carbon, oxygen and nitrogen
15. Most carbohydrates are represented by the general formula:
- (a) $C(H_2O)$ (b) $C_x(H_2O)$
(c) $C_x(H_2O)_y$ (d) $C_y(H_2O)_x$

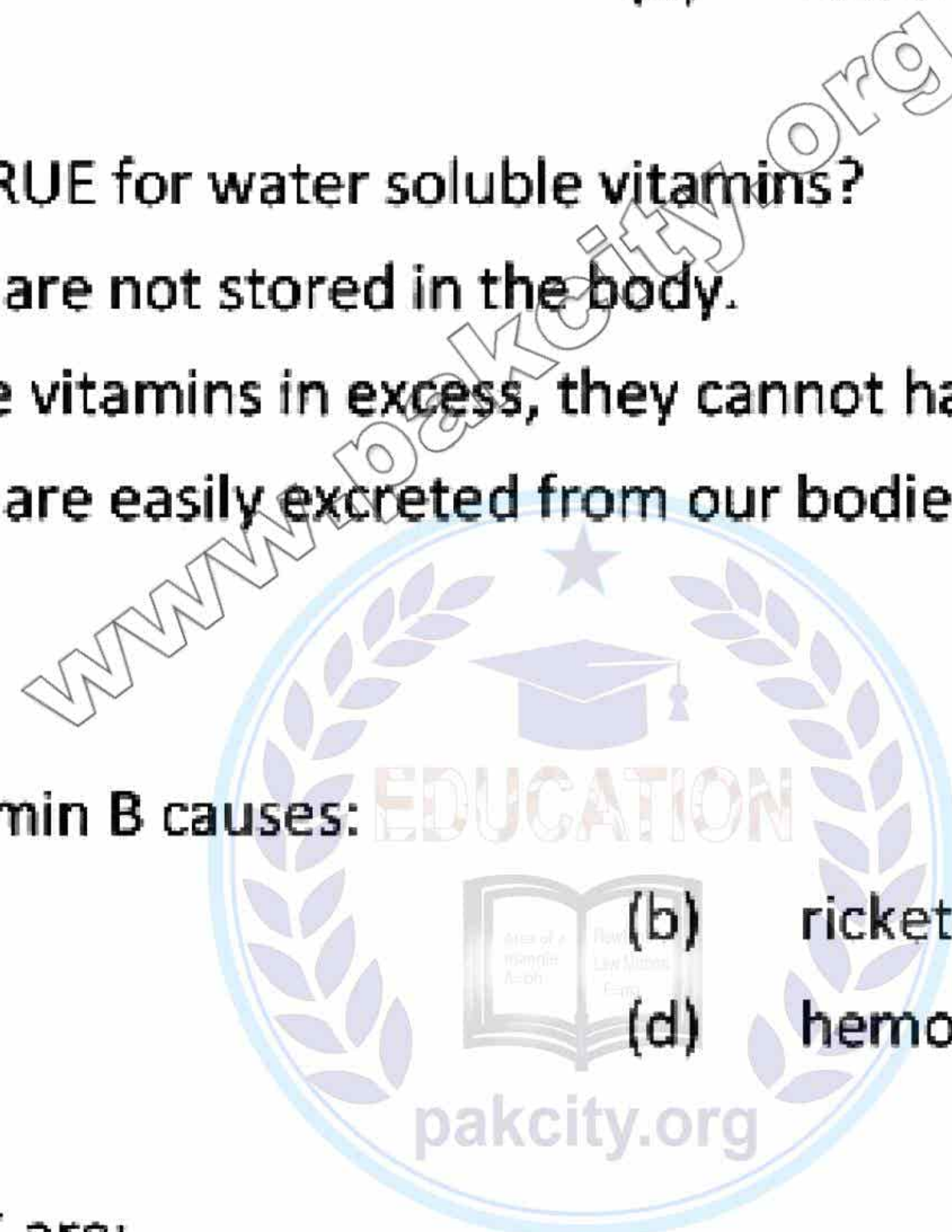
16. The carbohydrates which contain the ketone group are called:
(a) saccharides (b) ketoses
(c) pentoses (d) aldoses
17. Majority of carbohydrates are sweet in taste so they are also called:
(a) saccharides (b) ketoses
(c) pentoses (d) aldoses
18. Based on hydrolysis, there are _____ types of carbohydrates.
(a) two (b) three
(c) four (d) five
19. Monosaccharides are also called:
(a) sugars (b) easy sugars
(b) single sugars (d) simple sugars
20. These carbohydrates cannot be further simplified on hydrolysis.
(a) Monosaccharides (b) Oligosaccharides
(c) Polysaccharides (d) All of them
21. These carbohydrates contain 3 to 10 carbon atoms.
(a) Monosaccharides (b) Oligosaccharides
(c) Polysaccharides (d) All of them
22. Glucose (grape sugar) belongs to:
(a) saccharides (b) ketoses
(c) pentoses (d) aldoses
23. Fructose (honey) belongs to:
(a) saccharides (b) ketoses
(c) pentoses (d) aldoses

24. Aldoses and ketoses are examples of:
- (a) ✓ Monosaccharides (b) Oligosaccharides
(c) Polysaccharides (d) All of them
25. It is also known as blood sugar.
- (a) Fructose (b) Sucrose
(c) ✓ Glucose (d) Lactose
26. per 100 ml, the normal range for blood glucose is:
- (a) 40 – 70 mg (b) ✓ 65 – 110 mg
(c) 70 – 150 mg (d) 90 – 180 mg
27. It occurs in ripe fruits, honey, cane sugar etc.
- (a) Glucose (b) ✓ Fructose
(c) Lactose (d) Maltose
28. In oligosaccharides, monosaccharides are connected by:
- (a) glucose bond/linkage (b) saccharide bond/linkage
(c) covalent bond/Linkage (d) ✓ glycosidic bond/Linkage
29. Sucrose, maltose, lactose (milk sugar) etc. are important members of:
- (a) Monosaccharides (b) ✓ Oligosaccharides
(c) Polysaccharides (d) All of them
30. They are required as the energy source for the survival of both plants and animals.
- (a) ✓ Carbohydrates (b) Proteins
(c) Lipids (d) Fatty acids
31. It is a food additive. It is found in confectioneries, condensed milk, canned fruits, Jams, and jellies, among other things.
- (a) Glucose (b) Fructose
(c) Lactose (d) ✓ Sucrose

32. It helps in cholesterol reduction and blood pressure regulation.
- (a) ✓ Carbohydrates (b) Proteins
(c) Lipids (d) Fatty acids
33. It promotes peristalsis in the intestine.
- (a) Starch (b) ✓ Celluloses
(c) Glucose (d) Fructose
34. It is used as a raw material in a variety of industries, including textiles and paper.
- (a) Starch (b) ✓ Celluloses
(c) Glucose (d) Fructose
35. It is utilized in the production of ethanol and laundries.
- (a) ✓ Starch (b) Celluloses
(c) Glucose (d) Fructose
36. The word protein is taken from Greek 'Proteios' means:
- (a) ✓ first (b) Last
(c) strong (d) weak
37. These are nitrogenous macro-molecules found in all the cells of living organisms.
- (a) Carbohydrates (b) ✓ Proteins
(c) Lipids (d) Fatty acids
38. Upto twenty amino acids have been found in nature. Out of them, the number of essential amino acids is:
- (a) 5 (b) 7
(c) ✓ 10 (d) 17
39. Due to this linkage protein is formed.
- (a) glucose bond/linkage (b) saccharide bond/linkage
(c) ✓ peptide bond/Linkage (d) glycosidic bond/linkage

40. Proteins may contain:
- (a) 10 to 1000 amino acid molecules (b) 30 to 3000 amino acid molecules
(c) 45 to 5500 amino acid molecules (d) ✓ 60 to 6000 amino acid molecules
41. Humans consume proteins as food since they are required for:
- (a) energy production (b) cell repairing
(c) ✓ protoplasm production (d) None of them
42. They are proteins generated by living organisms.
- (a) Cellulose (b) ✓ Enzymes
(c) Gelatin (d) Lipids
43. It is produced, when bones are cooked.
- (a) Cellulose (b) Enzymes
(c) ✓ Gelatin (d) Lipids
44. They are the building blocks of cells
- (a) Cellulose (b) Enzymes
(c) Gelatin (d) ✓ Lipids
45. They are lipids' building components.
- (a) ✓ Fatty acids (b) Amino acids
(c) Carboxylic acids (d) Proteins
46. They're carboxylic acids with a lengthy chain, either saturated or unsaturated.
- (a) ✓ Fatty acids (b) Amino acids
(c) Carboxylic acids (d) Proteins
47. He discovered vitamins in 1912.
- (a) Funk (b) Wohler
(c) ✓ Hopkins (d) Presley

48. He discovered Vitamin B₁ (Thiamin).
- (a) ✓ Funk (b) Wohler
(c) Hopkins (d) Presley
49. On the basis of solubility, there are _____ types of vitamins.
- (a) ✓ two (b) three
(c) four (d) five
50. Water soluble vitamins are obtained from:
- (a) Lipids (b) meat
(c) fats (d) ✓ cereals and fruits
51. Vitamin B (complex) and vitamin C are:
- (a) fat soluble vitamins (b) ✓ water soluble vitamins
(c) Both 'a' & 'b' (d) None of them
52. Which statement is TRUE for water soluble vitamins?
- (a) These vitamins are not stored in the body.
(b) If we take these vitamins in excess, they cannot harm us
(c) These vitamins are easily excreted from our bodies
(d) ✓ All of them
53. The deficiency of vitamin B causes:
- (a) ✓ beriberi (b) rickets
(c) scurvy (d) hemorrhage
54. Vitamins A, D, E and K are:
- (a) ✓ fat soluble vitamins (b) water soluble vitamins
(c) Both 'a' & 'b' (d) None of them
55. Which of the following is called sunshine vitamin?
- (a) A (b) B
(c) C (d) ✓ D



56. Which statement is FALSE for fat-soluble vitamins?
- (a) They are stored in the body for a Long period of time
 - (b) ✓ If we take these vitamins in excess, they cannot harm us
 - (c) These vitamins are obtained from lipids
 - (d) All of them
57. These enzymes are utilized in the production of bread.
- (a) Lipases
 - (b) Lactase
 - (c) ✓ Amylase
 - (d) Cellulose
58. The following enzyme is used to make ice cream sweeter
- (a) Lipases
 - (b) ✓ Lactase
 - (c) Amylase
 - (d) Cellulose
-



CHEMISTRY 10TH - Multiple Choice Questions

**→ ENVIRONMENTAL CHEMISTRY-1
THE ATMOSPHERE**

CHAPTER# 05

01. Second highest layer of Earth's atmosphere is:
- (a) stratosphere (b) ✓ mesosphere
(c) troposphere (d) thermosphere
02. Aeroplanes fly in:
- (a) troposphere (b) ✓ stratosphere
(c) mesosphere (d) thermosphere
03. Atmospheric pressure decreases with the
- (a) increase in longitude (b) decrease in altitude
(c) ✓ increase in altitude (d) increase in latitude
04. Layer of atmosphere which separates stratosphere and troposphere is known as:
- (a) ✓ tropopause (b) mesopause
(c) thermopause (d) stratopause
05. Ozone layer is part of:
- (a) mesosphere (b) ✓ stratosphere
(c) thermosphere (d) troposphere
06. Which is not part of greenhouse gases?
- (a) carbon dioxide (b) methane
(c) nitrous oxide (d) ✓ oxygen
07. Second most abundant constituent of dry air in terms of volume after nitrogen is:
- (a) nitrogen (b) ✓ oxygen
(c) carbon dioxide (d) helium

08. Which of the following is the reason of global warming?
- (a) Presence of sulphite
(b) ✓ Rise in CO₂ concentration
(c) Oxides of nitrogen
(d) Formation of ozone
09. The altitude on stratosphere is:
- (a) 40 to 45 km
(b) ✓ 50 to 55 km
(c) 60 to 65 km
(d) 70 to 75 km
10. Ozone is a gas found in the layer:
- (a) Troposphere
(b) Mesosphere
(c) ✓ Stratosphere
(d) Exosphere
11. The earth is surrounded by a layer of gases called the:
- (a) ✓ atmosphere
(b) weather
(c) Exosphere
(d) Troposphere
12. The most abundant element in the atmosphere is:
- (a) oxygen
(b) carbon dioxide
(c) ✓ nitrogen
(d) argon
13. The percentage of nitrogen is found in the atmosphere:
- (a) 60.78%
(b) 68.29%
(c) 72.68%
(d) ✓ 78.09%
14. The second most abundant element in the atmosphere is:
- (a) ✓ oxygen
(b) carbon dioxide
(c) nitrogen
(d) argon
15. The percentage of nitrogen is found in the atmosphere:
- (a) 10.99%
(b) 13.78%
(c) ✓ 20.95%
(d) 27.89%
16. The Earth's atmosphere is divided up into _____ major layers.
- (a) 3
(b) 4
(c) ✓ 5
(d) 6

17. With respect to earth surface, the earth's atmospheric layers are classified on the bases of:
- (a) temperature (b) density
(c) ✓ Both 'a' & 'b' (d) None of them
18. The lowest layer of Earth's atmosphere is:
- (a) stratosphere (b) mesosphere
(c) ✓ troposphere (d) thermosphere
19. Troposphere altitudes varies from about:
- (a) ✓ 9 to 17 km (b) 12 to 19 km
(c) 17 to 23 km (d) 21 to 27 km
20. Weather in this layer affects our daily life.
- (a) Thermosphere (b) Stratosphere
(c) ✓ Troposphere (d) Mesosphere
21. Around 80% of the mass of the atmosphere is in the:
- (a) Stratosphere (b) Thermosphere
(c) Exosphere (d) ✓ Troposphere
22. It is the second-lowest layer of Earth's atmosphere.
- (a) Thermosphere (b) ✓ Stratosphere
(c) Troposphere (d) Mesosphere
23. The higher the altitude the is the atmosphere.
- (a) warm (b) ✓ hotter
(c) cold (d) freezing
24. Weather balloons go as high as the:
- (a) ✓ Stratosphere (b) Thermosphere
(c) Exosphere (d) Troposphere

25. The waste or exhaust products produced by the burning of fossil fuels and organic materials are referred to as:
- (a) ✓ primary pollutants (b) secondary pollutants
(c) Both 'a' & 'b' (d) None of them
26. Which one of the following is a primary pollutant?
- (a) Sulphuric acid (b) Carbonic acid
(c) ✓ Ammonia (d) Peroxy acetyl nitrate
27. Which one of the following is a secondary pollutant?
- (a) Carbon oxides (b) Sulphur oxide
(c) Hydrocarbons (d) ✓ Hydrofluoric acid
28. It causes the production of smog.
- (a) Sulphur dioxide (b) ✓ Carbon monoxide
(c) Nitrogen Oxides (d) Ozone
29. Key contributor to the creation of acid rain is:
- (a) ✓ Sulphur dioxide (b) Carbon monoxide
(c) Nitrogen Oxides (d) Ozone
30. Above the earth's surface, ozone layer is found roughly:
- (a) 10 to 20 km (b) ✓ 25 to 30 km
(c) 35 to 40 km (d) 45 to 60 km
31. It is a major contributor to ozone depletion.
- (a) CO₂ (b) Smoke
(c) ✓ CFC (d) SO₂
-

CHEMISTRY 10TH - Multiple Choice Questions

**→ ENVIRONMENT CHEMISTRY-II
WATER**

CHAPTER# 06

- Which of the following water-borne diseases is of viral origin?
(a) Typhoid fever (b) Polio
(c) Dysentery (d) diarrhea
- How much percentage (%) of the Earth's Surface is covered with water?
(a) 70% (b) 60%
(c) 90% (d) 75%
- Which type of bond is formed between H₂O molecules:
(a) Hydrogen bond (b) ionic bond
(c) covalent bond (d) all of these
- The permanent hardness of water is due to presence of:
(a) MgSO₄ (b) Mg(HCO₃)₂
(c) Ca(HCO₃)₂ (d) all of these
- How much fresh water is present on earth (rivers and lakes):
(a) 0.3% (b) 3%
(c) 0.2% (d) 2%
- Which salts are excessively dissolved to make temporary hard water:
(a) CaSO₄ and CaCl₂ (b) KNO₃ and KOH
(c) CaCO₃ and Ca(OH)₂ (d) Ca(HCO₃)₂ and Mg(HCO₃)₂
- Water is a:
(a) Polar solvent (b) Non polar solvent
(c) Amphipathic solvent (d) Non polar charged solvent

8. The taste of water is:
- (a) Sour (b) Bitter
(c) Sweet (d) Tasteless
9. Which of the following is helpful for removal of permanent hardness:
- (a) Na_2CO_3 (b) $\text{Ca}(\text{OH})_2$
(c) CaCO_3 (d) Na_2SO_4
10. Without water, a person can live no more than:
- (a) 2 to 3 days (b) 4 to 5 days
(c) 6 to 7 days (d) 8 to 9 days
11. Water makes up around of the earth's surface.
- (a) one sixth (b) one fourth
(c) one third (d) half
12. What percentage of water on the earth is salt water?
- (a) 30% (b) 70%
(c) 87% (d) 97%
13. What percentage of water on the earth is fresh water?
- (a) 3% (b) 30%
(c) 70% (d) 97%
14. What percentage of fresh water is accessible to humans?
- (a) less than 0.5% of the total quantity on the planet
(b) less than 1% of the total quantity on the planet
(c) more than 3% of the total quantity on the planet
(d) more than 30% of the total quantity on the planet
15. Water is litmus:
- (a) neutral (b) basic
(c) acidic (d) None of them

16. At 4°C, maximum density of water is:
- (a) 100 g.cm⁻³ (b) 70 g.cm⁻³
(c) 10 g.cm⁻³ (d) ✓ 1 g.cm⁻³
17. It is known as the universal solvent.
- (a) Sulphuric acid (b) Nitric acid
(c) Water (d) ✓ All of these
18. Which of the following is NOT soluble in water?
- (a) Benzene (b) Ether
(c) Petrol (d) ✓ All of these
19. The mechanism by which water rises from the roots of-plants to the leaves is known as:
- (a) eutrophication (b) leaching
(c) ✓ capillary action (d) photosynthesis
20. An excess of bile pigments in the blood causes
- (a) dysentery (b) ✓ jaundice
(c) cryptosporidium (d) polio
21. In this disease the liver stops working, and the eyes turn yellow the patient is weak and tired.
- (a) Typhoid (b) Hepatitis E
(c) ✓ Jaundice (d) Cryptosporidium
22. Hookworm larvae enter the body via the:
- (a) mouth (b) ✓ skin
(c) nose (d) wound
23. Fluorosis can harm our:
- (a) bones (b) teeth
(c) ✓ Both 'a' & 'b' (d) None of these

24. It is a gastrointestinal ailment caused by a waterborne microbe (protozoa) that causes diarrhea and vomiting.
- (a) Typhoid (b) Hepatitis E
(c) Jaundice (d) ✓ Cryptosporidium
25. It is a kind of gastrointestinal infection caused by bacteria or parasites.
- (a) ✓ Dysentery (b) Jaundice
(c) Cryptosporidium (d) Polio
-



CHEMISTRY 10TH - Multiple Choice Questions

→ ANALYTICAL CHEMISTRY

CHAPTER# 07

1. Analytical Chemistry deals with instruments and methods to _____, identify and quantify the matter.
- (a) mix (b) ✓ separate
(c) differentiate (d) manipulate
2. The sample may be solid, liquid, gas or a _____ in qualitative analysis.
- (a) ✓ mixture (b) compound
(c) substance (d) None of these
3. Analysis deals with the identification of the presence of functional groups in compounds is:
- (a) physical qualitative analysis (b) analytical qualitative analysis
(c) ✓ organic qualitative analysis (d) inorganic qualitative analysis
4. Flame test of copper halide with bluish-green colour identity the presence of:
- (a) halogen (b) hydrogen
(c) ✓ copper (d) hydrogen and copper
5. The physical methods used to measure physical properties are called:
- (a) combustion analysis method (b) ✓ atomic emission spectroscopy method
(c) volumetric analysis method (d) gravimetric analysis method
6. The error caused by improper functioning of an instrument is:
- (a) determinant error (b) in-determinant error
(c) systematic error (d) ✓ Both (a) & (c)
7. An agreement between a measured value and the accepted true value.
- (a) Error (b) ✓ Accuracy
(c) Precision (d) All of these



8. Spectroscopy is the interaction of light with:
- (a) Liquid (b) Solid
(c) Gas (d) Matter
9. The Gas is a mobile phase in:
- (a) Light chromatography (b) solid chromatography
(c) gas chromatography (d) None of these
10. It is used to assess the concentration or amount of a given atomic, molecular or ionic chemical.
- (a) Chromatography (b) Spectroscopy
(c) Conductometry (d) Potentiometry
11. The analytical chemistry consists of _____ main types of analysis.
- (a) two (b) three
(c) four (d) five
12. The identification of elements, ions or compounds present in a sample is called:
- (a) quantitative analysis (b) qualitative analysis
(c) physical analysis (d) organic analysis
13. Formation of the white precipitate by adding silver nitrate (AgNO_3) in dilute nitric acid (HNO_3) indicates the presence of:
- (a) halide (b) hydrogen
(c) copper (d) hydrogen and copper
14. It deals with the identification of elements.
- (a) chemical quantitative analysis (b) organic qualitative analysis
(c) physical qualitative analysis (d) inorganic qualitative analysis
15. The determination of how much amount or quantity of one or more substances present in a compound or sample is called:
- (a) quantitative analysis (b) qualitative analysis
(c) physical analysis (d) organic analysis

16. Chemical reactions such as precipitation, oxidation or neutralization and measured by:
(i) volumetric, analysis (ii) gravimetric analysis (iii) combustion analysis
(a) Only (i) (b) Only (ii)
(c) (ii) & (iii) (d) ✓ All of them
17. It is a measurable factor or boundary which define the performance and quality of analytical methods.
(a) Quality (b) Quantity
(c) ✓ Parameter (d) All of these
18. Various parameters of validation of any analytical method are:
(i) selectivity & linearity (ii) range & accuracy (iii) precision & error
(a) (i) & (ii) (b) (i) & (iii)
(c) (ii) & (iii) (d) ✓ All of them
19. In acid–base titration if burette is not properly cleaned or rinsed will cause:
(a) random error (b) ✓ systematic error
(c) Both 'a' & 'b' (d) None of them
20. An indeterminate error caused by variations of the procedure, environmental factors and limitations of instrumentation.
(a) ✓ Random error (b) Systematic error
(c) Both 'a' & 'b' (d) None of them
21. It is not dependent on precisions.
(a) Error (b) ✓ Accuracy
(c) Both 'a' & 'b' (d) Name of them
22. The degree of agreement between replicate measurements of the same quantity.
(a) Error (b) Accuracy
(c) ✓ Precision (d) All of these
23. It is the repeatability of a result and is known as the degree of exactness.
(a) ✓ Precision (b) Error
(c) Accuracy (d) Parameter

24. Interaction of matter with radiation energy as a function of wavelength or frequency is called:
- (a) HPLC (b) chromatography
(c) conductometry (d) ✓ spectroscopy
25. They are also known as electronic spectroscopy.
- (i) Ultraviolet spectroscopy (ii) infrared spectroscopy (iii) Visible spectroscopy
- (a) (i) & (ii) (b) ✓ (i) & (iii)
(c) (ii) & (iii) (d) All of them
26. The wavelength range of ultraviolet and visible spectroscopy is:
- (a) 52 to 700nm (b) 92 to 800nm
(c) ✓ 192 to 900nm (d) 212 to 880nm
27. Infrared spectroscopy is an analytical technique introduced in:
- (a) ✓ 1950 (b) 1960
(c) 1970 (d) 1976
28. it is used for specification of functional groups in food products, polymers and industries.
- (a) Ultraviolet spectroscopy (b) Visible spectroscopy
(c) ✓ Infrared spectroscopy (d) Liquid chromatography
29. It is an effective tool for quality control in different industries.
- (a) Visible spectroscopy (b) ✓ Infrared spectroscopy
(c) Liquid chromatography (d) Gas chromatography
30. Electromagnetic radiations lower in energy than visible radiations are called:
- (a) ✓ infra-red radiation (b) ultraviolet radiation
(c) Visible radiation (d) None of them
31. The ordinary IR region extends from 2.5 μm (wavelength) to:
- (a) 7 μm (b) 10 μm
(c) 12 μm (d) ✓ 15 μm

32. It is also known as vibrational spectroscopy.
- (a) Ultraviolet spectroscopy (b) Visible spectroscopy
(c) Infrared spectroscopy (d) Liquid chromatography
33. It is the modern analytical technique which is used for the separation of compounds.
- (a) Ultraviolet spectroscopy (b) Visible spectroscopy
(c) Infrared spectroscopy (d) Chromatography
34. It is a technique used in analytical chemistry for the separation of volatile compounds.
- (a) Visible spectroscopy (b) Infrared spectroscopy
(c) Liquid chromatography (d) Gas chromatography
35. It is a method used in electro-analytical chemistry to find the concentration of solute in solution.
- (a) Spectroscopy (b) Potentiometry
(c) Chromatography (d) Conductometry
36. Used in the analysis of pollutants in water, pharmaceutical and drugs, quality control in the food industry and clinical chemistry.
- (a) Spectroscopy (b) Potentiometry
(c) Chromatography (d) Conductometry

CHEMISTRY 10TH - Multiple Choice Questions

→ INDUSTRIAL CHEMISTRY

CHAPTER# 08

1. Soap is the term for a salt of a:
(a) carboxylic acid
(b) citric acid
(c) sulphuric acid
(d) fatty acid
2. Surfactants reduce the _____ of water.
(a) viscosity
(b) surface tension
(c) boiling point
(d) melting point
3. The carboxylate end of the soap molecule that is attracted to water is called:
(a) hydrophobic end
(b) endpoint
(c) hydrophilic end
(d) None of them
4. The use of potassium hydroxide produced a:
(a) hard soap
(b) soft soap
(c) moderate soap
(d) All of these
5. The citric acid is used in the preparation of cold drinks for:
(a) sweet taste
(b) bitter taste
(c) sour taste
(d) salty taste
6. The centrifuge machine used for separation of:
(a) juice
(b) pH
(c) mud
(d) crystal
7. The abrasives are:
(a) water-soluble minerals
(b) water-insoluble minerals
(c) water semi soluble minerals
(d) water absorbing minerals

8. The harvesting is the most important step of:
- (a) preparation of soap (b) preparation of cold drinks
(c) preparation of sugar (d) preparation of medicines
9. Which of the following is used as jet fuel?
- (a) Kerosene oil (b) Diesel oil
(c) Fuel oil (d) petrol
10. Which one of the following is not a fraction of crude oil?
- (a) Paraffin wax (b) Ammonia
(c) Fuel oil (d) Petroleum coke
11. _____ different products are manufactured through chemical industries.
- (a) 10,000 (b) 100,000
(c) 70,000 (d) more than 70,000
12. Saponification is the reaction of _____ with sodium or potassium hydroxide.
- (a) triglycerides (b) glycerol
(c) soap (d) None of them
13. Animal fats or vegetable oils are the most common sources of:
- (a) citric acid (b) triglycerides
(c) glycerol (d) All of them
14. The use of sodium hydroxide produced a:
- (a) hard soap (b) soft soap
(c) moderate soap (d) All of these
15. Animal fat tallows from cows, such as lard, are, often used for / in:
- (a) preparation of sugar (b) distillation of petroleum
(c) soap making (d) preparation of medicine
16. It is mild, moisturizing and gives a low creamy lather.
- (a) animal fats (b) plant oils
(c) caustic soda (d) potassium hydroxide

17. It causes saponification and is an essential ingredient in soap making.
- (a) Citric acid (b) Lime
(b) Silica (d) ✓ Caustic soda
18. They help in removing grease and dirt from the skin.
- (a) Animal fats (b) Plant oils
(c) Additives (d) ✓ Abrasives
19. The preparation of sugar from sugarcane is composed of _____ steps.
- (a) ✓ 6 (b) 5
(c) 4 (d) 3
20. Sugar crystals are separated in:
- (a) vacuum pans (b) ✓ centrifuge machine
(c) evaporators (d) fractionating towers
21. The basis of soft drinks, the syrup, is prepared by dissolving these ingredients into the water to:
- (a) 25° Brix (b) 45° Brix
(c) ✓ 65° Brix (d) 85° Brix
22. The term "petroleum" refers to:
- (a) ✓ rock oil (b) ground oil
(c) sand oil (d) deep oil
23. Petroleum is a liquid that is _____ than water yet _____ in it.
- (a) heavier, soluble (b) heavier, insoluble
(c) ✓ lighter, insoluble (d) lighter, soluble
24. Petroleum is mostly made up of:
- (a) hydrogen and oxygen (b) hydrogen and nitrogen
(c) hydrogen and silica (d) ✓ hydrogen and carbon

25. In petroleum, the percentage of carbon is found to be:
- (a) 0.1 to 2% (b) 10 to 14%
(c) 40 to 55% (d) ✓ 83 to 85%
26. According to the World Health Organization (WHO), it is the first _____ and so far, only _____ human illness to be declared eliminated globally.
- (a) polio (b) ✓ smallpox
(c) Cholera (d) AIDS
27. It is a key component in the combustion process.
- (a) Air (b) Oxygen
(c) ✓ Both 'a' & 'b' (d) None of them
-

