

CHEMISTRY 2ND YEAR(M.C.QS) NOTES

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Chapter 1

Periodic Classification of Elements

1. _____ elements have been discovered so far.

(100, 110, 120, 150)

2. so far 110 elements have been discovered. Out of these _____ elements are naturally occurring.

(100, 96, 92, 94)

3. _____ classified the then known elements into metals, non metals and their derivatives.

(Dobreiner, Al-Razi, Newlands, Mendeleev)

4. In 1817, a German chemist, _____ made use of the idea of relationship between atomic weights and properties of elements for the classification of elements.

(Dobreiner, Al-Razi, Newlands, Mendeleev)

5. _____ presented the law of triads.

(Dobereiner, Al-Razi, Newlands, Mendeleev)

6. Dobereiner's work led to the law of triads which states that _____.

(Atomic weight of any one element was found to be approximately the mean of the other two elements of triad, Atomic weight of the middle element was found to be approximately the mean of the other two elements of a triad, Atomic number of any one element was found to be approximately the mean of the other two elements of a triad, Atomic number of the middle element was found to be approximately the mean of the other two elements of triad)

7. The law of octaves was given by _____.

(Dobereiner, Al-Razi, Newlands, None of these)

8. Law of octaves states that _____.

(The properties of every 6th element from the given one were similar to the first, the properties of every 9th element from the given one were similar to the first, the properties of every 8th element from the given one were similar to the first, the properties of every 7th element from the given one were similar to the second)

9. "Physical and chemical properties of elements are periodic functions of their atomic weight." This is called _____.

(Dobereiner's Law of Triads, Newlands' Law of Octaves, Mendeleev's Periodic Law, None of these)

10. Lothar Meyer arranged the elements in order of their increasing atomic weights and found that _____.

(Physical properties of the elements were the periodic function of their atomic weights, chemical properties of the elements were the periodic function of their atomic number, physical properties of the elements were the periodic function of their atomic number, chemical properties of the elements were periodic function of their atomic weights)

11. Mendeleev's Periodic table was based on _____.

(Atomic number, Atomic mass, Atomic volume, Electronic Configuration)

12. Mandeleev formulated a rule for the classification of elements and concluded that _____.

(Physical and chemical properties of the elements are periodic functions of their atomic numbers, physical and chemical properties of the elements are periodic functions of their atomic weights, physical properties of the elements are periodic function of their atomic weights, Chemical properties of the elements are periodic functions of their atomic numbers)

13. Modern Classification of elements is based on _____.

(Doberiner's law of Triads, Newlands' law of Octaves, Mendeleev's Periodic Table, None of these)

14. Excluding H and He, the smallest element in the periodic table is _____.

(Lithium, Fluorine, Cesium, Iodine)

15. "Physical and chemical properties of elements are the periodic functions of their atomic numbers." This is called _____.

(Law of Triads, Law of Octaves, Periodic Law, None of these)

16. Moseley's work led to the periodic law, which states that _____.

(the number of the electrons in the 1s energy level increases as the atomic number increases, The properties of the elements are a periodic function of their atomic masses, The x-rays spectra of the elements are more complex than the optical spectra, The properties of elements are the periodic function of their atomic number)

17. A pair of elements in the same family in the periodic table classification is _____.

(Chlorine and carbon, calcium and aluminium, nitrogen and neon, sodium and potassium)

18. In the period, the elements are arranged in strict sequence in order of _____.

(Increasing charges in the nucleus, increasing atomic weight, increasing number of electrons in valence shell, increasing valency)

19. Most of the known elements are metals of _____ of periodic table.

(d-block, p-block, III-group, Zero block)

20. _____ reflects combining capacity of an element.

(Valency, atomic number, ionization energy, ionization potential)

21. As we move from left to right in second period of the periodic table, the gram atomic volume of the elements _____.

(Increases at a constant rate, remains unchanged, decreases, will change indefinitely)

22. The volume in cubic centimeters occupied by one gram atom of the element is called _____.

(Atomic Volume, Atomic weight, Mass number, None of these)

23. In a _____, atomic volume increases with atomic number, from top to bottom, as new shells are added up with increase in atomic number.

(Group, Period, Sub-group, None of these)

24. _____ of the following is a transition element.

(Ni, Rb, Al, As)

25. On moving from left to right across a period in the periodic table, the size of atom generally _____.

(decreases, increases, remains constant, decreases up to IV A group and then increases)

26. The amount of energy required to remove an electron from an atom of an element in the gaseous state I called _____.

(Ionization Potential, Ionization energy, Electron volt, both a and b)

27. Each vertical row of the periodic table includes elements with chemical characteristics that are in general _____.

(identical, similar, different, sometimes identical and sometimes different)

28. The ionization energy _____ in a group from top to bottom with the increase in atomic size.

(Increases, decreases, remains constant, none of these)

29. The lowest ionization energies are found in the _____.

(inert gases, alkali metals, Transition elements, Halogens)

30. Ionization energy is lowest for _____.

(Inert gases, alkali metals, halogens, alkaline earth metals)

31. In the periodic table, the highest ionization energies are for _____.

(Halogens, Noble gases, Alkali metals, Chalcogens)

32. The atomic weight of an element divided by its density is called _____.

(Atomic mass, Atomic volume, Atomic density, Atomic number)

33. Elements in the same family _____.

(have same atomic number, have the same molecular weight, have similar chemical properties, constitute a group of elements with the same electronic configuration)

34. In a given period, the alkali metals have _____.

(smallest atomic size, lowest ionization energy, lowest density, highest electron affinity)

35. Of the following given elements _____ atom has the highest ionization energy.

(Be, F, N, Ne)

36. The value of ionization energy _____ in a period from left to right due to the decrease in atomic size.

(increases, decreases, remains constant, None of these)

37. _____ is the most electronegative element.

(Fluorine, Iodine, Oxygen, Sodium)

38. The unit of ionization energy is _____.

(Joule, Calorie, electron volt, none of these)

39. Of the following elements, _____ element has the highest first ionization potential.

(Boron, carbon, nitrogen, oxygen)

40. The unit of ionization potential is _____.

(Joule, joule per mole, calorie per mole, none of these)

41. In a period, the density of normal elements first _____ and then _____ after reaching a maximum value somewhere in the middle.

(Increases, decreases, remains constant, none of these)

42. Most of the known elements are _____.

(Crystalloids, Metals, Metalloids, Non metals)

43. Melting and boiling points gradually _____ in a periodic table from left to right up to the middle.

(increases, decreases, remains constant, none of these)

44. The electropositive elements form _____.

(acidic oxides, basic oxides, neutral oxides, none of these)

45. _____ of the following elements has the lowest first ionization energy.

(Na, F, I, Cs)

46. The electronegative elements form _____.

(Acidic oxides, Basic oxides, Neutral oxides, none of these)

47. _____ is the most volatile compound.

(HI, HCl, HBr, HF)

48. The ionization energy of nitrogen is more than oxygen because of _____.

(more attraction of electrons by the nucleus, more penetration effect, the extra stability of half filled p-orbitals, the size of nitrogen atom is smaller)

49. The elements of group IIA are called _____.

(Metals, Non-metals, Alkaline earth metals, Transition elements)

50. _____ ion has the largest radius.

(Al⁺³, Cl⁻, F⁻, O⁻²)

51. _____ atom has the smallest size.

(C, F, Li, Rb)

52. _____ of the following has highest first ionization energy.

(Br, Cl, F, I)

53. The most electropositive among the following elements is _____.

(Fe, Na, Cs, Pb)

Chapter 2

Hydrogen

1. Large amounts of atomic hydrogen are present in the atmosphere of _____.

(Earth, Sun, Moon, none of these)

2. Hydrogen atom contains _____ electrons.

(1, 2, 3, 4)

3. During the electrolysis of water hydrogen is liberated at the _____.

(Anode, Cathode, Diode, none of these)

4. The atomic weight of hydrogen is _____.

(1.00, 1.008, 1.08, 1.800)

5. In nature hydrogen exists in _____.

(Gaseous state, Solid state, Liquid state, Plasma state)

6. _____ is the lightest gas.

(Nitrogen, Helium, Oxygen, Hydrogen)

7. Alkali metals do not exist in _____.

(Monoatomic, Diatomic, Triatomic, none of these)

8. Hydrogen generally combines with other elements to form _____.

(Ionic bond, Covalent bond, Polar bond, none of these)

9. Hydrogen may be readily prepared by the action of water on _____.

(Fe, HCl, Zn, Na)

10. In organic compounds, _____ element is found in close association with hydrogen.

(C, N, O, none of these)

11. Ionic hydrides are usually _____.

(liquids at room temperature, good reducing agents, good electrical conductors in solid state, Easily reduced)

12. The atoms of the same element, which have the same atomic number but different mass numbers, are called _____.

(Isotopes, Actanides, Isobars, none of these)

13. The difference in atomic weights or mass numbers of the atoms of the same element is due to _____.

(Different number of electrons in them, different number of protons in them, different number of neutrons in them, none of these)

14. A tritium nucleus has _____.

(one proton and two electrons, one proton and two neutrons, one neutrons and two protons, one proton and three neutrons)

15. Physical properties of elements depend upon the number of _____.

(Protons in the nucleus, neutrons in the nucleus, electrons in the valence shell, both protons and neutrons in the nucleus)

16. Chemical properties of elements depend upon the number of _____.

(electrons in the valence shell, protons in the nucleus, neutrons in the nucleus, protons and neutrons in the nucleus)

17. Chemical properties of elements depend upon their _____.

(Atomic number, Atomic weight, volume, none of these)

18. The hydronium ion is a/an _____.

(ion with formula H_2O^+ , ion with the formula H_3O^+ , free radical rather than an ion, ion formed by removal of H^- from a water molecules)

19. Hydrogen is an important constituent of _____.

(Water, Petroleum, Natural gas, all of these)

20. When steam is passed over red hot coke at $1000^\circ C$, a mixture of carbon monoxide and hydrogen gas is produced. It is known as _____.

(Heavy water, Water gas, Phosgen gas, none of these)

21. The most suitable process for the separation of CO from water gas is _____.

(Bosch Process, Lane's Process, Electrolysis of water, None of these)

22. When steam is passed over iron at 500°C, magnetic oxide and hydrogen gas is produced. This is called _____.

(Bosch Process, Lane's Process, Electrolysis, All of these)

23. The presence of an acid or base renders water _____.

(good conductor of electricity, poor conductor of electricity, very bad conductor of electricity, all of these)

24. The process of loss of oxygen from a substance or addition of hydrogen is called _____.

(Oxidation, Reduction, Hydrogenation, None of these)

25. Hydrogen is a very good _____.

(Reducing agent, Oxidizing agent, Reducing agent as well as oxidizing agent, none of these)

26. Lowering of oxidation state of a metal is termed as _____.

(Oxidation, Reduction, Hydrogenation, All of these)

27. The process of addition of hydrogen (H₂) to a molecule is called _____.

(Oxidation, Reduction, Hydrogenation, all of these)

28. Formation of vegetable ghee from vegetable oil is an example of _____.

(Oxidation, Reduction, Hydrogenation, all of these)

29. Ethylene can be hydrogenated to _____ under pressure at about 300°C, when double bond is changed to single compounds.

(Methane, Ethane, Ethyne, None of these)

30. Hydrogen reacts with halogens to give _____.

(Hydrogen halides, hydrogen hydrides, hydrogen sulphides, All of these)

31. Hydrogen is used in the manufacture of _____.

(Fertilizers, CO₂, O₂, None of these)

32. Hydrogen at the time of its generation during chemical reaction is in the form of atomic state and is called _____.

(Ionic Hydrogen, Nascent hydrogen, atomic hydrogen, none of these)

33. Hydrogen molecule consists of two atoms linked together by a strong _____.

(Ionic bond, Covalent bond, Hydrogen bonding, None of these)

34. Nascent hydrogen is used in the reduction of _____.

(Ionic compounds, Organic compounds, Inorganic compounds, none of these)

35. The compounds formed between two elements are called _____.

(Hydrides compounds, Binary compounds, Tertiary compounds, None of these)

36. Hydrogen reacts with some elements to form binary compounds called _____.

(Halides, Hydrides, Oxides, all of these)

37. The hydrides formed by the transfer of electrons from electropositive metals to hydrogen are called _____.

(Ionic hydrides, covalent hydrides, Complex hydrides, Interstitial hydrides)

38. NaH is an example of _____.

(Ionic hydrides, covalent hydrides, Complex hydrides, Interstitial hydrides)

39. Ionic hydrides ionize to produce _____.

(H-ion, OH-ion, H⁺ion, all of these)

40. The hydrides, which are good conductors of electricity in the fused state, are called _____.

(Ionic hydrides, covalent hydrides, Complex hydrides, Interstitial hydrides)

41. Covalent hydrides generally exist in _____.

(Solid state, Liquid state, Gaseous state, all of these)

42. Covalent hydrides are prepared by the direct action of _____.

(metals with hydrogen, non-metals with hydrogen, transition elements with hydroge, none of these)

43. Hydrides, which are non-stoichimetric in nature, are called _____.

(Ionic hydrides, covalent hydrides, Complex hydrides, Interstitial hydrides)

44. The law of chemical combination is not obeyed by _____.

(Ionic hydrides, covalent hydrides, Complex hydrides, Interstitial hydrides)

45. Electron deficient hydrides are called _____.

(Ionic hydrides, covalent hydrides, Complex hydrides, Interstitial hydrides)

46. Hydrogen occurs in _____.

(One isotopic forms, two isotopic forms, three isotopic forms, four isotopic forms)

47. Atomic hydrogen is _____.

(More reactive than molecular hydrogen, less reactive than molecular hydrogen, very less reactive than molecular hydrogen, all of these)

48. The process of addition of hydrogen to a molecule is called _____.

(Halogenation, Hydrogenation, Sulphonation, Reduction)

Chapter 3

S - Block Elements

1. Out of all the elements of group IA, the highest atomic number is for _____.

(Na, Cs, Rb, K)

2. Out of all the elements of group IA, the highest melting and boiling point is for _____.

(Li, Na, Rb, K)

3. _____ of the following elements has highest ionization potential.

(K, Rb, Cs, Li)

4. Out of all the elements of group IA, the highest heat of hydration is for _____.

(Li, Na, K, Rb)

5. _____ of the elements has highest melting and boiling point.

(Be, Ca, Mg, Ba)

6. _____ of the following elements have highest oxidation potential.

(Na, Li, Rb, K)

7. Out of all the elements of group IIA, the highest density at 20°C is for _____.

8. Out of all the following elements of group IIA, the highest atomic number is for _____.

(Be, Ba, Ca, Sr)

9. The alkali metals possess _____ electrons in their outermost orbitals.

(1, 2, 3, 4)

10. Out of all the elements of group IIA, the highest heat of hydration is for _____.

(Be, Ba, Ca, Mg)

11. _____ of the elements has highest ionic radius.

(Be, Ba, Sr, Ca)

12. Out of all the elements of group IA, the highest heat of hydration is for _____.

(Li, Na, K, Cs)

13. Of all the group II elements, the highest oxidation potential is for _____.

(Li, Be, Ba, Ra)

14. Sodium is not observed in +2 Oxidation State because of its _____.

(high first ionization potential, high second oxidation potential, high ionic radius, high electronegativity)

15. The metallic lustre of sodium is explained by the presence of _____.

(Na⁺ ions, conduction electrons, free protons, a body centred cubic lattice)

16. _____ of the following substances is manufactured by electrolysis of NaCl solution.

(NaOH, Na₂ClO₃, NaClO₃, Na)

17. When NaCl is dissolved in water, the sodium ions become _____.

(Oxidized, Reduced, Hydrolyzed, Hydrated)

18. NaCl imparts a golden yellow colour to the Bunsen flame. This can be interpreted due to _____.

(Low ionization potential of sodium, Photosensitivity of sodium, Sublimation of metallic sodium to give yellow colour, Emission of excess energy absorbed as a radiation in the visible region)

19. The alkaline earth metals possess _____ electron or electrons in their outermost orbitals.

20. Alkali metals form _____.

(Ionic bond, covalent bond, non-polar, Vander waal's forces)

21. Sodium salts constitute _____% of earth's crust.

(2.40, 2.35, 2.30, 2.25)

22. Potassium salts constitute _____% of the earth's crust.

(2.40, 2.35, 2.30, 2.25)

23. Alkaline earth metals occur in nature in _____.

(free state, combined state, both free and combined state, none of these)

24. In general alkali metals act as _____.

(Reducing agents, Oxidizing agents, Both reducing and oxidizing agents, none of these)

25. All alkaline metals except _____ are white in colour.

(Be, Mg, Ca, None of these)

26. In the alkali metal series _____ of the following is most reactive.

(Li, Na, K, Rb)

27. In the alkali metal series, Cesium is the most reactive metal because _____.

(its incomplete shell is nearest to nucleus, the valence electron has a larger orbit than the orbit of the valence electron of any of the others, it exerts considerable Beautiful force on the valence electrons, it is a heavier metal)

28. Alkali metals are _____.

(lighter than water, heavier than water, enlarged than water , all of these)

29. _____ does not belong to alkali metals.

(Li, Na, Rb, K)

30. A graphite anode is used in Down's cell for the production of sodium

because _____.

(It does not react with sodium, it does not react with chlorine, it is easy to fashion in circular form, it floats on the fused sodium chloride)

31. _____ is a reducing agent and a constituent of a gun powder.

(KNO_3 , C, CaCO_3 , Na)

32. Alkaline earth metals form _____ carbides on heating with carbon.

(Stable, Unstable, soluble, none of these)

33. Except lithium, all alkali metal hydroxides are strongly _____.

(acidic in nature, basic in nature, neutral in nature, none of these)

34. Alkaline earth metal carbonates, sulphates and phosphates are _____.

(soluble in water, insoluble in water, sometimes soluble and sometimes insoluble in water, none of these)

35. Alkali metal carbonates, sulphates and phosphates are _____ in water with the exception of Li_2CO_3 and Li_3PO_4 .

(soluble, insoluble, Both soluble and insoluble, none of these)

36. LiCl is soluble in organic solvents while NaCl is not. This is because _____.

(Lattice energy of NaCl is less than LiCl , Li^+ has higher value of hydration energy than that of Na^+ , LiCl is more covalent in nature than NaCl , Li^+ has lower value of hydration energy than Na^+)

37. When burnt in air, Lithium forms _____.

(Normal oxide, Peroxide, Super oxide, none of these)

38. The chlorides of alkali metals and alkaline earth metals are generally _____.

(Ionic, Covalent, non polar, vander waal's forces)

39. Sodium is a _____.

(good conductor of electricity, poor conductor of electricity, bad conductor of electricity, none of these)

40. Sodium reacts vigorously with oxygen on heating to form _____.

(Sodium oxide, Sodium peroxide, sodium superoxide, all of these)

41. Sodium is very reactive with water. Hence due to its high reactivity with water, it is stored in _____.

(Alcohol, Kerosine oil, Benzene, all of these)

42. Sodium reacts vigorously with water, liberating _____.

(Oxygen, hydrogen, Carbonoxide, Neon)

43. Sodium is a powerful _____.

(Reducing agent, oxidizing agent, bleaching agent, all of these)

44. _____ is used as a reducing agent in the preparation of such metals as titanium and zirconium from their chlorides or oxides.

(Mg, Na, Cu, Ag)

45. _____ is used in the synthesis of rubber.

(Mg, Cu, Na, Fe)

46. _____ reducing action is used in the manufacture of certain dyes

and drugs.

(Na, Mg, Cu, Ca)

47. _____ is used often in highway lamps as filaments to produce yellow light.

(Na, Tungston, Mg, Fe)

48. Purification of sodium chloride is accomplished by _____.

(Sublimation, Crystallization, Hydrogenation, Melting)

49. Ice and sodium chloride form a freezing mixture, which is used in _____.

(Refregeration, Preserving fish, Sublimation, None of these)

50. Sodium bicarbonate is commonly called _____.

(Soda Ash, Baking soda, Caustic soda, none of these)

51. Soap is often composed of _____.

(sodium carbonate, calcium carbonate, rubidium carbonate, sodium stearate)

52. Solvay's process is also called _____.

(Haber's Proess, Ammonia Soda Process, Washing Soda Process, Down's Process)

53. _____ is a stronger base.

(NaOH, KOH, LiOH, HCl)

54. Na_2CO_3 is marketed as _____.

(Soda ash, baking soda, caustic soda, none of these)

55. When a solution of sodium carbonate is evaporated, $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$ crystallizes out at room temperature and marketed as _____.

(Soda ash, baking soda, caustic soda, washing soda)

56. By the action of aqueous NaOH on aluminium, _____ is produced.

(H_2 , CO_2 , H_2O , O_2)

57. _____ is used for weighing cotton cloth.

(Gypsum, Soda ash, Magnesium Sulphate, Washing soda)

Chapter 4

P - Block Elements

1. _____ of the following is non-metal.

(Boron, Aluminium, Indium, Thallium)

2. _____ of the following was isolated by Davy in 1807 by electrolysis of moist boric acid.

(Boron, Indium, Aluminium, Gallium)

3. _____ of the following is chemically inert.

(Boron, Indium, Aluminium, Gallium)

4. _____ is not the member of group IIIA.

(B, In, C, Al)

5. The oxides of Boron are _____ in nature.

(Acidic, Basic, Neutral, None of these)

6. _____ forms the most acidic oxide.

(B, Al, Ga, In)

7. Boron bursts into flame at _____.

(600°C, 700°C, 800°C, None of these)

8. B³⁺ cannot exist in aqueous solution because of its _____.

(Strong reducing ability, large size and small charge, small size and large charge, strong oxidizing ability)

9. Orthoboric acid on heating to about 100°C loses a water molecule to form _____.

(Metaboric acid, Pyroboric Acid, Metaboric and Pyroboric acid, none of these)

10. The reduction of metal oxides is sometimes accomplished by using aluminium in the _____.

(Goldschmidt's reaction, Silberchmidt's reaction, Baeyer's reaction, Zilch's reaction)

11. Baeyer's Process is used for the purification of _____.

(Alum stone, Cryolite, Bauxite, none of these)

12. Hall's Process is based on electrolysis of _____.

(Alumina, Gypsum, Borax, none of these)

13. _____ is a better conductor of heat.

(Fe, Sn, Al, none of these)

14. Al₂O₃ formation involves evolution of a larger quantity of heat, which

makes its use in _____.

(Deoxidizer, confectionary, indoor photography, thermite welding)

15. A mixture of iron oxide and aluminium is called _____.

(Thermite, Bauxite, Alum, none of these)

16. Aluminium is used in _____.

(X-ray welding, Spot welding, Thermite welding, none of these)

17. _____ metal is used in photo-flash bulbs.

(Ca, Na, W, Al)

18. The alloy of aluminium, which contains small quantities of manganese, copper and magnesium, is called _____.

(duralumin, Magnalium, Alnico, none of these)

19. The alloy of aluminium with small percentage of magnesium is called _____.

(Duralumin, Magnalium, Alnico, none of these)

20. The aluminium which contains 20% nickel, 20% aluminium, 50% iron and 10% cobalt is called _____.

(Duralumin, Magnalium, Alnico, none of these)

21. A magnet made of _____ will lift approximately 4000 times of its own weight of iron.

(Duralumin, Magnalium, Alnico, none of these)

22. An alloy of aluminium made by alloying 5-15% aluminium and has a golden lustre is called _____.

(duralumin, Magnalium, Aluminium Bronze, none of these)

23. All the alums crystallize to yield _____.

(Octahedral crystal, Tetrahedral crystal, Trigonal crystal, Linear crystal)

24. The process of permanent dyeing is called _____.

(Mordanting, Painting, Calination, none of these)

25. The solvent used in the extraction of aluminium from its ore is _____.

(Cryolite, Bauxite, Molten sodium chloride, Water)

26. The group IV-A of the periodic table consists of _____ elements.

(three, four, five, six)

27. In group IV-A the metallic character down the group _____.

(Increases, Decreases, remains constant, none of these)

28. _____ does not contain aluminium.

(Felsper, Cryolite, Kaoline, Anhydrite)

29. Carbon differs from other members of its group due to the absence of _____ electrons.

(s, p, d, none of these)

30. Elements, which exist in two or more physical or molecular forms, are called _____.

(Isotopes, Allotropes, Isobars, none of these)

31. Out of the following elements of group IV A of the periodic table the higher density is for the element _____.

(C, Si, Ge, Pb)

32. Diamond is a _____ conductor of electricity and heat.

(Poor, Good, None, none of these)

33. Out of all the elements of group IV the higher density is for _____.

(C, Si, Ge, Pb)

34. _____ is used as a lubricant for machinery and also as a moderator in nuclear reactors.

(Diamond, Graphite, Epsom, Gypsum)

35. Highest melting and boiling point is for _____.

(C, Ge, Si, Pb)

36. PbO behaves as a/an _____.

(Amphoteric oxide, basic oxide, super oxide, sub oxide)

37. White lead is prepared by _____.

(Dutch process, Solvay's Process, Down's Process, none of these)

38. _____ member of the group V-A show several oxidation states such as -1, +2, +3, +4 and +5.

(P, As, Sb, N)

39. _____ member of the group V-A forms multiple bonds.

(P, Bi, As, N)

40. _____ member of group V-A does not show allotropy.

(P, Sb, N, As)

41. In _____ solution glass is soluble.

(HNO₃, HCl, HF, H₂CO₃)

42. On industrial scale Nitric acid is prepared by _____.

(Dutch Process, Birkland-Eyde's Process, Solvay's Process, Down's Process)

43. In Ostwald's Process the substance used to oxidize ammonia is _____.

(Zn, Pt, CO, none of these)

44. Copper reacts with dilute nitric acid to form _____.

(Nitric oxide, nitrogen peroxide, nitrous oxide, none of these)

45. Nitric acid is a strong _____.

(reducing agent, bleaching agent, oxidizing agent, none of these)

46. A mixture consisting of one volume of concentrated HNO₃ and three volumes of concentrated HCl is called _____.

(Aqua regia, Meta stannic acid, Alum, Sandhur)

47. Lead tetraethyl is used as _____.

(Fire extinguisher, Pain Killer, Mosquito repellent, Petroleum Additive)

48. Nitric acid is used in the manufacture of _____.

(Cellulose, Varnishes, T.N.T, all of these)

49. _____ allotropic form of coal is hard.

(Peat, Lignite, Anthracite, Graphite)

50. _____ molecule is paramagnetic nature.

(O, S, Se, Po)

51. _____ element exhibits the largest number of allotropic forms amongst the elements.

52. _____ element is the most abundant element in earth's crust.

(Ca, Si, C, O)

53. There are _____ rings in unit cell of Rhombic sulphur.

(12, 16, 20, 24)

54. Graphite is used in nuclear reactor as _____.

(A Lubricant, A fuel, for lining the inside of reactor as an insulator, for reducing the velocity of neutrons)

55. In its unit cell, monoclinic sulphur possesses how many S8 rings.

(12, 6, 3, 0)

56. H₂S is a good _____.

(reducing agent, oxidizing agent, bleaching agent, none of these)

57. In the aqueous solution H₂S ionizes to produce _____ ions and behaves as a weak acid.

(H⁺, H⁻, OH⁻, none of these)

58. H_2S reduces halogens to _____.

(hydrides, halides, halogens, none of these)

59. By _____ process the H_2SO_4 produced is pure and can be produced of any desired strength.

(Lead Chamber Process, Contact Process, Down's Cell, none of these)

60. _____ gas is responsible for rising of bread.

(CO , CO_2 , NH_3 , O_2)

61. At what temperature H_2SO_4 completely dissociates into sulphur trioxide and water.

(416°C , 516°C , 616°C , 716°C)

62. Concentrated sulphuric acid acts as a _____.

(Reducing agent, Oxidizing agent, Dehydrating agent, None of these)

63. _____ charcoal is used to decolourise brown sugar solution.

(Wood, Coconut, Animal, Sugar)

64. In the sale of diamonds the unit of weight is carat. One carat is equal to _____.

(100mg, 200mg, 300mg, 400mg)

65. Hot concentrated sulphuric acid acts as an _____ usually itself reduced to sulphur dioxide.

(Dehydrating, Oxidizing, Reducing, none of these)

66. _____ are the two elements that find wide application in transistor

industry.

(Silicon and Germanium, Carbon and Platinum, Iridium and Germanium, Tungsten and Platinum)

67. In the manufacture of certain explosives such as nitroglycerine, trinitrotoluene and gun-cotton etc. Sulphuric acid is used as a _____.

(Oxidizing agent, Reducing agent, Dehydrating agent, none of these)

68. _____ prepared chlorine in 1774, by the action of hydrochloric acid on manganese dioxide.

(Cavendish, C.W. Scheele, Sir Humphry Davy, Lane)

69. _____ suggested the name chlorine for the gas produced by the action of hydrochloric acid on manganese dioxide.

(Sir Humphry Davy, C.W. Scheele, Cavendish, none of these)

70. Chlorine is obtained by reacting concentrated HCl with _____ agent, such as MnO_2 , $KClO_3$, $KMnO_4$.

(Reducing, oxidizing, dehydrating, none of these)

71. Electrolysis of Brine produces _____.

(Chlorine, Hydrogen, H_2S , Nitrogen)

72. The process based on the oxidation of hydrochloric acid with oxygen is _____.

(Nelson's Cell, Contact Process, Down's Process, Deacon's Process)

73. _____ process is used for the production of chlorine gas.

(Deacon's, Contact, Solvay's, Electrolysis of water)

74. Chlorine gas is _____ in colour.

(Yellow, Greenish Yellow, Violet, Blue)

75. _____ produces inflammation of the nose and throat when breathed in considerable quantities.

(Nitrogen, Carbon dioxide, Chlorine, Hydrogen Sulphide)

76. To kill bacterial, most of the drinking water is treated with _____.

(Nitrogen, Carbon dioxide, Chlorine, Hydrogen Sulphide)

77. Chlorine is used in the preparation of poisonous gases of warfare, such as _____.

(COCl₂, H₂S, HCl, none of these)

78. In phosphorus oxide the number of oxygen atoms bonded to each phosphorus atom is _____.

(1, 2, 3, 4)

79. Of the following elements the only one which does not exhibit allotropy is _____.

(P, As, Sb, Bi)

80. Phosgene is the common name of _____.

(Carbon dioxide and Phosphine, Phosphoryle chloride, Carbonyle Chloride, Carbon Tetrachloride)

81. Out of all the elements of group VI A, the highest melting and boiling point is for _____.

(Te, Se, S, Pb)

82. In group VIA highest electronegativity is for _____.

(S, O, Pb, Se)

83. Large deposits of sulphur in nature are found as _____.

(Sulphuric acid, hydrochloric acid, free sulphur, none of these)

84. On the basis of available data of the structure of monoclinic sulphur, it probably consists of _____ chains.

(S₆, S₂, S₄, S₈)

85. Rhombic sulphur consists of _____.

(S₈ chains, S₂ chains, S₄ rings, S₈ rings)

86. Pure sulphuric acid is a solid compound which _____.

(Is always colloidal, slowly decomposes to form SO₂, Seves as a useful source for H₂S, has never been observed)

87. The form of sulphur, which is stable at room temperature and normal atmospheric pressure, is _____.

(orthorhombic, hexagonal, mono clinic, amorphous)

88. When H₂S gas is dissolved in aqua regia, the function of HCl in the mixture is to _____.

(oxidize the sulphur, oxidize the mercury, complex the sulphur, complex the mercury)

89. When liquid sulphur at one atmosphere pressure is very slowly cooled, unless super cooling occurs, the first solid to appear is _____.

(monoclinic sulphur, Rhombic sulphur, Hexagonal sulphur, metallic sulphur)

90. The synthesis of ethers from alcohol depends on the fact that sulphuric acid is a good _____.

(oxidizing agent, reducing agent, complexing agent, dehydrating agent)

91. _____ of the following has the highest catenation capability.

(Oxygen, Sulphur, Selenium, Tellurium)

92. the halogen with the highest ionization potential is _____.

(F, Cl, I, At)

93. The halide ion with the highest hydration energy is _____.

(F⁻, Cl⁻, I⁻, At⁻)

94. Hydrofluoride acid is _____.

(a powerful oxidizing agent, a weak acid, a strong acid, a good reducing agent)

95. _____ of the following is most powerful oxidizing agent.

(F₂, Cl₂, Br₂, I₂)

96. _____ of the following exhibits the largest electrical conductivity in the liquid state.

(F₂, Cl₂, Br₂, I₂)

97. _____ of the following exhibits the highest bond energy.

(F₂, Cl₂, Br₂, I₂)

98. _____ does not form its oxy acids.

(F₂, Cl₂, Br₂, I₂)

99. The colour of I_2 solution can be discharged by shaking a aqueous solution of _____.

(Sulphur dioxide, sodium thiosulphate, sodium sulphite, sodium sulphate)

100. Bleaching powder is obtained by the interaction of Cl_2 and _____.

(a dilute solution of $Ca(OH)_2$, conc. Solution of $Ca(OH)_2$, dry CaO , dry slaked lime)

Chapter 5

Transition Elements

1. Transition elements are those in which _____ orbitals are in the process of completion.

(d, f, s, d or f)

2. Transition elements are located between _____ elements in the periodic table.

(s and p block, s and f block, d and p block, none of these)

3. Out of total 110 elements known, there are more than _____ transition elements.

(40, 50, 60, 70)

4. Elements in which d-orbitals are in the process of completion are called _____ elements.

(outer transition, inner transition, non-transition, none of these)

5. _____ of the following is transition element.

(Sr, Sn, Cr, B)

6. _____ of the following elements is not included in the list of transition elements.

(Ca, Cu, Cr, CO)

7. Due to the addition of electrons in inner f-orbitals atomic and ionic radii of f-block elements have a regular trend. This is called _____.

(Contraction, Lanthanide contraction, actinide contraction, none of these)

8. The transition elements usually have very _____ melting and boiling points.

(low, high, intermediate, none of these)

9. Transition elements show a tendency of _____.

(high reactivity, less reactivity, very high reactivity, none of these)

10. Finely divided iron is used in _____.

(Haber Process, Catalytic Hydrogenation, Oxidation of ammonia to nitric oxide, Contact Process)

11. _____ reagent can be used to identify Cu^{2+} ion.

(Nitric acid, Sulphuric acid, Sodium hydroxide, Potassium chromate)

12. Vanadium pentoxide is used in _____.

(Haber Process, Oxidation of sulphur dioxide to sulphur trioxide, oxidation of ammonia to nitric oxide, Contact Process)

13. _____ is the important ore of copper.

(Malachite, Bauxite, Blue Vitriol, Alumina)

14. Copper is used in _____.

(Haber Process, Oxidation of ethyl alcohol to acetaldehyde, oxidation of ammonia to nitric oxide, Contact Process)

15. Bessemer converters are used to get _____.

(Aluminium, Copper, Steel, Sodium)

16. Titanium is used as catalyst in _____.

(Haber Process, Catalytic Hydrogenation, Oxidation of ammonia to nitric oxide, Polymerization of ethylene into polyethylene)

17. Platinum or Palladium is used as catalyst in _____.

(Haber Process, Catalytic Hydrogenation, Oxidation of ammonia to nitric oxide, Contact Process)

18. _____ of the following does not belong to d-block elements.

(Chromium, Cobalt, Silicon, Copper)

19. Compounds attracted into a magnetic field are called _____.

(Magnets, Paramagnets, Diamagnets, none of these)

20. Transition metal compounds, which show paramagnetism, have _____.

(unpaired electrons, paired electrons, unpaired protons, paired protons)

21. A substance, which has even number of electrons and has paired spin is called _____.

(Ferromagnetic, Paramagnetic, Diamagnetic, none of these)

22. Magnetic moment is measured with help of _____.

(Guoy's balance, Spring balance, Physical balance, Cavendish Apparatus)

23. _____ property provides information about the presence of unpaired electrons in an atom or ion.

(Dipole moment, Magnetic moment, torque, none of these)

24. By measuring the magnetic moment values we can measure _____.

(Nature of the transition metal compound, oxidation state of the transition metal, both nature and oxidation state of transition metal compound, none of these)

25. Transition elements show variable valencies because of the involvement of the d-electrons in addition to _____.

(p-electrons, f-electrons, d-electrons, e-electrons)

26. The empty spaces between atoms of transition metals in their crystal lattices are called _____.

(Vacant spaces, valence spaces, interstices, none of these)

27. The formation of non-stoichiometric compounds is due to the defects in solid structure and _____.

(Variable valency of transition elements, even number of electrons, even number of protons, unpaired electrons)

28. Interstitial compounds have _____ formula.

(definite, half, indefinite, no)

29. Strong paramagnetism is called _____.

(diamagnetism, ferromagnetism, both diamagnetism and ferromagnetism, none of these)

30. When a number of molecules or negatively charged ions combine with a central d-block atom or ion to form complex ion or molecule, _____ is formed.

(a co-ordinate compound, interstitial compound, di-atomic compound, none of these)

31. In coordinate bonding the molecules or ions, which bond onto the central metal ion or atom, are called _____.

(actanides, Lanthanides, Ligands, none of these)

32. Ligands are _____.

(electron pair donors, electron pair acceptors, neutral, none of these)

33. $[\text{Ni}(\text{CN})_4]^{2-}$ is an example of _____.

(Square planar, tetrahedral complexes, octahedral complexes, none of these)

34. $[\text{Cu}(\text{NH}_3)_4]^{2+}$ is an example of _____.

(Square planar, tetrahedral complexes, octahedral complexes, none of these)

35. MnO_4^- is an example of _____.

(Square planar, tetrahedral complexes, octahedral complexes, none of these)

36. CrO_4^{2-} is an example of _____.

(Square planar, tetrahedral complexes, octahedral complexes, none of these)

37. $[\text{Cu}(\text{CN})_4]^{3-}$ is an example of _____.

(Square planar, tetrahedral complexes, octahedral complexes, none of these)

38. $[\text{Zn}(\text{NH}_3)_4]^{2+}$ is an example of _____.

(Square planar, tetrahedral complexes, octahedral complexes, none of these)

39. $[\text{Fe}(\text{CN})_6]^{3-}$ is an example of _____.

(Square planar, tetrahedral complexes, octahedral complexes, none of these)

40. $[\text{Fe}(\text{CN})_6]^{4-}$ is an example of _____.

(Square planar, tetrahedral complexes, octahedral complexes, none of these)

41. $[\text{Ni}(\text{NH}_3)_6]^{2+}$ is an example of _____.

(Square planar, tetrahedral complexes, octahedral complexes, none of these)

42. $[\text{Co}(\text{NH}_3)_6]^{3+}$ is an example of _____.

(Square planar, tetrahedral complexes, octahedral complexes, none of these)

43. In the system of naming complex coordinate compounds cations are named _____ anions.

(after, before, inbetween, none of these)

44. The names of _____ are usually unchanged.

(anionic ligands, cationic ligands, neutral ligands, none of these)

45. NH_3 is an example of _____ ligand.

(anionic, cationic, neutral, none of these)

46. H_2O is an example of _____ ligand.

(anionic, cationic, neutral, none of these)

47. The suffix "ate" at the end of the name of the coordinate complex ion represents a/an _____.

(cation, anion, cathode, anode)

48. A mixture of iron sulphide and copper sulphide is called _____.

(gangue, matte, matter, residue)

49. Sulphide ore is concentrated by _____.

(Froth floatation Process, Dutch Process, Bessemerization, none of these)

50. _____ does not copper.

(Carborundum, Azurite, Blue Vitriol, Malachite)

51. Utensils used to carry out fermentation are made of _____.

(Cu, Fe, Al, Ca)

52. An alloy of copper, which contains 80% copper and 20% zinc, is called _____.

(Brass, Bronze, Bell metal, none of these)

53. Copper sulphate reacts with solution of potassium iodide giving _____.

(sulphur dioxide, iodine, copper oxide, potassium oxide)

54. An alloy of copper, which contains 90% Cu and 10% Sn is called _____.

(Bronze, Brass, Bell Metal, all of these)

55. An alloy of copper, which contains 80% Cu and 20% Sn is called _____.

(Bronze, Brass, Bell metal, all of these)

56. The substance attracted by magnetic field is known as _____.

(diamagnetic, paramagnetic, antimagnetic, all of these)

57. Copper sulphate is commonly called _____.

(Nila Thotha, Lunar Caustic, Surkh Kahi, none of these)

58. Silver nitrate is commonly called _____.

(Nila Thotha, Lunar Caustic, Surkh Kahi, none of these)

59. Stainless steel is _____.

(a mixture, a compound, an element, all of these)

60. Potassium dichromate is commonly called _____.

(Nila Thotha, Lunar Caustic, Surkh Kahi, none of these)

61. Manganese differs from most other transition elements because it reacts with _____.

(oxygen, water, sulphur, iodine)

62. _____ of the following elements can be included in the category of transition elements.

(Cu, Al, Ar, At)

63. Potassium ferrocyanide is a _____.

(normal salt, mixed salt, double salt, complex salt)

64. _____ of the following combination is included in the Iron triad of elements.

(Pd and Pt, Mn and Hg, Co and Ni, V and Ti)

65. _____ is a blue crystalline solid which is freely soluble in water.

(Nila Thotha, Lunar Caustic, Surkh Kahi, none of these)

66. _____ is an orange crystalline solid which is freely soluble in water.

(Nila Thotha, Lunar Caustic, Surkh Kahi, none of these)

67. _____ is a yellow crystalline solid which is freely soluble in water.

(Nila Thotha, K_2CrO_4 , Surkh Kahi, none of these)

68. _____ is a colourless crystalline solid.

(Nila Thotha, Lunar Caustic, Surkh Kahi, none of these)

69. _____ is used as fungicide and germicide.

(Nila Thotha, Lunar Caustic, Surkh Kahi, none of these)

70. Ferric oxide is _____.

(a basic anhydride, an acid anhydride, an amphoteric anhydride, green in colour)

71. Potassium dichromate is a strong _____.

(reducing agent, oxidizing agent, dehydrating agent, all of these)

72. The densest element is _____.

(Pb, Hg, Pt, Os)

73. The most strongly ferromagnetic element is _____.

(Fe, Co, Ni, Os)

74. Alloying of metals serves to inhibit _____.

(Corrosion, Froth Floatation, Erossion, None of these)

75. Mechanical strains can be removed by _____.

(heat treatment, polishing the metal surface, both heat treatment and polishing the metals surface, none of these)

76. _____ has the lowest density.

(Cu, Ni, Sc, Zn)

77. Galvanizing is done by dipping clean iron sheet in a zinc chloride bath and _____.

(heating, rusting, froth floatation, alloying)

78. There are two well known theories to explain the phenomenon of corrosion namely _____.

(Acid theory, Electromechanical theory, electrochemical theory, acid and electromechanical theory)

79. _____ one of the following metals exists in liquid form.

(Sc, Y, La, Hg)

80. The process of depositing a thin layer of tin on base metals to protect them from corrosion is called _____.

(Exposure, tin plating, Fixing, none of these)

81. The most strongly ferromagnetic element is _____.

(Fe, Ni, S, C)

82. The property of a substance which permits it being drawn into wire is called _____.

(softness, Ductility, Brittleness, Hardness)

83. One of the constituent of German silver is _____.

(Ag, Cu, Mg, Al)

84. When potassium permanganate is added to a saturated aqueous solution of potassium hydroxide, _____ gas is evolved.

(Hydrogen, Oxygen, Carbon dioxide, none of these)

85. _____ reagent can be used to identify nickel ion.

(Resorcinol, Dimethyl glyoxime, Dimethyl Benzidine, Potassium Ferrocyanide)

86. _____ of the following is the transition element.

(Sr, Sn, Cr, Fe)

87. Bessemer converters are used to get _____.

(Aluminium, copper, steel, none of these)

88. _____ is not the ore of copper.

(Blue vitriol, Cuprite, Chalcocite, Steel)

89. _____ of the following elements is not included in the list of transition elements.

(Ca, Cu, Cr, Co)

90. _____ one of the following does not belong to d-block elements.

(Chromium, Silicon, Cobalt, Nickel)

Chapter 6

Organic Chemistry

1. The branch of chemistry which deals with the study of compounds containing carbon as a essential element is called _____.

(Organic chemistry, Inorganic chemistry, Physical chemistry, all of these)

2. The first organic compound synthesized in the laboratory is _____.

(Methane, Urea, Acetic Acid, Glucose)

3. _____ of the following is not an organic compound.

(CH₄, CO₂, CH₂-CH₂, CH₃OH)

4. _____ of the following is not an organic compound.

(Penicillin, Urea, Oxalic acid, Plaster of Paris)

5. _____ is the important sources of naturally occurring compounds of carbon.

(Animals, Plants, Rock salts, Sea water)

6. _____ is not a component of coal.

(H, O₂, N, Si)

7. Hard black form of coal containing 92 - 98% carbon is called _____.

(Anthracite, Sub-bituminous coal, Bituminous coal, Lignite)

8. The most abundant form of coal and is used as energy source and carbonization for coke, coal tar and coke-oven is called _____.

(Anthracite, sub-bituminous coal, Bituminous coal, Lignite)

9. Form of coal used at power generating stations is called _____.

(Anthracite, Sub-bituminous coal, Bituminous coal, Lignite)

10. A soft and brown form of coal which contains 50 to 60% carbon is called _____.

(Anthracite, Sub-bituminous coal, Bituminous coal, Lignite)

11. In Pakistan deposits of lignite are found at _____.

(Dandot, Saindak, Khewra, none of these)

12. _____ is a pure carbon.

(Coke, Coal gas, Coal tar, none of these)

13. Its major constituents are hydrogen (50%), methane (35%) and carbon monoxide (8%).

(Coke, coal gas, coal tar, none of these)

14. Number of organic compounds present in coal tar is _____.

(115, 215, 315, 415)

15. Residue left after fractional distillation of coal tar is called _____.

(Pitch, Dutch, Gangue, Matte)

16. Petroleum in the unrefined form is called _____.

(Coke, Coal gas, Crude oil, Rock oil, both crude oil and rock oil)

17. Natural gas mainly consists of _____.

(Methane, Ethane, propane, Butanes)

18. In Pakistan there are vast reserves of natural gas at _____ in Baluchistan.

(Bandot, Khewra, Saindak, Sui)

19. _____ is a mixture of methane, ethane, propane and butane, used as a fuel and for making other organic chemicals.

(Refinery gas, Gasoline, Kerosene oil, gas oil)

20. _____ is a mixture of hydrocarbons containing 5-8 carbon atoms and boiling in the range of 40-180°C.

(Refinery gas, Gasoline, Kerosene oil, gas oil)

21. _____ is a mixture of hydrocarbons having 11-12 carbon atoms and boiling point in the range of 250°C.

(Refinery gas, Gasoline, Kerosene oil, gas oil)

22. A mixture of hydrocarbons having 13-25 carbon atoms is called _____.

(Refinery gas, Gasoline, Kerosene oil, gas oil)

23. On strong heating the fractions containing the larger hydrocarbon molecules are broken up into smaller and more volatile molecules, this is called _____.

(Sublimation, Cracking, Roasting, Refining)

24. Cracking is also termed as _____.

(Pyrolysis, Refining, Polymerization, Hydrohalogenation)

25. A large number of organic compounds, especially the unsaturated ones,

show a great tendency to unite. This process is termed as _____.

(Pyrolysis, Cracking, Polymerization, none of these)

26. An isomer of ethanol is _____.

(Dimethyl ether, Diethyl ether, Ethylene glycol, Methanol)

27. Organic compounds made up of carbon and hydrogen are called _____.

(Polymers, Hydrocarbons, Butanes, none of these)

28. Organic compounds other than the hydrocarbons may be considered to be derived from the hydrocarbons by the replacement of one or more of their _____ atoms with atoms or groups of atoms of other element.

(Carbon, Hydrogen, Nitrogen, none of these)

29. When ethylene is heated under pressure, a transparent solid polymer, _____ is obtained.

(Polyethene, Ethane, Methane, None of these)

30. An atom or group of atoms, which confers characteristic properties to an organic molecule, is called _____.

(Radical, Functional group, Polymer, none of these)

31. Compounds having same molecular formula but different structures are said to be _____.

(Polymers, Isomers, Radical, Functional group)

32. The quality of petroleum is determined by _____.

(Decane number, octane number, hexane number, none of these)

33. _____ of the following obey isomerism.

(CO₂, C₂H₆O, CuSO₄, none of these)

34. Two or more than two different compounds having the same molecular formula but different carbon chains or skeletons are said to be _____.

(Chain isomers, position isomers, functional group isomers, metamers)

35. The kind of isomerism which depends upon the relative position of the group, or the position of double or single bond in case of unsaturated compounds is termed as _____.

(Chain isomerism, Position isomerism, Functional Group isomerism, Metamerism)

36. Isomerism, which involves compounds having the same molecular formula, but different functional groups are called _____.

(Chain isomerism, Position isomerism, Functional Group isomerism, Metamerism)

37. _____ is exhibited by compounds having the same functional group but different alkyl attached to the same multivalent atom.

(Chain isomerism, Position isomerism, Functional Group isomerism, Metamerism)

38. In cracking usually catalyst used is _____.

(Pt, Aluminosilicate, Ni, Tetra-ethyl lead)

39. Iso-butane exhibited _____.

(Chain Isomerism, Position Isomerism, Functional group Isomerism, Metamerism)

40. In CCl₄ molecule the four valencies of carbon atom are directed towards the corners of a _____.

(Cube, Hexagon, Prism, Tetrahedron)

41. Tetrahedral nature of bonding in carbon atom was first shown by _____.

(Wohler, Vant Hoff and LeBel, Lewis, Kekule)

42. The general formula $(RCO)_2O$ represents _____.

(An ether, ketone, an ester, an acid anhydride)

43. Formation of alkane by the action of zinc on alkyl halide is called _____.

(Frankland reaction, Wurtz reaction, Cannizzaro's reaction, Kolbe's reaction)

44. _____ of the following are isomers.

(Methyl alcohol and dimethyl ether, Ethyl alcohol and dimethyl ether, Acetone and Acetaldehyde, Propanoic acid and propanone)

45. The isomers must have the same _____.

(Structural formula, molecular formula, chemical properties, physical properties)

46. _____ has the longest bond length.

($C = C$, $C \equiv C$, $C - C$, all of these)

47. In alkanes all $C - C$ bonds have _____.

(single bond, double bond, triple bond, none of these)

48. Removal of one of the hydrogen atoms of an alkane produces a _____.

(alkyl group, ethyl group, methyl group, none of these)

49. Compounds in which two alkyl groups are attached to an oxygen atom are called _____.

(alkanes, ethers, alcohols, isomers)

50. Many hydrocarbons contain more than one OH groups in a molecule. Molecules of this type are called _____.

(Ethers, Polyhydroxy alcohols, aldehydes, none of these)

51. _____ is the common name of methanol.

(formaldehyde, acetaldehyde, propionaldehyde, none of these)

52. Compounds which contain carbonyl group but differ from aldehydes in that two alkyl groups are attached to the carbon of carbonyl group are called _____.

(Ethers, Ketons, Alcohols, none of these)

53. _____ is the common name of propanone.

(Acetone, ketone, Diethyl Ketone, none of these)

54. Benzene is a _____.

(Heterocyclic compound, Alicyclic compound, Aromatic compound, Acyclic)

55. Common name of formic acid is _____.

(Methanoic acid, Ethanoic acid, Propanoic acid, none of these)

56. The properties of organic compounds are due to _____.

(Covalent bonds, Functional groups, Ionic bonds, None of these)

Chapter 7

Hydrocarbons

1. Organic compounds, which contain element carbon and hydrogen only are called _____.

(Hydrocarbons, Ethers, Ketones, none of these)

2. The number of hydrocarbons is very large because of the property of hydrogen to _____, with it self in the form of chains and rings.

(Combine, Catenate, Sulphonation, none of these)

3. Carbon usually exhibits a covalency of _____.

(Two in most of its compounds, three in most of its compounds, four in most of its compounds, none of these)

4. Hydrocarbons, which contain single bonds, are called _____.

(alkanes, alkenes, alkynes, none of these)

5. Hydrocarbons, which contain double bonds, are called _____.

(alkanes, alkenes, alkynes, none of these)

6. Hydrocarbons, which contain triple bonds, are called _____.

(alkanes, alkenes, alkynes, none of these)

7. The alkanes have _____.

(tetrahedral frame work, planar molecules, linear structure, none of these)

8. The alkynes have _____.

(tetrahedral frame work, planar molecules, linear structure, none of these)

9. The alkenes have _____.

(tetrahedral frame work, planar molecules, linear structure, none of these)

10. Saturated Hydrocarbons are also called _____.

(Alkanes, Olefins, Alkenes, Alkanes and Olefins)

11. Unsaturated hydrocarbons are also called _____.

(Alkenes, Paraffins, alkanes, none of these)

12. Alkenes are characterized by the presence of _____ bond between two carbon atoms.

(single, double, triple, none of these)

13. Alkanes or paraffins are characterized by the presence of _____ bond between two carbon atoms.

(Single, double, triple, none of these)

14. Alkynes are characterized by the presence of _____ bond between two carbon atoms.

(single, double, triple, none of these)

15. Alkanes are also called _____.

(Paraffins, Olefins, Aldehydes, none of these)

16. Alkenes are also called _____.

(Paraffins, Olefins, Carbonyl, none of these)

17. An alkane hydrocarbon chain on cyclization would result in the formation of _____.

(Alicyclic compound, aromatic compound, ethers, none of these)

18. Benzene is the simplest example of hydrocarbon called _____.

(Alicyclic, aromatic, open chain, none of these)

19. Solid CH₄ is _____.

(molecular solid, covalent solid, ionic solid, does not exist)

20. Methane is also known as _____.

(oil gas, marsh gas, gasoline, none of these)

21. A liquid hydrocarbon is converted into a mixture of gaseous hydrocarbon by _____.

(Cracking, Hydrolysis, Oxidation, Reduction)

22. _____ is obtained in the laboratory by heating a mixture of sodium acetate and soda lime.

(Alcohol, Ethene, Methane, none of these)

23. Alkenes undergo _____.

(addition reaction, substitution reaction, both addition and substitution reaction)

24. _____ does not react with aqueous solution of acids, alkalies, or potassium permanganate or other oxidizing agents and most of the usual laboratory reagents.

(Benzene, Ether, Methane, Acetic acid)

25. Bromine reacts with methane when the reaction is catalyzed by _____.

(Sunlight, high frequency radiation, diffused sunlight, nickel)

26. In methane the replacement of hydrogen by NO_2 is called _____.

(Pyrolysis, Nitration, Halogenation, none of these)

27. Methane when heated to extreme temperature in the absence of air undergoes thermal decomposition, called _____.

(Nitration, Catalytic oxidation, Pyrolysis, none of these)

28. Urea, a useful fertilizer, is prepared on industrial scale from _____.

(Natural gas, Coal, Coke, Petroleum)

29. Carbon black is a raw material for paints and automobile tyres and is prepared from _____.

(Ethane, Ethene, Methane, none of these)

30. C_2H_6 is called _____.

(Methane, Ethane, Methanol, none of these)

31. _____ is obtained in the laboratory by heating sodium propanoate and soda lime.

(Methane, Ethane, Ethene, none of these)

32. In the laboratory ethane is prepared by the reaction called _____.

(Sabatier-Senderens Reaction, Pyrolysis, Catenation, Hydrohalogenation)

33. When an aqueous solution of sodium or potassium salt of mono-carboxylic acid is subjected to electrolytic, corresponding alkane is formed. This reaction is called _____.

(Sabatier-Senderens Reaction, Kolbe's Electrolysis, Polymerization,

chlorination)

34. On burning _____ produces a considerable amount of heat energy which may be used for welding process.

(Ethane, Benzene, Ethene, none of these)

35. _____ is found to be present in wood gas and coal gas.

(Methane, Ethene, Ethane, Benzene)

36. _____ is prepared on a small scale in the laboratory by heating together ethyl alcohol and sulphuric acid.

(Methane, Ethane, Ethylene, none of these)

37. The elimination of hydrogen halide (HX) from adjacent carbon atoms is called _____.

(Pyrolysis, Chlorination, Dehydrohalogenation, none of these)

38. _____ process is important in the hardening of vegetable and animals oils to produce solid fats which are used to make margarine.

(Pyrolysis, Catenation, Hydrogenation, Dehydrohalogenation)

39. When a mixture of ethene and air is passed over heated silver under pressure, we get _____.

(Epoxide, Superoxide, Suboxide, none of these)

40. The negative part of the addendum adds on to the carbon atom joined to the least number of hydrogen atoms. The statement is called _____.

(Markownikoff's rule, Peroxide effect, Theile's theory, Baeyer's strain theory)

41. Baeyer's test is the basis for detection of a _____ bond in an organic molecule.

(single, double, triple, none of these)

42. _____ was used in first world war.

(Phosgene gas, Mustard gas, Oil gas, Coal gas)

43. When a mixture of CO, C₂H₄ and C₂H₂ is passed through ammonical cuprous chloride solution then _____.

(Acetylene and CO are absorbed, CO is absorbed, C₂H₄ is absorbed, Nothing happens)

44. Ethylene dichloride is also called _____.

(Mustard gas, Dutch liquid, Polyethene, none of these)

45. _____ is used to manufacture mustard gas which is poisonous gas used as war gas.

(Ethane, Methane, Ethylene, none of these)

46. _____ is most found in alkenes.

(Chain isomerism, Geometrical isomerism, Mesomerism, Position Isomerism)

47. _____ poisonous gas is present in the exhaust fumes of car.

(Methane, Acetylene, HCl, Carbon dioxide)

48. _____ is used to impart colour to still green citrus fruit from ripening.

(Ethylene, Methane, Ethane, none of these)

49. The number of xylene isomers is _____.

(2, 3, 4, 5)

50. Ethylene dichloride and ethylene chloride are isomeric compounds. The statement which is not applicable to both of them is _____.

(react with alcoholic potash, react with aqueous potash and give the same product, are dihalides, answer Beilstein's test)

51. Structure of benzene is _____.

(Diagonal, Planar, Pyramidal, Tetrahedral)

52. _____ is used in the manufacture of plastic and synthetic rubber.

(Styrene, Mustard gas, Polythene, none of these)

53. The polythene is a polymer of _____.

(Ethylene, Acetone, Propylene, Butadiene)

54. Acetylene or ethyne was discovered accidentally in 1899 by the American chemist _____.

(Wilsson, Lane, Nelson, none of these)

55. Acetylene is present in small proportions (about 0.06% by volume) in _____.

(Natural gas, Coal gas, Gasoline, Petroleum)

56. _____ is prepared in the laboratory by dropping water on calcium carbide.

(Ethylene, Acetylene, Methane, none of these)

57. The process used for the preparation of acetylene is _____.

(Berthelot Process, Sabatier-Senderns Reaction, Kolbe's Process, none of these)

58. Acetylene has a characteristic ethereal smell resembling that of _____.

(Rotten egg, Garlic, Benzene, none of these)

59. Acetylene burns with _____ flame.

(Greenish, Bluish, Smoky, none of these)

60. Benzene was found by _____ in 1825 in the gas produced by the destructive distillation of vegetable oils.

(Hofmann, Michael Faraday, Solvay, none of these)

61. _____ found benzene in coal-tar.

(Hofmann, Michael Faraday, Solvay, none of these)

62. When n-hexane obtained from petroleum is heated in the presence of platinum at 500°C under 10 - 20 atmosphere pressure, it cyclises to give _____.

(Ether, Benzene, Mustard Gas, none of these)

63. Phenol is reduced to _____, when its vapours are passed over red hot zinc dust.

(Ether, Benzene, Ethane, Acetylene)

64. Replacement of hydrogen atom by - SO_2OH is called _____.

(Nitration, Sulphonation, Alkylation, Hydrogenation)

65. _ SO_2OH is called _____.

(Sulphonic Group, Carbonyl group, Methyl group, none of these)

66. Under the influence of anhydrous aluminium chloride as a catalyst, benzene reacts with alkyl and acyl halides giving alkylated and acylated benzenes. The reaction is called _____.

(Friedel-Crafts Reactions, Berthelot's Reaction, Sabatier-Senderens Reaction, none of these)

Chapter 8

Alkyl Halides

1. Monohalo derivatives of alkanes are called _____.

(Acyl halides, Aryl Halides, Alkyl Halides, none of these)

2. The general formula of alkyl halides is _____.

($C_nH_{2n+1}X$, $C_nH_{n+1}X$, $C_{2n}H_{2n+1}X$, none of these)

3. When an alkene is treated with halogen acids, _____ is formed.

(Alkyl halide, Acyl halide, Carbonyl chloride, all of these)

4. Formula of Thionyl Chloride is _____.

($SOCl_2$, $ZnCl_2$, CH_3Cl , none of these)

5. If ethane is treated with HBr then _____.

(Ethyl bromide is formed, Methyl bromide is formed, Bromine is evolved, Hydrogen is obtained)

6. When metallic sodium in ether is heated with an alkyl halide, a higher alkane is formed. It is called _____.

(Sulphonation, Wurtz's Reaction, Friedel-Crafts Reaction, none of these)

7. If sodium lead alloy is treated with methyl chloride then _____.

(Tetra ethyl lead is formed, Tetra methyl lead is formed, Tri methyl lead is formed, Di methyl lead is formed)

8. Dehydrohalogenation of alkyl halide is carried in the presence of alcoholic _____.

(NaOH, KOH, Ca(OH)₂, none of these)

9. Grignard's reagent when reacts with ammonia then _____.

(Methane is formed, Ethane is formed, Nitrogen is evolved, Magnesium is separated)

10. Grignard's reagent reacts with alkyl halide to form _____.

(Alkanes, Alkynes, Alkenes, Alcohols)

11. Grignard's reagents are _____.

(Alkyl halide, Alkyl magnesium halide, Alkyl sodium halide, none of these)

12. On passing CO₂ through Grignard reagent _____ is formed.

(Methanoic acid, Ethanoic acid, Propanoic acid, No reaction occurs)

13. Alkyl halides (methyl chloride or ethyl chloride) when treated with _____, react to produce the important anti-knock gasoline additives.

(Sodium, Lead, Sodium-lead Alloy, none of these)

14. On adding formaldehyde to Grignard's reagent _____ is formed.

(Primary alcohol, Secondary alcohol, Aldehyde, Acetone)

15. Action of zinc with alkyl halide in the presence of an inert solvent forms a corresponding higher alkane. This is called _____.

(Wurtz's Reaction, Frankland Reaction, Hoffman's Reaction, none of these)

16. The hydrolysis of alkyl halides by heating with aqueous alkali is a _____ substitution reaction.

(Electrophilic, Nucleophilic, Electrophile and Nucleophile, none of these)

17. _____ of the following compounds does not react with bromine.

(Ethylamine, Propene, Phenol, Chloroform)

18. A reaction in which an atom or group of atoms replaces an atom or group of atoms already present in the molecule of a substance is called _____.

(Nitration, Halogenation, Substitution, Sulphonation)

19. _____ is a Nucleophile.

(OH⁻, CN⁻, NH₃, all of these)

20. General formula of Grignard's reagent is _____.

(R - Mg - X, R - Al - X, R - Na - X, R - Cl - X)

21. _____ is prepared by heating methyl iodide with fresh magnesium turnings in anhydrous ether.

(Grignard's reagent, Mustard gas, Benzene, none of these)

22. When Grignard's reagent is hydrolyzed with water, it is converted into _____.

(Alkynes, Alkenes, Alkanes, Acetone)

23. _____ of the following alkyl halides is used as a methylating agent.

(C₂H₅Cl, C₂H₅Br, C₂H₅I, CH₃I)

24. Ethyl chloride reacts with alcoholic KOH to give _____.

(C₂H₅OH, C₂H₆, C₂H₂, C₂H₄)

25. Dry carbon dioxide is passed through Grignard's Reagent in the presence of _____ as a solvent.

(Acetone, Benzene, Ether, none of these)

26. Grignard's reagent reacts with CO₂ to form _____.

(HCl, Carboxylic acid, Acetic acid, Carbonic acid)

27. Grignard's reagent reacts with acetaldehyde to form _____.

(Primary alcohol, Secondary alcohol, Tertiary alcohol, all of these)

28. Alkyl halides reacts with Zn to form _____.

(Alkynes, Alkanes, Alkenes, none of these)

Chapter 9

Organic Compounds

1. The action of nitrous acid on ethyl amine gives _____.

(Ethane, Ammonia, Ethyl alcohol, Nitroethane)

2. Isopropyl alcohol on oxidation gives _____.

(Ether, Acetone, Ethylene, Acetaldehyde)

3. Rectified spirit contains _____ % alcohol.

(95.6, 75.0, 100.0, 85.4)

4. _____ is the end product in the process of fermentation.

(Methyl alcohol, Ethanol, CH_3OH , Ethylene)

5. _____ is not the characteristic of the alcohols.

(Their boiling points rise fairly uniformly with a rise in molecular weight, Lower members have a pleasant smell but burning taste and the higher ones are odourless and tasteless, these are lighter than water, Lower members are soluble in water and organic solvents but solubility decreases with increase in molecular weight)

6. In the dehydration of ethyl alcohol to ethylene with concentrated sulphuric acid _____.

(Carbonium ions are involved, carbonium are evolved, sulphuric acid acts as an electrophile, none of these)

7. A compound is an/a _____ if the "R-" group is derived from aliphatic or alicyclic hydrocarbons.

(Ether, Ketone, Alcohol, Phenol)

8. A compound which has -OH group attached to an aromatic hydrocarbon is called _____.

(Alcohol, Phenol, Ether, none of these)

9. A product formed by the reaction of sodium with ethanol is _____.

(H_2O , NaOH , NaH , H_2)

10. An alcohol, which contains one -OH group is called _____.

(Monohydric, Dihydric, Trihydric, none of these)

11. An alcohol, which contains one -OH group is called _____.

(Monohydric, Dihydric, Trihydric, none of these)

12. Primary, secondary and tertiary alcohols may be distinguished by using _____.

(Fehling's solution, Victor Meyer test, Hofmann set, Beilstein test)

13. The number of structural isomers for C_4H_9OH is _____.

(3, 4, 5, 6)

14. In cold countries glycerol is added to water in car radiators as it helps to _____.

(bring down the specific heat of water, lower the freezing point, reduce the viscosity, make water a better lubricant)

15. Aldehydes and Ketons are commonly referred to as _____.

(Ethers, Carbonyl compounds, phenols, none of these)

16. Aldehyde may be distinguished from ketons by the use of _____.

(Concentrated Sulphuric acid, Grignard's Reagent, Pyrogallol, Fehlings solution)

17. In aldehydes one bond of carbonyl group is always attached to _____.

(Carbon atom, Hydrogen atom, Nitrogen atom, none of these)

18. An aldehyde on oxidation gives _____.

(an alcohol, a ketone, an acid, an amine)

19. Acid anhydrides are calls of carboxylic acid derivatives, which may be formed by the elimation of _____.

(Carbon, Hydrogen, Water, none of these)

20. Formaline is an aqueous solution of _____.

(Formic acid, Formaldehyde, Flurescein, Furfuraldehyde)

21. Methyl alcohol is known commercially as _____.

(Wood-spirit, Wood Naphtha, Mustard gas, both Wood spirit and Wood-Naphtha)

22. _____ discovered Methyl alcohol.

(Boyle, Salvay, Jabber Bin Hayyan, none of these)

23. When wood is heated with an insufficient supply of air, organic materials are driven off as gases, and the cellulose is decomposed to almost pure carbon is called _____.

(Coal, Charcoal, Oil gas, Natural gas)

24. Now a days a large quantity of methyl alcohol is obtained by passing _____ over heated zinc and chromium oxides at 400 - 450°C under 200 atmospheric pressure.

(Natural gas, Water gas, Ethylene, none of these)

25. Methyl alcohol can cause _____.

(Cancer, Blindness, Aneimia, none of these)

26. The reaction of alcohol with thionyl chloride (SOCl_2) in the presence of solvent called _____.

(Pyridine yields, Adenine yields, Guanine yields, none of these)

27. Ethyl alcohol often called _____.

(Alcohol, Spirit, Ether, Lacquer)

28. Ethyl alcohol is also called _____.

(Methyalted spirit, Spirit of wine, Wood spirit, none of these)

29. _____ is also present in the urine of diabetic patients.

(Spirit of wine, Wood spirit, Methane, none of these)

30. In 1808, _____ discovered ethyl alcohol in urine of diabetic patients.

(Boyl, Suassure, Mendleeve, none of these)

31. Ethyl alcohol is produced on commercial scale by the biological break down of _____.

(Starch, Minerals, Cellulase, None of these)

32. The 14 enzymes present in the living cells of the yeast are collectively called _____.

(Substrate, Zymase, Amylase, none of these)

33. The force of attraction of the electrons of one atom for the protons of another atom in close proximity is called _____.

(Ionic bond, Hydrogen bond, Covalent bond, all of these)

34. _____ of the following compounds can form a hydrogen bond.

(CH₄, H₂O, NaCl, CHCl₃)

35. When two ice cubes are pressed over each other, they unite to form one cube. _____ of the following forces is responsible to hold them together.

(Hydrogen bond formation, Vander Waal's forces, Covalent bond, Dipole

Interaction)

36. CH_3OH and $\text{C}_2\text{H}_5\text{OH}$ are highly miscible with water because they exhibits _____.

(Ionic bonding, Covalent bonding, Hydrogen bonding, none of these)

37. Alcohols may be converted to the corresponding _____ by actions of halogen acids in the presence of ZnCl_2 .

(Aldehydes, Alkyl halides, acyl halides, none of these)

38. Compounds obtained by the elimination of a molecule of water between an alcohol and hydroxyl group of the acid are called _____.

(Ethers, Esters, Ketons, Phenols)

39. During the dehydration of alcohols, relatively high temperature and moderate alcohol concentration yield the corresponding _____.

(Ether, Olefin, Paraffin, none of these)

40. Ethyl alcohol may be identified by the _____.

(Bayer's Test, Flame Test, Iodoform Test, Chloroform Test)

41. Industrially, formaldehyde is made from methyl alcohol by _____.

(Dehydrogenation, Dehydrohalogenation, Oxidation, Reduction)

42. Dry distillation of calcium formate yields _____.

(Ether, formaldehyde, Acetic acid, none of these)

43. An aldehyde is converted to carboxylic acid on _____ with $\text{K}_2\text{Cr}_2\text{O}_7$ and H_2SO_4 .

(Reduction, Oxidation, Dehydrogenation, all of these)

44. When aldehydes are warmed with _____, red precipitates of cuprous oxide are precipitated.

(Grignard's Reagent, Fehlings solution, KMnO_4 , none of these)

45. Aldehydes can be distinguished from Ketons by using _____.

(Schiff's reagent, Concentrated sulphuric acid, Anhydrous Zinc chloride, Resorcinol)

46. In ketons the two bonds of the carbonyl are attached to two _____.

(alkyl group, aryl group, hydrogen group, alkyl group and aryl group)

47. Formation of acetaldehyde from ethanol is called _____.

(Addition, Reduction, Oxidation, Substitution)

48. Aldehydes can be distinguished from ketons by _____.

(AgNO_3 , CH_3COOH , conc. H_2SO_4 , Fehlings solution)

49. Acetaldehyde reacts with _____.

(nucleophiles only, electrophiles only, free radicals only, both with nucleophiles and electrophiles)

50. When aldehydes are warmed with an ammoniacal solution of silver nitrate, they precipitate metallic silver which often forms a mirror. This reaction is called _____.

(Tollen's Test, Fehlings Test, Iodoform Test, none of these)

51. Acetaldehyde reacts with ammonia to form _____.

(Condensation products, substitution products, addition product, resin like)

product)

52. _____ prepared the first synthetic plastic, by combining formaldehyde with phenol under heat and pressure.

(Newlands, Blackeland, Russel, Charles)

53. _____ is used medically as a urinary antiseptic.

(Formaldehyde, Benzene, Sulphuric acid, Methanamine)

54. Aldol condensation can occur between _____.

(an aldehyde and ketone, an aldehyde and ester, an aldehyde and benzene, none of these)

55. Aldol condensation between _____ of the following compounds, followed by dehydration gives methyl vinyl ketone.

(HCHO and CH₃COCH₃, HCHO and CH₃CHO, Two molecules of CH₃CHO, Two molecules of CH₃COCH₃)

56. Aldol condensation can occur between _____.

(two aldehydes (identical or different), an aldehyde and ester, an aldehyde and benzene, none of these)

57. Aldol condensation can occur between _____.

(two aldehydes and phenols, two ketons(identical or different), an aldehyde and benzene, none of these)

58. A nucleophilic addition of carbonion, generated by the loss of proton from α -position of an aldehyde or a ketone by a base, to the carbonyl group, is called _____.

(Nitration, Aldol Condensation, Esterification, none of these)

59. The aldehydes having no hydrogen attached to α -carbon atom when treated with concentrated solution of an alkali, undergo self-oxidation and reduction, forming a mixture of an alcohol and a salt of corresponding carboxylic acid. The reaction is known as _____.

(Fehlings reaction, Cannizzaro reaction, Formalin reaction, none of these)

60. An aqueous solution containing about 40% of formaldehyde and a little alcohol is sold under the name of _____.

(Formalin, Malt-sugar, Pyridine, Starch)

61. Gelatine, a substance readily soluble in water, becomes insoluble when it is treated with _____.

(Formalin, Malt sugar, Benzene, Resins)

62. _____ is used as preservative for biological specimens.

(Benzene, Ketone, Alcohol, Formaline)

63. Live polio virus in the culture fluid is made harmless by addition of _____ in the processing of anti-virus vaccine.

(Benzene, Acetic acid, formaldehyde, Carboxylic acid)

64. Acetic acid is manufactured from the brown aqueous distillate known as _____ which is obtained by the destructive distillation of wood and contains a mixture of acetic acid, acetone and methyl alcohol.

(Formalin, Pyroligenous acid, Pyridine, Acetylene)

65. The most general method of preparing _____ is by oxidation of corresponding aldehydes or primary alcohols.

(Phenols, Carboxylic acids, ketones, none of these)

66. The chemical properties of the carboxylic acids depend chiefly on the

_____.

(Hydroxyl group, Carbonyl group, Methyl group, none of these)

67. _____ is used for coagulating rubber and latex and curing fish as well.

(Alcohol, Acetic acid, Wood spirit, none of these)

68. Ethyl acetate is an example of a important class of substance known as _____.

(Ketones, Esters, Alcohols, none of these)

69. Ethyl acetate (an ester) can be prepared by the action of _____ on carboxylic acid, in the presence of acidic media.

(Phenols, Formalin, Pyradine, Alcohol)

70. Molecular hydrogen in presence of suitable catalysts reduces carbonyl compounds to _____.

(aCetones, Ethers, Esters, Alcohols)

71. _____ is used as a nail-polish remover.

(acetone, Benzene, Idoform, none of these)

72. Acetone may be converted into propane by heating with _____.

(conc HCl and 24/Hg, Mg + H₂O, conc HI and red P, Zn/Cu couple and ethanol)

73. _____ is the solvent used in the preparation of Grignard's reagent and in Wurtz reaction.

(Ethers, Phenoles, Ketons, Alcohols)

74. The hydroxyl group derivatives of aromatic hydrocarbons, which have the -OH group directly bonded to the ring carbon atoms are called _____.

(Esters, Acetons, Alcohols, Phenols)

75. Carboic acid is prepared from _____.

(Dow's Process, Down's Process, Nelson's Process, none of these)

76. Phenol is colourless, poisonous _____.

(Liquid, Gas, Solid, none of these)

77. Above _____ °C phenol is miscible with water in all proportions, but below this temperature, it is only partially miscible.

(78.5, 68.5, 58.5, none of these)

78. Phenol is reduced to _____ when its vapours are passed over red hot zinc dust or distilled in the presence of zinc dust.

(Alcohol, Benzene, acetone, none of these)

79. Action of zinc with alkyl halide in the presence of an inert solvent forms a corresponding higher alkane. This is called _____.

(Wurtz's reaction, Frankland's reaction, Hoffman's reaction, none of these)

80. The hydrolysis of alkyl halides by heating with aqueous alkali is a _____ substitution reaction.

(Electrophilic, Nucleophilic, Electrophilic and Nucleophilic, none of these)

81. _____ is prepared by heating methyl iodide with fresh magnesium turnings in anhydrous ether.

(Grignard's reagent, Mustards gas, Benzene, none of these)

82. Dry carbon dioxide is passed through Grignard's reagent in the presence of _____.

(Acetone as a solvent, Benzene as a solvent, Ether as a solvent, none of these)

Chapter 10

Chemistry of Life

1. Starch is a polymer of _____.

(Glucose, Fructose, Lactose, Maltose)

2. A material cannot be termed as food unless it contains at least one _____.

(Vitamine, Mineral, Nutrient, Amino acid)

3. On heating glucose with Fehling's solution we get a precipitate of colour _____.

(Yellow, Red, Black, Green)

4. It is the best to carry out reactions with sugars in neutral or acid medium and not in alkaline medium. This is because in alkaline medium sugars undergo _____ of the following changes.

(Racemisation, Decomposition, Inversion, Rearrangement)

5. _____ food component regulates body processes.

(Minerals, Fats, Proteins, Carbohydrates)

6. The process by which large non-diffusible organic molecules are converted into smaller diffusible molecules is known as _____.

(Ingestion, Fermentation, Decomposition, Digestion)

7. The solution of sugar in water contains _____.

(Free atoms, Free ions, Free molecules, Free atoms, and free molecules)

8. During digestion carbohydrates are broken down to _____.

(Glucose, Amino acids, Fatty acids, None of these)

9. During digestion proteins are broken down to _____.

(Glucose, Amino acids, Fatty acids, none of these)

10. _____ of the following gives a deep blue colour with a drop of dilute solution of iodine.

(Cellulose, Glucose, Starch, Sugar)

11. During digestion fats are broken down to _____.

(Glucose, Amino acids, Fatty acids, none of these)

12. The use of the products of digestion in synthesis of cellular structure is known as _____.

(Metabolism, Assimilation, Homeostasis, None of the above)

13. The percentage of glucose in human blood is _____.

(0.1, 0.2, 9.3, 0.4)

14. Carbohydrates supply about _____ of energy per gram.

(4 kcal, 2 kcal, 2 kcal, 1 kcal)

15. The main source of cellulose is _____.

(cotton, wood, both cotton and wood, none of these)

16. Fats provide about _____ of energy per gram.

(4kcal, 2 kcal, 9kcal, 5kcal)

17. Of the following, _____ is a high-energy food.

(Proteins, Fats, Carbohydrates, none of these)

18. Glucose and fructose are _____.

(Geometrical Isomers, Metamers, Optical Isomers, none of these)

19. _____ isomers of glucose are known.

(4, 8, 16, 32)

20. The digestion of carbohydrates begins with the mastication in the mouth, where enzyme _____ of the saliva hydrolyses some of the starch to maltose.

(Ptyalin, Amylase)

21. Human body tissue contains _____% carbohydrates.

(1, 2, 3, 4)

22. Carbohydrates are ultimately converted into glucose and other simpler products in the _____.

(Mouth, Stomach, Small intestine, Large intestine)

23. The use of products of digestion in synthesis of cellular structures is called _____.

(Assimilation, Metabolism, Excretion, Digestion)

24. The products of oxidation of glucose are _____.

(Carbon dioxide and water, Oxygen and Hydrogen, Carbon dioxide and hydrogen, none of these)

25. Glucose is termed as _____.

(Single nutrient food, double nutrient food, multi nutrient food, none of these)

26. Deficiency of all nutrients leads to _____.

(Nutrition, Malnutrition, Under Nutrition, none of these)

27. The recommended daily intake of protein per kilogram of the body weight is _____.

(0.8 gm, 0.9 gm, 0.6 gm, 1.0 gm)

28. Lipids and Proteins are made of _____.

(Macromolecule, Micromolecule, Microatom, None of these)

29. The digestion of proteins begins in the _____.

(Mouth, Stomach, Small intestine, Large intestine)

30. The enzyme _____ of gastric juice, catalyses the hydrolysis of peptide linkage in protein molecules.

(Renin, Trypsin, Pepsin, Amylase)

31. In the mouth of some of the starch is hydrolyzed to maltose by the action of enzyme _____.

(Ptylin, Lipase, Renin, Amylase)

32. In the body dietary proteins are the source of _____.

(Amino acids, Fatty acids, Lipids, none of these)

33. A large class of compounds that are polyhydroxy aldehydes or ketones, or substances that yield such compounds upon acid hydrolysis are called _____.

(Fats, Carbohydrates, Proteins, vitamins)

34. Plants are able to synthesis their own carbohydrates from CO₂ of the air and water taken from the soil in the presence of sunlight and chlorophyll. This process is called _____.

(Nutrition, Assimilation, Photosynthesis, Homeostasis)

35. Human diet consist of 60 - 65% by mass of the average diet on _____.

(Fats, Carbohydrates, Proteins, vitamins)

36. Carbohydrates, which have three to nine carbon atoms and are not hydrolysable are called _____.

(Monosacchrides, Ddi-saccharides, Poly-saccharides, None of these)

37. The carbohydrates, which have three to nine carbon atoms and are not hydrolysable are called _____.

((Monosacchrides, Ddi-saccharides, Poly-saccharides, None of these)

38. The balanced diet contains amount _____ per day.

(60 gm, 70 gm, 80 gm, 90 gm)

39. Glucose is _____.

(a monosacchrude carbohydrate, a di-saccharide carbohydrate, a poly-saccharide carbohydrate, none of these)

40. A class of carbohydrates which are formed by the condensation of two or

more monosaccharide units with the loss of water molecules are called _____.

(Disaccharides, Poly saccharides, Pentoses, none of these)

41. Sucrose is an example of _____.

(a monosacchride carbohydrate, a di-saccharide carbohydrate, a poly-saccharide carbohydrate, none of these)

42. On hydrolysis _____ is broken down into two simpler sugars glucose and fructose.

(Glucose, Sucrose, Maltose, none of these)

43. Glucose is also called _____.

(Dextrose, Maltose, Fructose, Mannose)

44. Corn syrup contains _____.

(Glucose, Fructose, Mannose, Maltose)

45. Fructose occurs in many _____.

(Cereals, Fruits, Vegetables, none of these)

46. Honey is a mixture of _____.

(Glucose and Fructose, Glucose and Maltose, Fructose and Mannose, Glucose and Fructose with vitamins and minerals)

47. The carbohydrates, which contain hundreds to thousands of monosacchride units are called _____.

(Polysacchrides, Oligosaccharides, Hexoses, None of these)

48. Cellulose is an example of _____.

(Monosaccharides, Di-saccharides, Polysaccharides, None of these)

49. The main difference between starch and cellulose is the type of links between _____.

(Mannose units, Glucose units, Fructose, units, none of these)

50. Vitamin was discovered by _____.

(Casimir Funk, Blackeland, Hopkins, Elmer)

51. Vitamin A was discovered by _____.

(Elmer McCollum, Casimir funk, Hopkins, none of these)

52. Vitamin D was discovered by _____.

((Elmer McCollum, Casimir funk, Hopkins, none of these)

53. Fat-soluble vitamins are found associated with _____ in natural foods.

(Renin, Lipids, Peptides, Maltose)

54. Fat soluble vitamins include _____.

(Vitamin A, B, C, D, Vitamin A, B, C, Vitamin A, D, E, K, Vitamin K)

55. Water-soluble vitamins include _____.

(Vitamin A, B, Vitamin A, B, C, vitamin B, C, Vitamin A, C)

56. Vitamin B1 is called _____.

(Thiamin, Riboflavin, Niacin, Pyridoxine)

57. Vitamin B2 is called _____.

(Thiamin, Riboflavin, Niacin, Pyridoxine)

58. Vitamin B5 is called _____.

(Thiamin, Riboflavin, Niacin, Pyridoxine)

59. Vitamin B6 is called _____.

(Thiamin, Riboflavin, Niacin, Pyridoxine)

60. Vitamin B12 is called _____.

(Cyanocobalamin, Riboflavin, Niacin, Pyridoxine)

61. Most water-soluble vitamins act as _____.

(Enzymes, Coenzymes, Coenzymes or are required for the synthesis of coenzymes, none of these))

62. People who consume too much vitamin _____, may develop bone pain, bone like deposits in the kidneys, and mental retardation.

(A, B, C, D)

63. Edible lipids constitute approximately _____ % of the diet of an average person.

(25-28, 25-30, 25-32, 25-35)

64. The most important energy storage compounds in the animal kingdom are _____.

(Peptides, Lipids, Amino acids, none of these)

65. Plants store most of the energy in the form of carbohydrates primarily as _____.

(Amino acids, Starch, Cellulose, Maltose)

66. The nutrients of our food which provide insulation for the vital organs, protecting them from electrical shocks and maintaining optimum body temperature are called _____.

(Amino acids, Steroids, Lipids, Fatty acids)

67. Lipids that contain both polar and non polar groups are integral components of _____.

(Cell wall, Cell membrane, Cytoplasm, Mitochondria)

68. Steroids is an important type of _____.

(Proteins, Vitamins, Lipids, Carbohydrates)

69. The most abundant and the most important steroid in the human body is _____.

(Riboflavin, Cholestrol, Folic acid, Inositol)

70. _____ is an important precursor in the biosynthesis of sex-hormones, synthesis of adrenal hormones and vitamin D.

(Insitol, Cholestrol, Lipoic Acid, Biotin)

71. On the average, more than 50% of the total dry weight of the cells is composed of _____.

(Carbohydrates, Proteins, Fats, Water)

72. The Dutch chemist, GJ Mulder (1883), is credited as being one of the first scientists to recognize the importance of _____.

(Vitamins, Carbohyrates, Proteins, Fats)

73. _____ organic compound is a major structural component of an

animal tissue.

(Carbohydrates, Proteins, Cellulose, Lipids)

74. Hormones are made of _____.

(Proteins, Fats, Carbohydrates, Lipids)

75. Antibodies are _____.

(fats in nature, carbohydrates in nature, protein in nature, vitamins in nature)

76. Enzymes are _____.

(carbohydrates in nature, proteins in nature, fats in nature, none of these)

77. Haemoglobin is a _____.

(Protein, Carbohydrate, Fat, Mineral)

78. The primary function of proteins is _____.

(Energy supply, body building, body building and maintenance, protection of body)

79. _____ nutrients of food are stored by the body as energy reserves.

(Carbohydrates and lipids, proteins and lipids, proteins and carbohydrates, none of these)

80. for a normal adult with a constant weight, the recommended daily intake of protein is approximately _____ gram per kg of body weight.

(0.2, 0.4, 0.6, 0.8)

81. 33% - 43% protein is present in _____.

(Food yeast, Soya bean, Rice, Cheese)

82. The percentage of protein in chicken food is _____%.

(28, 21, 33, 12)

83. The protein in milk is _____%.

(2, 3, 12, 19)

84. Fats are esters of glycerol and _____.

(Faty acids, Lipids, Steroids, none of these)

85. The percentage of protein in egg is _____%.

(12-18 , 12-24, 12-36, 12-48)

86. The percentage of protein in flour is _____%.

(18, 12, 6, 3)

87. The percentage of protein in fish is _____%.

(18-21, 12-18, 6-36, 3-9)

88. The percentage of protein in rice is _____%.

(6-7, 2-3, 5-11, 11-19)

89. The percentage of protein in fresh vegetables is _____%.

(5-6, 7-17, 4-7, Rarely contains 2-3)

90. Amino acids are the building blocks of _____.

(Carbohydrates, Proteins, Lipids, Fats)

91. Proline amino acids have _____ group and $-COOH$ group attached to the same carbon atom.

($-NH_3$, $-NH_2$, $-NH$, $-OH$)

92. Amino acids are widely classified _____.

(according to the number of $-NH_2$ group, according to the number of $-COOH$ group, according to polarity of their side chain, all of these)

93. The first amino acid was isolated in 1806 and was given the name _____.

(Asparagine, Glycine, Renin, Maltose)

94. The major amino acid found in gelatin is _____.

(Glycine, Asparagine, Renin, none of these)

95. Esters of Glycerol and Fatty acids are called _____.

(Acids, F, Proteins, Carbohydrates)

96. Among the most important of the natural _____ are the cotton seed oil, corn oil, butter, tallow and olive oil.

(Fats, Proteins, Carbohydrates, Vitamins)

97. Unsaturated vegetable oils, such as cotton seed oil are converted into fast on _____.

(Oxidation, Dehydration, Hydrogenation, Sulphonation)

98. The hydrogenation of oils is accomplished easily by bubbling hydrogen into the oil in the presence of catalyst _____.

(Pt, Ni, Zn, ZnO)

99. Naturally occurring fatty acid nearly always have an/a _____ number of carbon atoms.

(Even, Odd, Even and odd, none of these)

100. Liquid fats are called _____.

(Fatty acids, Oils, Ketones, Lipids)

101. The degree of undaturation of a fat or oil is usually measured by the _____.

(number of carbon atoms, number of hydrogen atoms, iodine number, none of these)

102. The number of grams of iodine that will be consumed by 100 grams of fat or oil is called _____.

(Iodine complex, Iodine number, Iodoform, None of these)

103. Brain cells are made of _____.

(Proteins, Fats, Carbohydrates, Lipids)

104. Nerve tissues are made of _____.

(Fats, Proteins, Carbohydrates, Steroids)

105. Fat-soluble vitamins are obtained from _____.

(Carbohydrates, proteins, fats, lipids)

106. Vegetable oils such as peanut oil contain vitamin _____.

(A, B, C, E)

107. Milk fat, butter, cream, and fish liver oil contain vitamin _____.

(A, B, C, A and D)

108. Our balanced diet contains 70 grams per day of _____.

(Carbohydrates, Proteins, Fats, None of these)

109. About 35% of our daily caloric requirements are obtained from _____.

(Carbohydrates, Proteins, Fats, Vitamins)

110. _____ is the term used to reflect the development of any disagreeable odour in the fat or oil.

(Acidity, Basicity, Rancidity, none of these)

111. Two principal chemical reactions responsible for causing rancidity are _____.

(Oxidation and Hydrogenation, Oxidation and Hydrolysis, Hydrolysis and fermentation, Oxidation and Pyrolysis)

112. The reaction of fat with a strong base such as NaOH to produce glycerol and the salt of a fatty acid is used to produce _____.

(Soap, Glucose, Vegetable oil, Gastric Juice)

113. The word enzyme has a _____.

(Greek origin, Latin origin, Roman origin, Arabic origin)

114. In living systems enzymes catalyze reactions at _____ °C.

(0, 25, 100, 37)

115. The substance upon which an enzyme acts is known as its _____.

(base, substrate, nutrient, pair)

116. The amount of enzyme, which will catalyze the transformation of one micro-mole of a substrate per minute is termed as _____.

(Substrate, potency, activity, specific activity)

117. Units of enzyme per milligram of proteins are termed as _____.

(activity, potency, turn over, none of these)

118. The number of moles of substrate transformed per mole of enzyme per minute at a definite temperature is called _____.

(Potency, Turn over, Activity, none of these)

119. Enzymes are most commonly named by adding the suffix to the root of the name of the substrate _____.

(ose, ase, ane, ene)

120. Urease acts upon _____.

(Sucrose, Urea, Ammonia, Starch)

121. Sucrose is also called _____.

(invertase, Urea, Renin, Amylase)

122. _____ is an enzyme.

(Sucrose, Sucrase, Maltose, Urea)

123. _____ enzyme was first obtained by grinding pancreatic tissue with glycerol.

(Amylase, Urea, Ascorbic Acid Oxidase, Trypsin)

124. The site of the enzyme, which combines with the substrate, and at

which transformation from substrate to products occurs, is called he
_____.

(Cellular site, Active site, Vacant site, Complex)

125. The main factors, which effect enzyme activity, are _____.

(concentration, temperture and pH, concentration, temperature, pH and co-enzymes, concentration, temperature, pH, co-enzymes (activators and inhibitors) and radiation, co-enzymes, activators and inhibitors)

126. The majority of enzymes are most active at about _____ °C.

(35, 45, 55, all of these)

127. Many enzymes contain a protein part and a non-protein part. The protein part is called the _____.

(Apoenzyme, Coenzyme, Enzyme, none of these)

128. The non-protein part in enzyme is termed as _____.

(Apoenzyme, coenzyme, substrate, all of these)

129. Examples of co-enzymes are _____.

(Vitamins, Compounds derived from vitamins, Vitamins or compounds derived from vitamins, all of these)

130. In organic substances that tend to increase the activity of an enzyme are called _____.

(activators, Inhibitors, Apoenzymes, coenzymes)

131. Magnesium ion is an inorganic activator for the enzyme _____.

(Trypsin, Carbonic anhydrate, Sucrase, Phosphatase)

132. Zinc ion is an activator for the enzyme _____.

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(Amulase, Carbonic anhydrase, Renin, Phosphatase)

133. Substances, which tend to decrease the activity of enzyme are called _____.

(Activators, Accelerators, Inhibitors, Retarders)

134. Enzymes are generally inactivated rapidly by exposure to _____.

(Ultraviolet light, b-rays, g-rays, X-rays, all of these)

Chapter 11

Chemical Industries in Pakistan

1. The substances added to the soil to provide one or more nutrient elements essential for plants growth are called _____.

(Growth hormones, Minerals, Fertilizers, Salts)

2. The substances added to the soil in very small amounts (about 6 grams to 200 grams per acre) are called _____.

(Macronutrients, Micronutrients, Fertilizers, none of these)

3. Fertilizers are classified into _____.

(two major categories, three major categories, four major categories, none of these)

4. Natural fertilizers are materials derived from _____.

(plants, animals, algae, all of these)

5. A natural fertilizer provide about _____ kg of nitrogen.

(4.5, 3.2, 2.2, 1.5)

6. A natural fertilizer provides _____ kg of P_2O_5 .

(4.5, 3.2, 2.2, 1.5) A

7. A natural fertilizer provides _____ kg of potash (K_2O).

(4.5, 3.2, 2.2, 1.5)

8. The percentage of nitrogen in ammonia is _____%.

(32, 55, 82, 25)

9. The percentage of nitrogen in ammonium Nitrate is _____%.

(32-33.5, 50-55, 80-82, 20-25)

10. The percentage of nitrogen in ammonium sulphate is _____%.

(27, 21, 23, 19)

11. The percentage of sulphur in ammonium sulphate is _____%.

(25, 21, 23, 19)

12. The percentage of nitrogen in Urea is _____%.

(37, 50, 46, 82)

13. Ammonia when used directly as a fertilizer is to be injected about _____ under the surface to keep it from seeping out.

(2 inches, 4 inches, 6 inches, 8 inches)

14. Ammonium nitrate is sold as a mixture with _____.

(Soda Ash, Limestone, Zinc, None of these)

15. The percentage of nitrogen in Diammonium hydrogen phosphate is _____%.

(16, 48, 32, 64)

16. The percentage of P_2O_5 in diammonium hydrogen phosphate is _____%.

(16, 32, 48, 64)

17. A fertilizer; potassium chloride is sold as _____.

(Muriate of potash, Mixture of potash, Potency of potash, none of these)

18. The percentage of K_2O in potassium chloride is _____%.

(60-63, 50-70, 40-80, 30-90)

19. Potassium sulphate with 48% to 52% potash, is made from _____.

(Potassium Phosphate, Potassium Chloride, Potassium Nitrate, none of these)

20. _____ is preferred for horticultural crops and for tobacco and potatoes.

(Potassium chloride, Potassium sulphate, Potassium Nitrate None of these)

21. _____ is used for fruits, vegetables and tobacco.

(Potassium chloride, Potassium sulphate, Potassium Nitrate None of these)

22. Any material, which changes the cleaning effect of water, is called _____.

(Fertilizers, Detergent, Acid none of these)

23. _____ are sodium and potassium salt of long chain fatty acids.

(Soaps, Detergents, Fertilizers, None of these)

24. _____ contain sodium or potassium salts of aryl or alkyl sulphonated acids as one of their constituents.

(Soaps, Detergents, Fertilizers, none of these)

25. Soap is a surfactant of the type _____.

(anionic, cationic, nonionic, none of these)

26. _____ is best in its cleaning action.

(Soap, Detergents, Surfactant, None of these)

27. Hydrolytic reaction of fat with caustic soda is known as _____.

(Esterification, Saponification, Acetylation, Carboxylation)

28. Turpentine is obtained from _____.

(Oak tree, Pine tree, Birch tree, Lemon tree)

29. _____ surfactants perform well over a wide range of water hardness and pH.

(Anionic, Cationic, Nonionic, none of these)

30. Fats and oils are _____.

(Acids, alcohols, salts, none of these)

31. Washing soap can be prepared by saponification with alkali of _____ of the following oil.

(Rose oil, Paraffin oil, Groundnut oil, Kerosene oil)

32. Commercial detergents contain mainly _____.

(RCOON , RONa , RSNa , ROSO_3Na)

33. Sodium tripolyphosphate is _____.

(a surfactant, a builder, a auxiliary agent, none of these)

34. In glass or vitreous state solid the atoms are arranged in _____.

(Regular fashion, Random fashion, Linear fashion, none of these)

35. Glass was first made by about _____.

(40BC, 400BC, 4000BC, none of these)

36. The number of glass products now manufactured is _____.

(25,000, 50,000, 75,000, none of these)

37. The substance that can form the glassy, non-crystalline structure is called _____.

(Formers, Fluxes or modifiers, Stabilizers, none of these)

38. The principle former of almost all glasses is _____.

($(\text{SiO}_2)_n$, $(\text{SiO}_3)_n$, $(\text{SiO}_2)_X$, none of these)

39. Chemical compounds, which are added to reduce the reactivity of glass, are called _____.

(Formers, Modifiers, Stabilizers, none of these)

40. _____ is used as stabilizer.

(Ca_2O , SiO_2 , Na_2O , none of these)

41. In glass making the whole combination of ingredients is called a _____.

(Gangue, Batch, Mixture, none of these)

42. The melting of nearly all glass is done in a continuous tank furnace, which operates steadily over periods of up to _____.

(a day, a month, a year, none of these)

43. _____ is a heat-treatment cycle that prevents glass from harmful stress.

(Forming, Annealing, Batching, none of these)

44. _____ is used for Annealing.

(Klin, Batch, Converter, Oven)

45. The main constituents of _____ are boron oxide and silica.

(Pyrex glass, Soda-lime glass, Low silica glass, Fibrous glass)

46. In Pakistan how many units are involved in the production of glass _____.

(20, 25, >25, none of these)

47. In Pakistan the total production of glass is over _____ tons per year.

(800, 8000, 80,000, none of these)

48. Asbestos is a _____.

(Mineral fibre, Animal fibre, Vegetable fibre, none of these)

49. _____ is the fibre in which the basic polymer (fibre forming

substance) is a long chain composed of least 85% by weight of Acrylonitrile units.

(Acrylic Fibre, Modacrylic fibre, Polyester fibre, Rayon Fibre)

50. The fibre, which has less than 85% but more than 35% proportion by weight, of acrylonitrile units is called _____.

(Acrylic fibre, Modacrylic fibre, Polyester fibre, Rayon fibre)

51. _____ is the fibre in which the fibre-forming substance is a long chain synthetic polymer composed of at least 85% by weight of an ester of a dihydric alcohol and terephthalic acid.

(Acrylic fibre, Modacrylic fibre, Polyester fibre, Rayon fibre)

52. _____ is a fibre composed of regenerated cellulose in which substituents have replaced not more than 15% of the hydrogen of the hydroxyl group.

(Acrylic fibre, Modacrylic fibre, Polyester fibre, Rayon fibre)

53. _____ compound contains cellulose acetate as fibre forming substance.

(Acrylic fibre, Modacrylic fibre, Acetate fibre, Rayon fibre)