1. ATOMIC STRUCTURE

1. Rutherford's atomic model is also known as _____
2. Quantum theory was proposed by _____
3. Electromagnetic radiation is in the form of packets called _____
4. Planck's equation is _____
5. Value of planck's constant is _____
6. Angular momentum of the revolving electron is _____
7. "In presence of applied magnetic field spectral lines split into fine spectrum." This phenomenon is called _____
8. According to sommerfeld, shape of the orbital is _____
9. As per sommerfeld's model if n = k, the shape of the orbital is _____
10. Maximum value of 'l' is _____
11. Wave equation was proposed by _____
12. Dual nature of electron was proposed by _____
13. Electrons revolve round the nucleus in _____ and _____ directions.
14. Azimuthal quantum number is also called as _____
15. For given 'l', m can have a maximum of _____ values.
16. The upper & lower limits of 'm' for l = 3 are _____
17. Spin values of electron are _____
18. Region in space where there is a finite probability of finding an electron is _____
19. Shape of s - orbital is _____ , p - orbital is _____ , d - orbital is _____
20. Orbitals having indentical energy are called _____
21. Valency configuration of cr (24) is _____ , cu (29) is _____
22. Number of sub - energy levels in an orbit is equal to _____
23. (n + *l*) value of 1 s - orbital is _____
24. Unit of atomic size is _____ , 1 Angstrom = _____
25. Units of I.P, E.A. are _____ , E A order of halogens is _____
26. Region in space where the probability of finding an electron is zero is _____

2. CHEMICAL BOND

1. The filling up of valency orbital with 8 electrons is called _____
2. Examples of S - S overlap are _____
3. Examples of P - P overlap are _____
4. Examples of S - P overlap are _____

5. Examples of molecules with double bond are _____
6. Examples of molecules with triple bond are _____
7. Examples of molecules with co-ordinate covalent bond are _____
8. End-on-End overlap leads to _____
9. Side ways overlap leads to _____
10. Molecules with linear shape are _____
11. Pyramidal shaped molecules are _____
12. Shape of PCl_5 is _____
13. Shape of H_2O is _____
14. _____ orbitals can form sigma bond.
15. _____ orbitals can form Pi bond.
16. In co-ordinate covalent bond, both electrons were donated by _____

3. PERIODIC CLASSIFICATION OF ELEMENTS

1. Examples of Doberenier traids are _____
2. According to Doberenier, in a traid the Arithmatic mean at atomic weight of 1st & 3rd elements is equal to the atomic weight of _____
3. As per Newland's concept of octaves, properties of 1st elements resemble properties of _____
4. Mendeleef's periodic table is based on _____
5. Mendeleef's eka aluminium is _____ eka boron is _____ , eka silicon is _____
6. Modern periodic table is based on _____
7. The modern periodic table has _____ groups & _____ periods.
8. In the modern periodic table, 1st period has _____ elements, 2nd & 3rd periods have _____ elements, 4th & 5th periods have _____ elements 6th period has _____ elements and 7th period is _____
9. General electronic configuration of S - block elements is _____ , P - block elements is _____
10. Inert gas configuration is _____
11. Elements form 57 to 71 are _____ & 90 to 103 are _____
12. In a group, atomic size _____ from top to bottom and in a period it _____ from left to right.
13. Electronegativity is measured by using _____
14. Highest electronegative element is _____ , its value is _____
15. Highest electro positive elements is _____

16. Halogens are _____ they belong to _____
17. Electropositive elements are & are _____ agents.
18. Electronegative elements are & are _____ agents.
19. In a period, from left to right R.P. _____ and O.P. _____
20. In a group, from to bottom R.P. _____ and O.P. _____

4. ALKALINE EARTH METALS

1. Group IIA elements are called _____
2. Radio active element is _____
3. For group II A elements, melting & boiling points do not follow _____
4. Alkaline earth metals are very reactive due to _____
5. Group II A elements react with H_2O & form _____ , with Cl_2 & form _____ , with H_2 & form _____ , with O_2 & form _____
6. _____ forms peroxides when heated in excess oxygen.
7. Oxides of group II A elements are _____
8. Be H_2 is prepared by reducing $BeCl_2$ with _____
9. Hydrides of group II A are _____ agents.
10. _____ is covalent & hygroscopic.
11. Chlorides of Mg, Ca, Sr & Ba are _____
12. Group II A elements are extracted by _____
13. To increase electrolytic conductivity & to decrease (lower) melting point of Mg _____
14. Two ores of Mg are _____
15. No of H_2O molecules present in Epsom salt are _____
16. During extraction of Mg, cathode is _____ anode is _____
17. To prevent oxidation of Mg _____ is passed over floating Mg.

Mineral	Formulae
Beryl	$Be_3 Al_2 (SiO_3)_6$
Dolomite	$CaCO_3 . Mg CO_3$
Carnallite	$Mg Cl_2 . KCl . 6H_2O$
Barytes	$BaSO_4$
Magnasite	$MgCO_3$
Epsom salt	$MgSO_4 . 7H_2O$

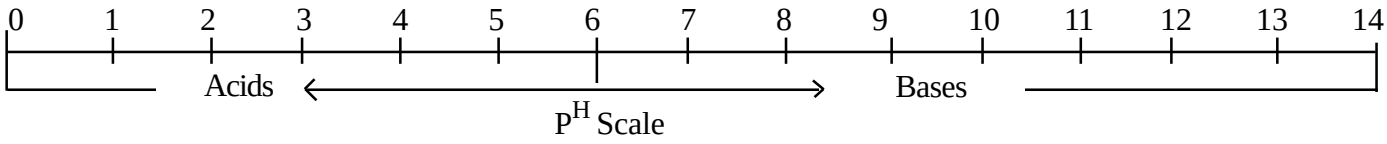
5. SOLUTIONS

1. Solution is a homogeneous mixture of _____
2. In a solution, the component which is taken in relatively less quantity is called _____ & the one which is comparatively in large quantity is _____
3. In a solution, if solvent is water, the resultant solution is _____
4. _____ is defined as the maximum amount of solute by weight in grams dissolved in 100 gm. of solvent at constant temperature.
5. solubility of a compounds depends on _____
6. On increasing temperature, solubility of $Ce_2(SO_4)_3$ _____ and NaCl _____
7. Polar solvents are soluble in _____
8. _____ is defined as the amount of solute present in unit volume solution.
9. Concentration is expressed in _____
10. Weight (W%) = _____ , Volume (V%) = _____
11. Molarity M = _____
12. Mole fraction x_A = _____, x_B _____ if A, B are solute & solvent.
13. Molarity is dependent on _____
14. Mole fraction is independent of _____
15. A _____ solution is a solution of Known Concentration.
16. Standard solutions are Prepared in _____
17. The Process of a molecule giving rise to ions is _____
18. Examples of strong electrolytes are _____ , weak electrolytes are _____ non - electrolytes are _____
19. Effect of _____and _____ increases ionisation.
20. Super saturated solutions are _____
21. _____ , _____ and _____ have no units.

6. ACIDS, BASES AND SALTS

1. Acids are formed when _____ react with water.
2. Bases are formed when _____ react with water.
3. Acids are _____ to taste while bases are _____ to taste.
4. Colour of Methyl orange indicator in acidic medium is _____
5. Colour of Methyl orange indicator in basic medium is _____

6. Colour of phenapthalene indicator is _____
7. Aqueous solutions of acids & bases show _____
8. According to Arrhenius, acids give _____ & bases give _____ on dilution.
9. According to Arrhenius theory, Co_2, SO_2, SO_3 have _____ nature CaO, FeO have _____ nature.
10. Proton in H_2O is in the form of _____
11. Product of $[H^+]$ $[OH^-]$ ion concentrations in one mole of water is defined as _____
12. Value of K_w at 25^oC is _____
13. Value of K_w increases with _____
14. P^H is defined as _____



P^H Scale

15. For acedic solution, the $[H^+]$ _____ , P^H _____
16. For basic solution, the $[H^+]$ _____ , P^H _____
17. For neutral solution, the $[H^+]$ _____ P^H _____
18. Heat of neutralisation is _____
19. Heat of neutralisation for weak acid & strong base is _____
20. Completely ionized acids and bases are called _____
21. Incompletely ionized acids and bases are called _____

P^H of some Common fluids	
Sample	P^H
Gastric juice in the stomach	1 - 2
Lemon juice	2 - 4
Vinegar	3
Grape juice	3.2
Orange juice	3.5
Urine	4.8 - 7.5
Aerated water	5.5
Saliva	6.4 - 6.9
Pure water	7
Blood	7.32 - 7.45

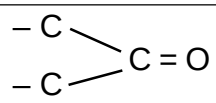
Formulae	
Acetic acid	CH_3 COOH
Nitric acid	H NO_3
Phosphoric acid	H_3 PO_4
Carbonic acid	H_2 CO_3
Sulphuric acid	H_2SO_4
Hydrochloric acid	HCL
Sodium Hydroxide	NaOH
Calcium Hydroxide	$Ca(OH)_2$
Zinc Hydroxide	$Zn(OH)_2$
Ammonium Hydroxide	NH_4OH
Sodium Acetate	CH_3COONa

7. CHEMISTRY OF CARBON COMPOUNDS

1. The occurrence of same element in one or more forms is _____
2. Bond angle in diamond is _____ , graphite is _____
3. Bond length in diamond is _____ , graphite is _____
4. In diamond carbon atoms are arranged _____ & in graphite they have _____ arrangement.
5. Full form of C_{60} is _____
6. In C_{60}, carbon atoms are arranged in _____ , bond length is _____
7. Carbon monoxide reacts with haemoglobin to give _____
8. 6 CO_2 + 6 H_2O ⟶ 6 O_2 + _____

   6n CO_2 + 5n H_2O ⟶ 6 NO_2 + _____
9. CO_2 is used as _____
10. Solid CO_2 is called _____
11. The Compounds in which all the Valancies are not satisfied are called _____
12. _____ is the Phenomenon in which atoms of same element join togeather to form long chains.
13. Compounds having same molecular formula but different structures are called _____ and the Phenomenon is called _____
14. L.P.G. is _____
15. _____ is 'store of sun'. Kind of coal with 95% carbon is _____
16. Pyrolysis of coal gives _____
17. Compounds containing exclusively carbon & hydrogen are called _____
18. Example of aromatic hydrocarbon is _____
19. Saturated hydrocarbons are _____ with general formula _____

20. unsaturated hydro carbons are _____ with general formulae _____ & _____
21. Alkanes are also called as _____
22. LPG gas contains large amount of _____
23. Unsaturated hydrocarbons have _____ b/n two carbon atoms.
24. Complete burning of a substance is called _____
25. on removing a hydrogen from alkanes, _____ are formed
26. Alkanes undergo _____ reactions
27. Alkenes are also called as _____
28. Alkenes & alkynes Participate in _____ reactions
29. Alkenes polymerise to form long chain compounds known as _____ & the Phenomenon is called _____
30. Alkanes, alkenes, alkynes are _____
31. _____ is used in welding & artificial ripening of fruits.
32. Carbon togeather with heteroatoms is called a _____

Some functional groups and their formula		
Functional group	**Name**	**Example**
– C – OH	Alcohol	CH_3 OH [Methyl Alcohol]
– C – CHO	Aldehyde	CH_3CHO [Acetaldetyde]
	Ketone	CH_3 $COCH_3$
– C – COOH	Acid	CH_3COOH [Acetic acid]
– C – O – H	Ether	CH_3 – O – CH_3 [Dimethyl Amine]
– C – NH_2	Amine	C_3 H_7 NH_2 [Propyl Amine]
– C – COOR	Ester	CH_3 $COOC_2H_5$

8.CARBOHYDRATES & PROTIENS

1. Poly Hydroxy aldehydes / Ketones are called _____
2. General formula of carbohydrates is _____
3. Sweetest sugar is _____
4. Examples of Monosaccharides are _____
5. Examples of oligosaccharides are _____
6. Examples of Polysaccharides are _____
7. $6\ H_2O + 6\ CO_2 \xrightarrow[\text{Chlorophyll}]{\text{Sunlight}}$ _____

8. The amount of energy made available by consumption of one gram of a substance is known as its _____
9. The calorific value of glucose is _____
10. Ammonical silver Nitrate solution is called _____
11. In Tollen's test, Ag^+ ions reduce to _____
12. Bendict's solution contains _____
13. The spent cane is called _____
14. Process of passing lime, $Ca(OH)_2$ is called _____
15. Process of passing CO_2 gas is called _____
16. Process of passing SO_2 gas is called _____
17. The Precipitates of defecation, carbonation & sulphitation is called _____ and is useful as _____
18. The purified juice is called _____
19. The thick black liquid obtained after the seperation of crystals is called _____
20. By product of sugar industry is _____
21. _____ is the process of breaking down of large molecules into small molecules by the action of enzynes _____
22. Enzynes produced by yeast are _____
23. Salts added for the fast growth of yeast are _____
24. The alcohol produced in fermentation tank is technically called _____
25. The product containing 96% alcohol & 4% water is commercially called _____
26. 100% alcohol is called _____
27. Consumption of alcohol leads to _____
28. Amino acids have _____ and _____ groups.
29. _____ are called the salt like structures of aminoacids.
30. _____ are building blocks of protiens.
31. Essential amino acids are _____
32. CO – NH bond is called _____
33. _____ can form protiens
34. Number of amino acids present in Hemoglobin is _____

35. Protiens act as _____

36. If the order of amino acids in hemoglobin is changed, then it is called _____

37. Harmone regulating blood sugar level is _____

38. Protiens are polymeric compounds of _____

9.OILS AND FATS

1. Chemical composition of oils are _____
2. _____ are principal sources of oils and fats.
3. _____ oils find medicinal values.
4. Catalyst used hydrogenation of oils is _____
5. Chemically soap is a sodium or pottasium salt of _____
6. Hydrolysis of oils & fats in presence of base gives _____ & the process is called _____
7. Deodrant or anti - microbial soaps contain _____
8. Shaving soaps contain excess of _____
9. Transparent soaps contain _____
10. Dry cleaning soaps and cosmetics have _____
11. $2Na_3\ PO_4 + 3\ CaCl_2$ ⟶ _____
12. _____ are salts of ABS and FAS.
13. _____ & _____ are examples of oils giving seeds.
14. Hydrogenation of oils improve _____

Name of Fatty Acid	Formula
Lauric acid	$C_{11}\ H_{23}\ COOH$
Myristic acid	$C_{13}\ H_{27}\ COOH$
Myristoleic acid	$C_{13}\ H_{25}\ COOH$
Palmitic acid	$C_{15}\ H_{13}\ COOH$
Stearic acid	$C_{17}\ H_{35}\ COOH$
Oleic acid	$C_{17}\ H_{33}\ COOH$
Linoleic acid	$C_{17}\ H_{31}\ COOH$
Linolenic acid	$C_{17}\ H_{29}\ COOH$

10.CHEMISTRY & INDUSTRY

1. Cement was invented by_____
2. _____ is dirty grey powder consisting of calcium silicates & aluminates
3. Raw slurry or raw meal is called _____
4. Chemical composition of glas is _____
5. Pieces of broken glass is called _____
6. process of cooling glass is called _____
7. Glass blowing is possible with _____
8. _____ impart colour to glass
9. Plastics are _____
10. Examples of natural adhesives are _____
11. Examples of synthetic adhesives are _____
12. _____ is used as nail polish remover
13. Cold - cream is an emulsion of _____
14. Talc contains _____
15. First synthetic dye was prepared by _____
16. Examples of auxochromes are _____
17. Examples of chromophores are _____
18. _____ is defined as a substance used in prevention, diagnosis, treatment or ure of a disease.
19. _____ are drugs of modefied form
20. Petroleum is derived from _____
21. Cooking gas contain _____
22. _____ is decomposition of bigger hydrocarbons into simple.
23. Fertilizers containing micro nutrients are _____
24. Examples of single fertilizers are _____
25. Examples of compound fertilizers are _____

Metal oxide / Metal salt	Colour
Fe_2O_3	Yellow
Feo	Green
Cr_2O_3	Green
MNO_2	Purple
$CuSO_4$	Blue
CuO	Blue
$AuCl_3$	Ruby
Cu_2O	Red
SeO_2	Red
CdS	Lemon Yellow