Chemistry Fsc Part 1 Online Test

Sr	Questions	Answers Choice
1	After 3 half lives of a chemical reaction, the % fraction of the amount left is	A. 6.25 B. 75 C. 12.5 D. 50
2	In the ground state of an atom, the electron is present	A. In the nucleus B. In the second shell C. Nearest to the nucleus D. Farthest from the nucleus
3	27g of Al will react completely with how much mass of O2, to produce Al2O3.	A. 8 g of oxygen B. 16 g of oxygen C. 32 g of oxygen D. 24 g of oxygen
4	According to classical concept, oxidation involves	A. Addition of oxygen B. Addition of electron C. Removal of hydrogen D. All are correct
5	What is oxidation state of chlorine in Ca(ClO3)2	A. +1 B. +3 C. +5 D. +7
6	In which compound oxidation state of chlorine is +5	A. NaCl B. HOCl C. NaClO3 D. NaClO2
7	The electron in a subshell is filled according to formula.	A. 2n² B. 2(2l+1) C. (2l+1) D. None of these
8	In zero order reaction, the rate is independent of	A. Temperature of reaction B. Concentration of reactants C. Concentration of products D. None of these
9	The boiling point of water at Murree Hills.	A. 90^oC B. 98^oC C. 100^oC D. 120^oC
10	In which de excitation of electron of hydrogen atom maximum energy is relaeased.	A. From n2 to n1 B. From n3 to n2 C. From na to n1 D. From na to n2
11	The charge on electron was determined by millikan in his oil drop experiment and its value is	A. 6.023 x 10⁻²³C B. 1.602 x 10⁻²³C C. 1.602 x 10⁻¹⁹C D. 6.625 x 10⁻³⁴C
12	Which one of the following has no tendency of form coordinate covalent bond with H+	A. NH3 B. H2O C. CH4 D. CH3OH
13	The heat contents of the system of known as.	A. Entropy B. Enthalpy C. Work D. Free energy
14	The molal boiling point constant is the the ratio of the elevation in boiling point to.	A. Molarity B. Molality C. Mole fraction of solvent D. Mole fraction of solute
15	Tin has isotopes.	A. 9 B. 10 C. 11 D. 12

16	Cell potential depends upon	A. Temperature B. Concentration of ions C. Nature of electrolyte D. All of above
17	Amorphous solids.	A. Have sharp melting points. B. Undergo clean cleavage when cut with knife C. Have perfect arrangement of atoms D. Can possesses small regions of orderly arrangement of atoms.
18	Butter is solution of	A. Liquid in liquid B. Solid and liquid C. Liquid and solid D. Liquid and gas
19	Which pair of molecule have Debye forces in them	A. Ar and Ar B. Argon and water C. Na+ ions and water D. water and water
20	London dispersion force are the only forces present among the.	A. Molecules of water in liquid state B. Atoms of helium in gaseous state at high temperature C. Molecule of solid iodine D. Molecules of hydrogen chloride gas
21	Which particle has a mass 1/1836 time, that of hydrogen.	A. Proton B. Positron C. Electron D. Neutron
22	When a reaction occurs in many steps than the slowest step is.	A. Mechanism step B. Rate determining step C. enthalpy determining step D. None of the above
23	If the salt bridge is not used between two half cells, then the voltage.	A. Decrease rapidly B. Decrease slowly C. Drops to zero D. Does not change
24	Which of the following species has unpaired electrons in anti-bonding molecular orbitals	A. O₂⁺² B. N₂⁻² C. B₂ D. F₂
25	If an endothermic reaction is allowed to take place very rapidly i the air, the temperature fo the surrounding air.	A. Remains constant B. Increase C. Decrease D. Remain unchanged
26	Dipole-dipole forces are present among.	A. Molecules of Iodine B. Atoms of Neon i gaseous state C. Chloroforms' molecules D. CCl4 molecules
27	The net heat change in a chemical reaction is same whether it is brought about in two or more different ways in one or several steps. It is knnown as	A. Henry's law B. Hess's law C. Joule's principle D. Law of combustion
28	The iodine present in water can be separated by which one of the following techniques	A. Sublimation B. Chromatography C. Filtration D. Solvent extraction
29	Safe and reliable method of drying crystals is through.	A. Pressing it between folds of filter paper B. Drying it in oven C. Evaporation of solution D. Vacuum desiccator
30	Bohr's model of atom, is contradicted by.	A. Planck quantum theory B. Pauli's exclusion prinsciple C. Heisenberg's uncertainty principle D. All of the above
31	When water freezes at 0°C, its density decreases due to	A. Cubic structure of ice B. Empty spaces present in the structure of ice C. Change of bond lengths D. Change of bond angles
32	Which acid has less value of pKa.	A. CH3COOH B. H2S C. H2CO3 D. HCl
		A. CaF2

33	Which is pseudo solid	B. Glass C. NaCl D. CaCl2
34	The influence of temperature on reaction rate is predicated by	A. Free energy change of reaction B. Arrhenius equation C. Van der weal's equation D. Kinetic equation
35	Gases of air, always remains in the random motion and do not settle due to.	A. Elastic collision of gas molecules B. Unequal number of different gas molecules C. Difference impartial pressure of gas molecules D. Difference in molecular masses of air gases
36	More abundant isotope of an element is the one with.	A. Even atomic number B. Odd atomic number C. Even mass number D. Odd mass number
37	Which of the following will have the same number of molecule at STP.	A. 280 cm3 CO2 and 280 cm3 of N2O B. 11.2 dm3 of O2 and 32 g of O2 C. 44 g of CO2 and 11.2 dm3 of CO D. 28 g of N2 and 5.6 dm3 of oxygen
38	Diamond is a bad conductor of electricity because	A. It has a tight structure B. It has a high density C. There are no free electrons present in the crystal of diamond to conduct electronics D. None of these
39	If an endothermic reaction is allowed to take place very rapidly in the air, the temperature of the surrounding air	A. Remains constant B. Increase C. Decrease D. Increase a bit
40	Two solutions of NaCl and KCl are prepared separately by dissolving same amount of the solute in water. Which of the following statements is true for these solution.	A. KCl solution will have higher boiling pint than NaCl solution B. Both the solutions have different boiling point C. KCl and NaCl solutions possess same vapour pressure D. KCl solution possesses lower freezing point than NaCl solution
41	Ionic solid are characterized by.	A. Low melting point B. Good conductivity in solid state C. High vapours pressure D. solubility in polar solvent
42	Dipole moment is defined as.	A. Charge x distance B. Charge x Debye C. Charge x displacement D. Charge x bond energy
43	Gooch crucible is made of.	A. Glass B. Paper C. Teflon D. Procelain
44	The liquid pair which is not completely miscible is	A. CH₃OH and water B. Alcohol and water C. Phenol and water D. Benzene and toluene
45	The number of moles of hydrogen atoms in 3.2 g of methane CH4.	A. 0.2 B. 0.4 C. 0.6 D. 0.8
46	A solution has pH zero. Its H+ ions concertation will	A. zero B. More than unity C. Less than unity D. Unity only
47	Cadmium has isotopes.	A. 3 B. 4 C. 5 D. 9
48	The reaction that involves gases, its rate does not depend upon	A. Catalyst B. Temperature C. Moles dm⁻³ D. Partial pressure
49	Isomorphic crystals show	A. Same chemical properties B. Same physical properties C. Same crystalline form D. Same melting point

50	When hot saturated solution is cooled very rapidly, we get	A. Medium sized crystals B. large sized crystals C. Premature crystallization of the substance D. Old crops of crystals
51	Which compound does not obey the octet rule.	A. NH3 B. BCl3 C. H2O D. CH4
52	Gas equation is derived by combining	A. Avogadro's and Charles's Law B. Boyle's and Charles's Law C. Avogadro's and Boyle's Law D. Avogadro's, Boyle's and Charles's Law
53	The structure of water molecule is.	A. angular B. Linear C. Trigonal D. Trigonal pyramidal
54	the nature of the positive rays depend on	A. The nature of the electrrode B. The nature of the discharge tube C. The nature of the residual gas D. All of the above
55	The polarizabilities of elements mostly increase down the group due to the reason that	A. The atomic numbers increase B. Number of protons increase C. Number of shells increase along, with increase of shielding effect D. The behavior of the elements remain the same
56	The nature of bond in diamond is	A. Electrovalent B. Metallic C. Coordinate covalent D. Covalent
57	In electrolysis of aqueous NaCl, Cl-ions are.	A. Oxidized at anode B. Oxidized at cathode C. Reduced at cathode D. Neither oxidized nor reduced
58	The number of moles of acid or base required by one $dm^3$of buffer to alter its pH by one unit is called	A. Buffer efficiency B. Buffer capacity C. Buffer action D. None
59	The separation of the different isotopes in the mass spectrometer is done on the basis of	A. Different amounts of positive changes B. Charge e/m value different amounts of negative changes C. Different m/e value D. Velocities of the ions
60	Half life period for 235 U is 92	A. 710 million years B. 810 milion years C. 720 million years D. 820 million years
61	When $i_2$present in the aquous layer in the form of $I^{-1}{}_3$foes to CCl_4layer, then the change in colour is from	A. Purple to brown B. Purple to green C. Green to brown D. Brown to purple
62	Noon has low critical temperature and pressure as compared to other gases. the most probable reason is that	A. Its octet is complete B. It is a monoatomic gas C. It has very low polarizability D. It has least forces of attraction
63	Drying agent used in crystallization is.	A. P2O3 B. Animal charcoal C. KMnO4 D. Water
64	Which of the following is a polar molecule	A. CCl4 B. HCl C. BF3 D. CO2
65	Which statement is correct about solubility product constant.	A. It is applicable at highly soluble substances. B. Value of Kap is independent of temperature C. It is used for homogeneous aquarium system D. It can be used to predict that precipitation will take place or not by combining two ions
66	A single lead cell provides volts	A. 2 B. 4 C. 6 D. 8
		A. Non-volatile or thermally unstable

67	Solvent extraction method is particularly useful technique for separation when the product to be separated is	B. Volatile or thermally unstable C. Non-volatile or thermally stable D. Volatile or unstable
68	The paper at which separation of solute have been taken place is called.	A. Retardation factor B. Chromatogram C. Base line D. Solvent front
69	When atoms are subjected to strong electric field, splitting of spectral lines is called.	A. Zeeman effect B. stark effect C. Photoelectric effect D. Compton effect
70	A substance which rerareds the rate of a reaction is called	A. Inhibitor B. Activator C. Auto-catalyst D. None of these
71	Equal masses of methane and oxygen are mixed in an empty container at 25 ^{O}C. The fraction of total pressure exerted by oxygen is.	A. 1/3 B. 8/9 C. 1/9 D. 16/17
72	At constant volume of a system remains constant and the heat is absorbed by the system, them amount of heat absorbed is called	A. Enthaply change of the system B. Internal energy change of the system C. Total enthalphy of the system D. Total internal energy of the system
73	Unit of mole fraction is	A. mol dm-3 B. mol kg-1 C. g dm-3 D. No unit
74	The highest temperature above which a gas cannot be liquified, no matter how much the pressure is applied is known as	A. Boiling temperature B. Consulate temperature C. Absolute zero D. Critical temperature
75	Acetone and chloroform are soluble in each other due to	A. Intermolecualr hydrogen bonding B. Dipole-dipole interaction C. Instantaneous dipoles D. All of the above
76	Lyman series lies in spectral region	A. Infrared B. Ultra violet C. Visible D. None of these
77	Which liquid has low boiling point with.	A. Less intermolecular force and higher V.P B. Greater intermolecular forces and low V.P C. Bigger size and greater polarizability D. High hydrogen bonding in it
78	When liquid water changes to ice its volume expands. The expansion in volume is.	A. 5% B. 9% C. 10% D. 18%
79	The molecules of CO_2in dry ice form the	A. Ionic crystal B. Covalent crystals C. Molecular crystals D. Any type of crystals
80	A solution of glucose is 10% The volume in which 1 g mole of it dissolved will be.	A. 1 dm3 B. 1.8 dm3 C. 900 cm3 D. 200 cm3
81	Which of the hydrogen halide has the highest percentage of ionic character.	A. HCl B. HBr C. HF D. HI
82	Lyman series lie in	A. Ultraviolet region B. Visible region C. Infrared region D. Radio waves region
83	The concept of distribution of velocities among the gas molecules was given by.	A. Clausius B. Mexwell C. Boltzmann D. Vander waal
84	Quantum number values for 2p orbitals are.	A. n = 2, 1 =1 B. n =1, 1 = 2 C. n =1, 1= 0 D. n = 2, 1 = 0

85	Which of the hydrogen halides has the highest percentage of ionic character.	A. HF B. HBr C. HCl D. HI
86	What are the SI of excluded volume 'b' in Vander waal equation.	A. dm³ mol -1 B. m3 mol -1 C. mol dm-3 D. mol m-3
87	Carbon atom in methane in hybridized.	A. sp3 B. Sp2 C. Sp D. dsp3
88	NH3 shows a maximum boiling point among the hydrides of the group V elements due to.	A. Very small size of nitrogen B. Long pair of electrons present on nitrogen C. Enhanced electronegative character of nitrogen D. Pyramidal structure of NH3
89	Compound which undergo sublimation is	A. KMnO4 B. CaCO3 C. NH4Cl D. Na2CO3
90	Which of the following particles would on losing an electron has its outermost p-orbital as half filled	A. Nitrogen atom B. O⁺ion C. P⁻¹ion D. S⁺¹ion
91	_____ was derived by C.M Guldberg and P Waage in 1864	A. Law of conservation of Mass B. Law of mass action C. Law of conservation of energy D. Distribution law
92	the order of the rate of diffusion of gases NH_3, SO_2, $Cl_2$and CO_2 is	A. NH₃> SO₂>Cl₂CO₂ B. NH₃> CO₂> SO₂> Cl₂ C. Cl₂> SO₂> CO₂> NH₃ D. NH₃> CO₂> Cl₂> SO₂
93	The atomis radius is of the order of	A. 10⁻⁸cm B. 10⁸cm C. 10⁻¹²cm D. 10⁻¹⁰cm
94	If a strips of Cu metal is placed in a solution of FeSO4	A. Cu will be precipitated down B. Fe is precipitated out C. Cu and Fe both dissolve D. No reaction takes palce
95	Optimum pressure in Haber's process for synthesis of Ammonia is	A. 100 -150 atm B. 200- 300 atm C. 350 - 450 atm D. 500 - 600 atm
96	A solution will be unsaturated if	A. Ionic product = Kap B. Ionic product < Ksp C. Ionic Product > Ksp D. both 'a' and 'b' are correct
97	The largest number of molecules are present in	A. 3.6 of H2O B. 4.6 g of C2H5OH C. 2.8 g of CO D. 5.4 g of N2O5
98	"The components of which mixture can be separated by filtration".	A. NaCl and CaCl2 B. Calcium carbonate and NaCl C. Blue and green inks D. Sand and naphthalene
99	At which distance a molecule is present from its neighbor molecules of its own diameter, at room temperature.	A. 100 times B. 200 times C. 300 times D. 400 times
100	What amount of NaOH is required to prepare 500 g of 0.5 molal solution.	A. 10 g B. 20 g C. 30 g D. 40 g
101	Select the correct answer out of the following alternative suggestions London dispersion forces are the only forces present among the.	A. Molecules of water in liquid state B. Atoms of helium is gaseous state at high temperature. C. Molecules of solid I2

		C. Molecules of solid I2 D. Molecule of H-Cl gas
102	Which of the following statements is correct about galvanic cell	A. Anode is negative charged B. Reduction occurs at anode C. Cathode is positively charged D. Reduction occurs at cathode
103	Which one is not example of a sublimate.	A. NH4Cl B. I C. NaCl D. Benzoic Acid
104	The difference of potential of two electrodes when concentration of solution is 1 M each at 25 ^{o}C and 1 atmosphere is called.	A. Electrode potential B. Standard cell potential C. Cell reaction D. Cell voltage
105	Which of the following solutions has the highest boiling point	A. 5.85% solution of sodium chloride B. 18.0% solution of glucose C. 6.0% solution of urea D. All have the same boiling points
106	Splitting of spectral lines when atoms are subjected to strong electric field is called.	A. Zeeman effect B. Stark effect C. Photoelectric effect D. Compton effect
107	Fluorine molecule (F_2) is formed by the overlap of	A. s - s orbital B. s - p orbital C. p - p head on overlapping of orbitals D. p - p parallel overlapping of orbitals
108	In Al2O3, the ratio between the ions is	A. 1 :2 B. 2:1 C. 2:3 D. 3:2
109	Which solution is an example of solid in gas	A. Fog B. Steel C. smoke D. Air
110	The deviation of a gas from ideal behavior is maximum at.	A. -10 ^oC and 5.0 atm B. -10^oC and 2 atm C. 0^oC and 2 atm D. 100^oC and 2 atm
111	How many allotropic forms are present in carbon	A. Two B. Three C. Four D. Five
112	When a non-spontaneous redox reaction is carried out by using the electrical current, then the process is called	A. Decomposition of the substances B. Cracking C. Hydrolysis D. Electroiysis
113	In chromatographic technique. Rf has unit.	A. Mol dm-3 B. Cm C. m3 D. No units
114	In silver oxide battery, the cathode is mad up of.	A. AgO B. Ag2O C. Ag2O3 D. Ag
115	A negative deviation from Raoult's law in solution means, the solution has	A. High boiling point and high vapour pressure B. High boiling point and low vapour pressure C. Low boiling point and low vapour pressure D. Low boiling point and high vapour pressure
116	The free expansion of the gas from high pressure towards the low pressure causes	A. Increase of temperature B. Decrease of temperature C. Grater number of collisions among the molecules D. Decrease of velocity of gas molecules
117	If the electron in a hydrogen atom drops from n = 6 to n =4 level, the radiation emitted is in which series of lines in the spectrum of atomic hydrogen.	A. Lyman B. Balmer C. Paschen D. Brackett
118	Which of the following substances is used as decolorizing agent.	A. Silica gel B. Animal charcoal C. conc. H2SO4 D. Asbestos
		A. Dilute solution which behave as nearly ideal

119	Colligative properties are the properties of.	solutions B. Concentrated solutions which behave as nearly non ideal solutions C. Both a and b D. Neither a nor b
120	In which compound the oxidation number of Mw is +6	A. KMnO4 B. K2MnO4 C. MnO2 D. MnO
121	The Van der Waals' equation explain the behaviour of.	A. Ideal gas B. Real gas C. Vapours D. Non ideal gases
122	Relative lowering of vapour pressure is equl to.	A. Mole fraction of solute B. Mole fraction of solvent C. Molarity D. Molality
123	Weak intermolecular forces are present in.	A. Only gases B. Only liquid C. Only solids D. gases, liquids and solids
124	The number of H2O molecules in 9 grams of ice is	A. 3.01 x 10²³ B. 6.02 x 10²³ C. 6.02 x 10⁸ D. 12.04 x 10²³
125	Molecule in which the distance between two carbon atoms in the largest is.	A. C2H6 B. C2H4 C. C2H2 D. C6H6
126	Which of the following molecules contain six bonding electrons.	A. CH4 B. CO2 C. BF3 D. H2S
127	An aqueous solution of ethanol in water has vapour pressure.	A. Equal to that of water B. Equal to that of ethanol C. More than that of water D. Less than that of water
128	Which of the following molecules have highest bond energy	A. F2 B. Cl2 C. Br2 D. I2
129	The optimum temperature for the synthesis of NH3 by Haber's process is.	A. 200 ^oC B. 300 ^oC C. 400 ^oC D. 500 ^oC
130	One molecule of hemoglobin in heavier than one atom of hydrogen.	A. 680 times B. 6800 times C. 68000 times D. 680000 times
131	18 g glucose is dissolved in 90 g o water, The relative lowering of vapour pressure is equal to.	A. 1/5 B. 5.1 C. 1/51 D. 6
132	In azeotropic mixture showing positive deviation from Raoult's law the volume of the mixture is	A. Slightly more than the total volume of the components B. Slightly less than the total volume of the components C. Equal to the total volume of the components D. None of these
133	Paalladium has isotopes.	A. 6 B. ₇ C. 8 D. 9
134	VSEPR theory was proposed by	A. Nyholn and Gillespie B. Kossel C. Lewis D. Sidwick
135	Isotopes differ in.	A. Properties which depend upon mass B. Arrangement of electrons in orbitals C. Chemical properties D. None of these
136	In order to mention the B.P. of water at 110°C, the external pressure should	A. Between 760 torr and 1200 torr B. Between 200 torr and 760 torr

136	be	C. 760 torr D. Any value of pressure
137	$K_a$and $K_b$of a conjugate acid and are related with $k_w$as	A. K_a+ K_b=K_w B. K_a-K_b=K_w C. K_a.K_b= K_w D. K_a/ K_b= K_w
138	In which molecule all atoms are coplanar.	A. CH4 B. BF3 C. NH3 D. PH3
139	The oxidation number of C in C12H22O11 is	A. Zero B. - 6 C. + 6 D. 12
140	The unit of rate constant is same as that of rate of reaction in	A. first order reaction B. Second order reaction C. Third order reaction D. Zero order reaction
141	The pH of 10-3 mole dm-3 of an aqueous solution of H2SO4 is.	A. 3.0 B. 2.7 C. 2.0 D. 1.5
142	The relationship between $K_p$and $K_c$is given by	
143	In order to mention the B.P of water at 110 ^{o}C the external pressure should be.	A. Between 760 torr and 1200 torr B. Between 200 torr and 760 torr C. 765 torr D. Any value of pressure
144	Which of the following statement is contrary to the first law of thermodynamics	A. An equivalent amount of heart energy can neither be created nor destroyed B. One form of energy can be transferred into an equivalent amount of other kinds of energy C. In an adiabatic process, the work done is independent of its path D. Continuous production of mechanical work without supplying an equivalent is amount of heat possible
145	Question Image	A. dm⁺⁶mole⁻² B. mole²dm⁻⁶ C. Mole dm⁻³ D. Having no units
146	The wave number of the light emitted by a certain source is 2 x 10^{6} m. the wavelength of this light is	A. 500 nm B. 500 m C. 200 nm D. 5 x 10⁷m
147	Which of the following molecules have unpaired electrons is the bonding molecular orbitals.	A. N2 B. O2 C. B2 D. F2
148	The number of moles of CO_2which contain 8.0 g of oxygen	A. 0.25 B. 0.50 C. 1.0 D. 1.50
149	Which substance have delta E = Delta H and no pressure - volume work.	A. Liquids only B. Solids only C. Gases only D. Liquids and solids
150	When one mole of each of the following is completely burned in oxygen, which gives the largest mass of carbon dioxide.	A. Diamond B. C2H6 C. Methane D. CO2
151	The change in heat energy of a chemical reaction at constant temperature and pressure is called.	A. Enthalpy change B. Bond energy C. Heat of sublimation D. Internal energy change
152	For the equilibrium system N2 + O2 + Heat = 2NO the equilibrium constant deceases by	A. Decreasing the temperature B. Adding a catalyst C. Adding N2 D. Adding NO
153	Standard enthalpy change when one mole of compound is formed from their elements at standard state is.	A. Heat of formation B. Standard heat of formation C. Heat of combustion D. Standard Heat of neutralization

154	Which one of the following enthalpies is always an exothermic process.	A. Enthalpy of atomization B. Enthalpy of neutralization C. Enthalpy of ionization D. Enthalpy of dissociation
155	Two solution of NaCl and KCl are prepared separately by dissolving same moles of them in the fixed amount of solvent. Which of the following statements is true for these solution	A. KCl solution will have higher boiling point than NaCl solution B. Both the solutions have different boiling point C. KCl and NaCl solution possess same vapour pressure D. KCl solution possesses lower freezing point than NaCl solution
156	Actual yield is mostly less than the theoretical yield due to the reason that	A. Rates of reactions are slow B. Loss of the product during handling C. Reactions are never completed 100% D. Law of conservation of mass is not true
157	As compared to pure atomic orbitals the hybrid orbitals have.	A. Low energy B. High energy C. Same energy D. None of these
158	Isotopes differ in	A. Properties which depend upon mass B. Arrangement of electrons in orbital C. Chemical properties which depend upon weight D. Atomic number
159	When external pressure is 23.7 torr, boiling point of water is	A. 100 ^oC B. 200^oC C. 98^oC D. 25^oC
160	X- rays have same nature as	A. Alpha rays B. Beta rays C. Gamma rays D. Cathods rays
161	Which of the following elements in its crystalline form will have the lowest enthalpy change of vaporization	A. Chlorine B. Argon C. Phosphorus D. Silicon
162	Electrolysis is a process in which a chemical reaction takes place at the expense of	A. Chemical energy B. Electrical energy C. Heat energy D. None of these
163	Conductivity of metal decreases by increasing temperature because.	A. Atoms are converted to ions B. Atoms oscillates and hinder the movement of free electrons. C. Ions are converted into atoms D. Velocity of mobile electrons increases
164	Exceptionally low acidic strength of HF is due to.	A. Strong polar bond between H and F B. Smaller size of fluorine C. Strong hydrogen bonding D. electronegativity of fluorine
165	The diffusion of gases at absolute zero will be	A. Unchanged B. Zero C. slightly decreases D. Slightly increases
166	Pressure remaining constant, at which temperature the volume of a gas will become twice of what it is at 0 ^{o}C	A. 546 ^oC B. 200 ^oC C. 546 K D. 273 K
167	A buffer solution can be prepared by mixing	A. Weak acid and its salt with weak base B. Weak base and its salt with strong acid C. Strong acid and its salts with weak base D. Strong base and its salt with weak acid
168	Haemoglobin is a Macro molecule and consists of approximately atoms.	A. 5000 B. 10,000 C. 68000 D. 15000
169	The substance used for decolorization of crystalline substance is	A. G2O5 B. Chloroform C. Animal charcoal D. Soda ash
170	With increases of 10 oC temperature the rate of reaction doubles. This increase in rate of reactions is due to.	A. Decrease in activation energy of reaction B. Decrease in the number of collisions between reactant molecules

	Increase in rate of reaction is due to:	C. Increase in activation energy of reactants D. Increase in number of effective collisions
171	Which one of the following aqueous solutions has the highest pH	A. 0.1 M NaOH B. 0.1 M HCl C. 0.2 M H2SO4 D. 0.1 M HNO3
172	18 g glucose is dissolved in 90 g of water. The relative lowering of vapour pressure is equal to.	A. 1/5 B. 5.1 C. 1/51 D. 6
173	Which of the following contains the same number of molecules as 9 g of water.	A. 2 g of hydrogen gas B. 14 g of nitrogen gas C. 32 g of oxygen gas D. 44 g of carbon dioxide gas
174	The pH of human blood is	A. 7.0 B. 7.4 C. 4.0 D. 6.5
175	An atomic orbital has l =1 , m =+1, 0, -1, n = 3 than which one of the following atomic orbital has such values.	A. 2s B. 2p C. 3p D. 3d
176	A real gas obeying Van der Waal's equation will resemble ideal gas if.	A. Both a and b are large B. Both a and b are small or zero C. A is small and b is large D. A is large and b is small
177	The bond angle in NH3 molecule is	A. 109.5^o B. 107.5^o C. 104.5^o D. 106^o
178	That cell in which electrical energy is converted into chemical energy is called	A. Galvanic cell B. Electrolytic cell C. Fuel cell D. Daniel cell
179	Oxidation number of phosphorus in the compound is.	A. +3 B. +4 C. +5 D. +6
180	Which one of the following process is endothermic	A. condensation of steam B. Freezing of water C. electrolysis of water D. None of these
181	Electrochemical series is the arrangement of the electrodes in	A. Increasing order of reduction potentials B. Decreasing order of reduction potentials C. Increasing order of oxidation reduction potential D. There is no fixed arrangement
182	Bohr's model of atom is contradicted b y.	A. Planck quantum theory B. Quantization of energy of electrons C. Heisenberg's uncertainty principle D. Quantization of angular momentum
183	10 g of NaOH have been dissolved per kg of solvent The molality of solution.	A. 0.25 m B. 0.5 m C. 1.0 m D. 2.0 m
184	A component having small value of K mostly remains in the.	A. Stationary phase B. Mobile phase C. Chromatographic tank D. Solvent
185	The law of mass action was given by	A. D.C. down and P wage B. Gay Lussic and C.M C. C.M Goldberg and P. Waage D. Hendeson and Le Chateller's
186	Which one of the following has the same number of electrons as an alpha particle.	A. H B. He C. H+ D. Li+
187	The enthalpy of combustion is	A. Positive B. Negative C. Either positive or negative D. No correlation
		A. E = hv

188	Which one of the following relationship is correct about energy and frequency.	B. E = h/v C. E = v/h D. h = v/E
189	In case of non volatile solute, lowering of vapour pressure is proportional to.	A. Mass fraction of solute B. Mole fraction of solvent C. Mole fraction of solute D. None of the above
190	Which is not a molecular ion.	A. He+ B. CH3+ C. NH3- D. CO+
191	The molar volume of CO2 is maximum at.	A. STP B. 127 ^oC and 1 atm C. 0 ^oC and 2 atm D. 273 ^oC and 2 atm
192	When a chemical reaction is completed.	A. Instantaneous rate > average rate B. Instantaneous rate = average rate C. Instantaneous rate is zero D. Both average and instantaneous rates become zero
193	When 5d orbital is completed them entering electron goes into.	A. 6s B. 6p C. 6d D. 6f
194	Which one of the following has highest pH	A. Distilled water B. 1 M NH4OH C. 1 M NaOH D. Water saturated with chlorine gas
195	The bond order of N2 molecule is.	A. 1 B. 2 C. 3 D. 4
196	A real gas can be liquefied if.	A. Temperature is more than critical temperature. B. Temperature is less than critical temperature C. Pressure is more than critical pressure and temperature is less than critical temperature D. Its pressure is less than critical pressure
197	In order to mention the oiling point of water at 110 ^{o}C, the external pressure should be.	A. Between 760 torr and 1200 torr B. Between 200 torr and 760 torr C. 765 torr D. Any value of pressure
198	Cathode rays strike alumina and produce a .....colour.	A. Red B. Blue C. Yellow D. Green
199	Which of the following solutions will have the highest boiling point	A. 0.1 M NaCl B. 0.1 M CaCl₂ C. 0.1 M FeCl₃ D. 0.1 M glucose
200	The power of which the concentration of a substance appears in the rate expression is known as	A. order of reaction with respect to that substance B. Rate of reaction C. Order of reaction D. Molecularity of reaction
201	In gas occupies a volume of 2 dm^{3}at 27°C and I atm pressure. The expression for its volume at S.T.P. is	
202	The change in heat energy of a chemical reaction at constant temperature and pressure is called	A. Enthalpy change B. Bond energy C. Heat of sublimation D. Internal energy change
203	Which one of the following inter molecular forces are present in neon gas molecules.	A. Hydrogen bond B. dipole -Dipole attraction C. London dispersion force D. Hydrogen bonding and London dispersion force
204	A solution of sucrose is 34.2% The volume of solution containing one mole of solute.	A. 500 cm3 B. 1000 cm3 C. 342 cm3 D. 3420 cm3
205	London dispersion forces are the only forces present among the	A. Molecules of water in liquid state B. Atoms of helium in gaseous state at high temperature C. Molecules of solid iodine D. Molecules of hydrogen chloride gas

206	The true representation for the units of rate constant K for the first order reaction	A. sec⁻¹ B. mole dm⁻³s C. mole dm⁻³s⁻¹ D. mole⁻¹dm⁺³s⁻¹
207	An orbital which is spherical and symmetrical is	A. S-Orbital B. P - Orbital C. d- Orbital D. f - Orbital
208	Which statement is incorrect about Dempster's mass spectrometer.	A. Solid sample can be used in this mass spectrometer B. Ions are detected on the basis of mass to charge ratio C. Atoms or molecules are ionized with beam of electron. D. This spectrometer work at one atmospheric pressure.
209	In BeCl2, the covalent bond is formed due to overlap of	A. sp -s B. sp -p C. sp2 -p D. sp3 -p
210	The unit of Kc for the reaction N2 +O2 = 2NO will be	A. mol dm-3 B. mol-1 dm+3 C. mol-2 dm+6 D. No units
211	Bromine has isotopes	A. 2 B. 4 C. 8 D. 6
212	The spreading of fragrance of a rose or scent in air is due to.	A. Effusion B. Diffusion C. Osmosis D. Evaporation
213	The ration of number of molecules of 2 g H2 g to number of molecules of 64 g gaseous oxygen is.	A. 1:1 B. 1:2 C. 1:32 D. 1:4
214	The velocity of photon is.	A. Depends on its source B. Equal to square of its amplitude C. Depends on its wavelength D. Independent of its wavelength
215	At constant temperature in a given mass of and ideal gas.	A. The ratio of pressure and volume remains constant B. Volume always remains constant C. Pressure always remains constant D. The product of pressure and volume remains constant
216	The number of bonds in nitrogen molecule is	A. One o and oneπ B. One o and twoπ C. Three sigma only D. Two o and twoπ
217	Ionic bond is formed by combination of groups	A. IA and VIII B. II A and VII A C. IV A and VA D. VIA and VII A
218	As the quantum number n increases, the energy difference between adjacent energy level.	A. Increase B. Remain same C. Decrease D. No correlation
219	All radio active disintegration nuclear reaction are of.	A. First order B. Zero order C. 2nd order D. Third order
220	The drying agent used in a desiccator.	A. Agcl B. NH4Cl C. P2O5 D. AlCl3

		D. $AlCl_3$
221	Gases exert pressure on the walls of the container becasue the gas molecules.	A. Collide with each other B. Collide with walls of container C. Have definite volume D. Obey the gas laws
222	Which one of the following molecules is paramagnetic.	A. H2 B. He C. N2 D. O2
223	SP^3-hybridization in important in describing the bonding in	
224	The number of bonds in oxygen molecules.	A. One sigma and One pi B. One sigma and two Pi C. Three sigma only D. Two sig and two pi
225	The volume occupied by 1.6 g of O_2at STP is	A. 22.4 dm³ B. 2.24 dm³ C. 1.12 dm³ D. 112 dm³
226	The crystallization of a solid substance is done from a hot saturated solution. The solution is	A. Evaporated rapidly B. Cooled very slowly to get good crystals C. Cooled rapidly to get excellent crystals D. Mixed with another miscible solvent
227	In mass spectrometry, ions are separated on the basis of.	A. Masses only B. Charge only C. Change to mass ratio D. Mass to charge ratio
228	The sum of pH and pOH is	A. 0 B. 7 C. 14 D. 10
229	The smallest collection of ions in an ionic compound is called.	A. Formula unit B. Chemical formula C. Formula mass D. Molecular formula
230	Oxidation number of Cr in a C_2CrO_4 is	A. +2 B. +4 C. +6 D. +8
231	Solvent extraction method is a particularly useful technique for separation when the product to be separated is.	A. Non volatile or thermally unstable B. Volatile or thermally stable C. Non volatile or thermally stable D. Volatile or thermally unstable
232	In order to have good crystals of a substance the temperature of the system at the time of preparation of solution should be	A. Around 0°C B. Around room temperature C. Sufficiently more than room temperature D. Just above the room temperature
233	Which one of the following salts dissolved in water to form a solution with a pH greater than 7	A. NaCl B. CuSO4 C. Na2CO3 D. NH4Cl
234	Question Image	
235	Boiling point of a liquid is high when	A. There is no hydrogen bonding B. Dipole moment is zero C. Inter molecular forces are weak D. Hydrogen bonding is present
236	The over all positive value for the reaction potential predicts that process is energetically.	A. Not feasible B. Feasible C. Impossible D. No indication
237	The mass of one mole of electrons is	A. 1.008 mg B. 0.55 mg C. 0.184 mg D. 1.673 mg
238	During paper chromatography, the stationary phase is.	A. Solid B. Liquid C. Gas D. Plasma
239	Which statement about a molecule is incorrect.	A. It exist independently B. Molecules of a substances are similar C. Hemoglobin is a homoatomic molecules

		D. Oxygen molecule is a macromolecule
240	Which formula will be used to determine the number of in electrons sub shell of an atoms.	A. 2(l+1) B. 2(2l+1) C. (l+1) D. (2l+1)
241	Vapour pressure of a substance does not depend upon.	A. Temperature B. Intermolecular forces C. Surface area D. Physical state of water
242	One of the following substances does not undergo sublimation	A. KMnO₄ B. Naphthalene C. NH₄Cl D. Iodine
243	During the electrolysis of molten NaCl, the ion which is reduce is	
244	NaCl is face centered cubic structure. The Na ion at the face of the unit cell is shared by	A. 2-unit cells B. 4-unit cells C. Only one unit cell D. 8-unit cells
245	More ideal gas at room temperature is.	A. CO2 B. NH3 C. SO2 D. N2
246	In the ground state of an atom the electron is present.	A. In the nuclsus B. In the second shell C. Nearest to the nucleus D. Farthest from the nucleus
247	The vapour pressure of an aqueous solution of glucose is.	A. Equal to vapour pressure of water B. Independent of temperature C. More than vapour pressure of pure water D. Less than vapour pressure of pure water
248	If the energy of the activated complex lies close to energy of reactants, it means that reaction is	A. Slow B. Fast C. Exothermic D. Endothermic
249	Which molecule has sG2 hybridization.	A. CH4 B. C2H4 C. C2H2 D. C2H5
250	a zero order reaction is one is which	A. Reactants do not react B. One reactant is in large excess C. Concentration of reactant do not change with passage of time D. Rate is of affected by changing concentration of reactants
251	What is the oxidation state of sulphur in SO_3^{2-}	A. -4 B. -2 C. +2 D. +4
252	Which of the following molecule obey octet rule.	A. BF3 B. BCl3 C. NH2 D. SF6
253	Chromatography in which the stationary phase is a solid is classified as.	A. Partition chromatography B. Gas chromatography C. Adsorption Chromatography D. Thin layer chromatography
254	What are the SI units of Van der Waal constant 'a'	A. atm dm3 mol-2 B. atm dm6 mol-2 C. Nm4 mol-2 D. Nm mol-1
255	Pressure remaining constant at which temperature the volume of a gas will come twice of what it is at 0 ^{o}C	A. 546 ^oC B. 200 ^oC C. 546 K D. 273 K
256	Depression of freezing point method is used for determination of molar masses of	A. Electrolytes B. Non-volatile solids C. Volatile solids D. Volatile liquids
257	The molarity of 2% w/v NaOH solution is	A. 2 B. 0.25 C. 0.05

		C. 0.05 D. 0.5
258	The shape of diamond crystal is.	A. cubic B. Hexagonal C. Tetragonal D. Orthorhombic
259	The order of the rate of diffusion of gases NH3, SO3, Cl2 and CO2 is.	A. NH3>SO2>CL2>CO2 B. NH3>CO2>Sl2>Cl2 C. Cl2>SO2>CO2>NH3 D. Cl2>SO2>CO2>NH3
260	On which factor boiling point of a liquid depends.	A. Amount of the liquid B. Shape of the container of the liquid C. Type of burner used for boiling D. External pressure
261	How many electrons can be accommodated in sub shell for which n = 3, l = 1	A. 6 B. 8 C. 18 D. 32
262	The sum of mole percent of all the components of solution is always equal to.	A. Unity B. 100 C. Less than one D. Less than 100
263	Borax has the chemical formula.	A. KNO3 B. Na2B3O7.10H2O C. Na2CO3 D. NaNO3
264	Splitting of spectral lines when atoms are subjected to strong electric field is called	A. Zeeman effect B. Stark effect C. Photoelectric effect D. Compton effect
265	The deviation of a gas from ideal behaviour is maximum at.	A. -10 ^oC and 5.0 atm B. -10 ^oC and 2.0 atm C. 100 ^oC and 2.0 atm D. 0 ^oC and 2.0 atm
266	Allotropy is the property of.	A. Compound B. Element C. Atom D. Mixtuer
267	In lead accumulator cathode is made up of.	A. Pb B. Pb coated with PbO2 C. PbSO4 D. Mixture of Pb and PbO2
268	For a given process, the heat change at constant pressure (q_p) and at constant volume (q_v) are related to each other as	A. q_p= q_v B. q_p< q_v C. q_p> q_v D. q_p= q_v/2
269	What type of bonding is present in NH4Cl	A. Ionic B. Covalent C. Co ordinate covalent D. All of these
270	The long chains of amino acids are coiled about one another onto a spiral by	A. Ionic bond B. Van der walls forces C. Hydrogen bonding D. Overlapping of orbitals
271	Stoichiometric calculations cannot applied to reversible reactions because.	A. Product again changes to reactant B. Less product is formed C. Reaction goes only in one direction D. Products do not disappear.
272	Which one of the following gases diffuse more rapidly.	A. Cl2 B. CO2 C. CH4 D. N2
273	The commonly used unit of pressure by meteorologists is.	A. Atmosphere B. Pascal C. Milli D. Pound inch3
274	Oxidation number of carbon in $NaHCO_3$	A. +4 B. -6 C. +6 D. +2
		A. Hybrid orbitals B. Valence orbitals

275	Orbitals having same energy are called.	B. Valance orbitals C. Degenerate orbitals D. d- orbitals
276	One of the following statements about Born-Haber cycle is correct. Which is that statement	A. Born-Haber cycle is different from Hess's law B. The energy change in a cyclic process is not zero C. The lattice energy of the crystalline substances can be calculated easily D. Heat of formation of the product and the lattice energy of the substance can be calculated simultaneously
277	Chlorine atom and chloride ions.	A. Are chemically identical B. Are allotropes of chlroin C. Have same number of electrons D. Have same number of protons
278	Both CH4 and NH3 are four electron pair system the angles of CH4 and NH3 are 109.5^{o} and 107.5^{o} respectively. This deviation is due to.	A. Hydrogen bonding in ammonia B. Lone pair attraction C. Lone pair occupy more space and repel to other bond pairs D. Lone pair lone pair repulsion
279	Dipole Moment of H2O is.	A. 1.61 D B. 1.85 D C. 0.95 D D. 1.49 D
280	One mole of CH_3OH and one mole of C_2H_5OH have	A. Equal number of atoms B. Equal number of molecules C. Equal number of electrons D. Equal number of protons
281	Kw for water at 0 oc is 0.1×10^{-34} and at 100 ^{o}C 7.5×10^{-14}, How many times dissociation of water increase from 0 ^{o}Cto 100 ^{o}C	A. 7.5 times B. 50 times C. 75 times D. 100 times
282	The cell in which a non spontaneous redox reaction takes place as a result of electricity is known as.	A. Voltaic cell B. Denial cell C. dry Cell D. Electrolytic cell
283	Which one of the following is not property of a good solvent.	A. It should be inexpensive B. It should dissolve impurities easily C. It should dissolve large amount of solute at boiling point and less amount of solute at low temperature. D. It should not react chemically with solute
284	An aqueous solution of ethanol is water has vaporu pressure.	A. Equal to the of water B. Equal to that of ethanol C. More than that of H2O D. Less than that of water
285	Sum of pKa and pKb is equal to.	A. 1 B. 7 C. 0 D. 14
286	Heat of solution of an ionic compound is equal to.	A. Hydration energy B. Lattice energy C. Slum of both 'a' and 'b' D. Difference of both a and b
287	If absolute temperature of the gas is doubled and the pressure is reduced to one half the volume the gas will.	A. Remains uncharged B. Increase four time C. Reduce to 1/4 D. Be doubled
288	How should the conditions be changed to prevent the volume of a give gas from expanding when its mass is increased.	A. Temperature is lowered and pressure is increased. B. Temperature is increased and pressure is lowered C. Temperature and pressure both are lowered D. Temperature and pressure both are increased
289	A gas is heated in such a way that its volume and absolute temperature both are doubled. the pressure of the gas	A. Becomes 2 times B. Becomes 4 times C. Become half D. Remain same
290	pH of buffer is calculated by.	A. Sorenson equation B. Mosley equation C. Henderson equation D. De broglie equation
291	The reduction potential of Zn is.	A. +0.76 V B. -0.34 B C. +0.34 V D. -0.76 V
		A. He [2s² 1</sup>]

292	Which of the following represents electronic configuration of the most electropositive elements	A. He [2s¹] B. Xe [6s¹] C. He [2s²] D. Xe [6s²]
293	Which bond has more ionic characters in it.	A. C - F B. N - F C. O - F D. F - F
294	Partial pressure of oxygen in the air is.	A. 156 torr B. 157 torr C. 158 torr D. 159 torr
295	A molecule has two ions pairs and two bond pairs around the central atom. The shape of molecule is.	A. Linear B. Pyramidal C. Angular D. Tetrahedral
296	For which system does the equilibrium constant K_c has units of $(concentration)^{-1}$	
297	In endothermic reactions, the heat content of the	A. Products is more then that of reactants B. Reactants is more than that of products C. Both a and b D. Reactant and products is equal
298	What is bond order.	A. Number of unpaired electrons B. Number of paired electrons C. Number of electrons present in antibonding molecular orbital D. Number of bond formed between two atoms after overlap
299	If uncertainty position of an electron is zero, the uncertainty in its momentum would be	A. Zero B. Infinite C. Both a and b D. None of these
300	Question Image	A. Heat of reaction B. Heat of sublimation C. Heat of neutralization D. Heat of combustion
301	A substance which itself is not a catalyst but increases the activity of a catalyst is called.	A. Promoter B. Poisoner C. Inhibitor D. Enzyme
302	The sum of all kinds of energies of atoms, ions or molecules of a system is known as.	A. Kinetic energy B. Potential energy C. Internal energy D. Solar energy
303	If the volumes of reactants and products are same in a gaseous phase reaction, then the equilibrium state is not affected by	A. Change of temperature B. Change of pressure C. Change of concentration D. Catalyst
304	The temperature which partially immiscible pair of liquid leads to the formation of a single phase in called.	A. Transition temperature B. Absolute temperature C. Consulate temperature D. Room temperature
305	One mole of SO2 contains	A. 6.02 x 10²³atoms of oxygen B. 18.1 x 10²³atoms of SO2 C. 6.02 x 10²³atoms of Sulphur D. 4 g atoms of SO2
306	The rate of reaction	A. Increases B. Decreases C. Remains the same D. May decrease of increase
307	Solubility curve of CaCl26H2O shows	A. Decrease in solubility with increase of temperature B. Increase in solubility with increase of temperature C. Discontinuous increase in solubility with temperature D. No effect of temperature on solubility
308	In the ground state of an atom, the electrons is present.	A. In the nucleus B. In the second shell C. Nearest to the nucleus D. Farthest form the nucleus
309	The comparative rates at which the solutes move in paper chromatography depends on.	A. The size of paper used B. Their Rt values solutes C. Temp of the experiment D. Size the chromate qraqic tank

310	The lightest value of lattice energy is for which one of these ionic compounds.	A. NaI B. NaF C. NaBr D. NaCl
311	Quantum number value for 2p sub shell are	A. n = 2, l = 1 B. n = 1, l =1 C. n = 1, l = 0 D. n = 2, l = 0
312	If the number of gas molecules are doubled in a certain volume of a gas, the pressure is.	A. Decreased to half B. Doubled C. Increased to four time D. Remains unchanged
313	During chromatography strip should be dipped into solvent mixture to a depth of.	A. 3-4 mm B. 4-5 mm C. 5-6 mm D. 6-7 mm
314	Which of the following has highest percentage ionic character.	A. HCl B. HF C. HBr D. HI
315	When water freezes at 0 ^{o}C, its density decrease due to.	A. Cubic structure of ice B. Empty spaces present in the structure of ice C. Change of bond lengths D. Change of bond angles
316	Melting of ice can be forwarded by the use of.	A. LiCl B. BeCl2 C. NaCl D. Ag Cl
317	Splitting of spectral lines when atoms are subjected to magnetic field is called.	A. Stark effect B. Zeeman effect C. Photoelectric effect D. Compton effect
318	What is the mass of aluminium is 204 g of the aluminum oxide Al2O3.	A. 26 g B. 27 g C. 54 g D. 108 g
319	What has a mass equal to that of one mole of water.	A. 22.4 dm3 of water B. One mole of steam C. One molecule of water D. Two moles of hydrogen molecules and one mole of oxygen molecules.
320	A cell in which electric current is produced as a result of spontaneous redox reaction is called.	A. Electrolytic cell B. Galvanic cell C. Half cell reaction D. Down's cell
321	The cathodic reaction in the electrolysis of dil H2SO4 with Pt electrodes is.	A. Reduction B. Oxidation C. Both oxidation or reduction D. Neither oxidation nor raduction
322	Most of the reaction which give stable products are	A. Exothermic B. Endothermic C. Isothermal D. None of these
323	Which of the following statements is not correct regarding bonding molecular orbitals	A. Bonding molecular orbitals possess less energy than atomic orbitals from which they are formed B. Bonding molecular orbitals have low electron density between the two nuclei C. Every electron in the bonding molecular orbitals contributes to the attraction between atoms D. Bonding molecular orbitals are formed when the electron waves undergo constructive interference
324	The components of which mixture can be separated by sublimation.	A. NaCl and Ca cl2 B. Is and water C. Sand and Naphthalene D. Blue and red inks
325	The process in which liquid can be made to boil at low temperature in known as .....distillation	A. Simple B. Thermal C. Steam D. Vacuum
326	In zero order reaction the rate is independent of.	A. Temperature of reaction B. Concentration of reactants C. Concentration of products

		D. None of these
327	The partial pressure of oxygen in lungs is	A. 760 torr B. 320 torr C. 159 torr D. 116 torr
328	Which one of the following salts dissolved in water to form a solution with a pH greater than 7	A. NaCl B. CuSO4 C. Na2CO3 D. NH4Cl
329	A chemical change always involve	A. Absorption of heat B. Evolution of heat C. Either absorption or evolution of heat D. The liberation of heat and light energy
330	The boiling point of glycerin at one atm is.	A. 280 ^oC B. 290 ^oC C. 100 ^oC D. 110 ^oC
331	How many balloon of 0.25 dm3 capacity at 1 atmospheric pressure can be filled from a hydrogen gas cylinder of 5 dm3 capacity at 10 atmospheric pressure.	A. 50 B. 90 C. 180 D. 200
332	Molecular crystals are generally	A. Hard B. Relatively soft C. Unstable D. do not exist
333	Mass of 22.4 dm3 of N2 at STP is.	A. 28 gm B. 14 gm C. 1.4 gm D. 2,8 gm
334	How many sigma and pi bonds are present in C2H2.	A. one sigma and two pi B. two pi and one sigma C. Two pi and three sigma D. Three pi and two sigma
335	In which one of the following pairs do the molecule have similar shape.	A. BF3 and AlCl3 B. CO2 and H2O C. CH4 and PH3 D. NH3 and BCl3
336	12.04 x 10^{23}atoms of nitrogen gas is equal to.	A. 1 mol B. 2 mol C. 3 mol D. 4 mol
337	Maximum number of electrons in f-subshell is.	A. 2 B. 6 C. 10 D. 14
338	The carbon atom is C2H4 is.	A. sp3 hybridized B. sG2 hybridized C. Sp hybridized D. dsG2 bybridized
339	Chromatography is the process which involve the distribution of a solute between	A. Two mobile phases B. A stationary phase and mobile phase C. Two stationary and two mobile phases D. Two stationary phases
340	Alkali and alkaline earth metal are usually obtained by	A. Decomposition of their carbonates B. By heating their hydroxide C. electrolysis of molten metal oxides D. Electrolysis of molten metal halides
341	The element nickel has isotopes.	A. 3 B. 2 C. 5 D. 7
342	Which of the following is psuedo solid	A. CaF2 B. Glass C. NaCl D. All
343	Question Image	A. 1 B. 2 C. 3 D. None of these
		A. the mass of the atom is itself fractional B. Atomic masses are average mases of Isobars

344	Many element have fractional atomic masses. This is because.	C. Atomic masses are average masses Isotopes D. Atomic masses are average masses of Isotopes proportional to their relative abundance.
345	Which of the following species has unpaired electrons in anti bonding molecular orbitals	A. O2 B. N2 C. B2 D. F2
346	The mass of one mole of electrons is.	A. 1.008 mg B. 0.55 mg C. 0.184 mg D. 1.673 mg
347	Glucose can be converted into ethanol by an enzyme.	A. Lipase B. Zymase C. Sucrose D. Urease
348	In cubic and hexagonal closest packing which layer has different arrangement.	A. First B. Second C. Third D. Fourth
349	How should the condition be changed to prevent the volume of a given gas from expanding when its mass is increased	A. Temperature is lowered and pressure is increased B. Temperature is increase and pressure is lowered C. Temperature and pressure both are lowered D. Temperature and pressure both are increased
350	Which one of the following salts dissolved in water to form a solution with a pH lesser than 7	A. NaCl B. CuSO4 C. Na2CO3 D. NH4Cl
351	Velocity constant is the rate of reaction when the concentrations of reactants are	A. Zero B. Unity C. Two D. Three
352	The nature of positive rays depends on	A. The nature of electrode. B. The nature of discharge tube C. The nature of residual gas D. All of the above
353	A filtration process could be very time consuming if it were not aided by a gentle suction, which is developed	A. If the paper covers the funnel up to its circumference B. If the paper has got small sized pores in it C. If the stem of the funnel is large so that it dips into the filtrate D. If the paper fits tightly
354	Which substances has diffused melting point.	A. Crystalline solids B. Amorphous solids C. Metallic solids D. Covalent solids
355	With increase in 10°C temperature, the rate of reaction double. This increase in rate of reaction is due to	A. Decrease in activation energy of reaction B. Decrease in the number of collisions between reactant molecules C. Increases in activation energy of reactants D. Increase in number of effect collisions
356	Which one of the following substances is not sublime material.	A. Iodine B. Benzoic acid C. Ammonium chloride D. Potash alum
357	A pressure cooker reduces cooking time because.	A. Heat is uniformly distributed B. Boiling point of water rises C. A large flame is used D. Vapour pressure of liquid reduces
358	Which of the following will have the same number of molecules at STP	A. 280 cm³of CO₂and 280 cm³of N₂O B. 11.2 dm³of O₂and 32 g of O₂ C. 44 g of CO₂and 11.2 dm³of CO D. 28 g of N₂and 5.6 dm³of oxygen
359	The rate of reaction	A. Increases as the reaction proceeds B. Decreases as the reaction proceeds C. Remains the same as the reaction proceeds D. May decrease or increase as the reaction proceeds
360	When an ionic compound is dissolved in water, it dissociate into positive and negative ions, which are surrounded byH2O molecule, This process is known as.	A. Hydrolysis B. Hydration C. Saturation D. solvolysis

361	the number of Al^{3+} ion sin $AlCl_3$is 2.007×10^{23}. The number of Cl- ions are.	A. 6.02 x 10²³ B. 3.01 x 10²³ C. 3.01 x 10²³ D. 1.5 x 10²³
362	If a strip of Cu metal is placed in a solution of $FeSO_4$	A. Cu will be precipitated out B. Fe is precipitated out C. Cu and Fe both dissolve D. No reaction takes place
363	The wave number of the light emitted by a certain source is 2×10^6 m-1 . The wavelength of this light will be.	A. 500 nm B. 5000 nm C. 200 nm D. 5 x10⁷ m
364	Upper consulate temperature for water phenol system is.	A. 150 ^oC B. 65.9 ^oC C. 120 ^oC D. 130 ^oC
365	Which of the following has linear structure.	A. CO2 B. NH3 C. CH4 D. H2O
366	The cathodic reaction in the electrolysis of dil H2SO4, with pt electrode sis.	A. Reduction B. Oxidation C. Both oxidation and reduction D. Neither oxidation nor reduction
367	The molecules of CO2 i dry ice form the.	A. Ionic crystals B. Molecular crystals C. Amorphous D. Covalent crystals
368	In NICAD dry cell, the cathode and anode is made up of.	A. Ca and Ag B. Ni and CdO2 C. NiO2 and Cd D. Ag and Ag2O
369	Which element has highest ionization potential	A. Li B. Na C. K D. Rb
370	Hund's rule state that when electrons enter to the same sub levels they are.	A. Singly occupied with same spin B. Doubly occupy with same spin C. Singly occupied with different spin D. Doubly occupied with different spin
371	Which of the following is true for ionic compounds	A. They are non-electrolytes in the molten state B. They have bonds which are directional C. They conduct electricity in solid state D. They are generally more soluble in polar solvents than in non-polar solvents
372	Which concentration unit is independent of temperature.	A. Molarity B. Molality C. ppm D. both a and b
373	The rate of diffusion of a gas is	A. Directly proportional to its density B. Directly proportional to molecular mass C. Inversely proportional to its density D. Inversely proportional to square root of its molecular mass
374	Dilatometer method is useful for the reactions that involve.	A. Ionic species B. Where reactant absorb U.V. visible or infrared radiations C. Small volume changes in solutions D. Change in refractive indices
375	The value of Rydberg constant is.	A. 1.6 x 10⁷ m-1 B. 1.9768 x 10⁷ m-1 C. 1.09678 x 10⁷ m-1 D. 1.7904 x 10⁷ m-1
376	The distillation of a solution under reduced pressure is called	A. Fractional distillation B. Destructive distillation C. Distillation D. Vacuum distillation
377	Which of the following molecules has a co-ordinate covalent bond	A. NH₄Cl B. NaCl C. HCl D. AlCl₃

378	Question Image	A. The value of K_pfalls with a rise in temperature B. The value of K_pfalls with increasing pressure C. Adding V₂O₅catalyst increase the equilibrium yield of sulphur trioxide D. The value of K_pis equal to K_c
379	The comparative rates at which the solutes move in paper chromatography, depends on	A. The size of paper used B. Their R_fvalues C. Their partition coefficients D. The polarity of solvent used
380	the volume occupied by 1.4 of N2 at S.T.P is	A. 2.24 dm3 B. 22.4 dm3 C. 1.12 dm3 D. 112 cm3
381	A glass is full of water and contains 6.02 x 10^{23}molecules of H2O The mass of water molecules is.	A. 18 gm B. 90 g C. 120 g D. 180 g
382	Born Haber cycle is used to determine the	A. Lattice energy B. Enthalpy of formation C. Enthalpy of ionization D. Enthalpy of dissociation
383	In given equation underlined element is. P+HNO3---------- H2PO4+NO+H2O	A. Oxidized B. Reduced C. Neither oxidized nor reduced D. Botha a and b
384	Nickel has isotopes	A. 3 B. 5 C. 6 D. 11
385	18 g of glucose is dissolved in 90 g of water. The relative lowering of vapour pressure is equal to	A. 1/5 B. 5.1 C. 1/51 D. 6
386	Dipole moment of CO2 is.	A. 1.25 D B. 1.85 D C. 3.1 D D. Zero
387	De Broglie equation treats electron to be.	A. A particle B. Wave C. Both particle and wave D. None of these
388	Which statement about Gooch crucible is incorrect.	A. It is made up of porcelain B. Quick filtration occur by using suction filtering apparatus C. All the chemicals which reacts with paper can be filtered. D. Filter medium used in this crucible consists many folds of filter paper only.
389	The shielding effect of the inner electrons is responsible for	A. Increasing ionization energy values B. Decreasing ionization energy values C. Increasing electron affinity D. Increasing electonegativity
390	The molal boiling point constant is the ration of the elevation in boiling point to	A. Molarity B. Molality C. Mole fraction of solvent D. Mole fraction of solute
391	A solution have H+ ions concentration 1 x 10^{-7} , its pH will	A. Acidic B. Basic C. Neutral D. Zero
392	The number of molecules in one $dm^3$of water is close to	
393	A limiting reactant is that one which	A. Gives greatest number of moles of products B. Gives least number of moles of products C. Is left behind after the completion of reaction D. Is mostly a cheaper substance as compared to other reactants
394	The standard heat of formation is measured at 1 atmosphere and	A. 0 ^oC B. 100 ^oC C. 293 ^oC D. 25 ^oC

395	The e/m value for the positive rays in maximum for the gas.	A. Helium B. Oxygen C. Nitrogen D. Hydrogen
396	Which of the given has hydrogen bonding.	A. CH4 B. CCl4 C. NH3 D. NaCl
397	Several types of filter media are used for filtration depending on	A. Natural of reactants B. Nature of reaction C. Size of precipitate D. Nature of filter paper
398	When an ionic compound is dissolved in water, it dissociate into positive and negative ions, which are surrounded by H2O molecule, This process is known as.	A. Hydrolysis B. Hydration C. Saturation D. solvolysis
399	One dm3 of a buffer solution containing 0.01 M NH4Cl and 0.1 M NH4OH having pKa of 3 has pH.	A. 4 B. 6 C. 9 D. 10
400	Crystal to diamond is.	A. Ionic B. Molecular C. Covalent D. Metallic
401	The drying agents used in desiccator is.	A. BeCl2 B. MgCl2 C. CaCl2 D. SrCl2
402	Relative lowering of vapour pressure is equal to.	A. Mole fraction of solute B. Mole fraction of solvent C. Mole fraction of solute and solvent D. Molality of solution
403	The gain of electron is known as.	A. Oxidation B. Reduction C. Dehydration D. Dehydrogenation
404	The shape of Sncl2 molecule is.	A. Linear B. Angular C. Trigonal planar D. Tetrahedral
405	How many moles of CO are present having 12.04 x 10^{23}molecules of CO2.	A. 0.5 mol B. 1.0 mol C. 1,5 mol D. 2.0 mol
406	The rate of reaction	A. Increase as the reaction proceeds B. Decreases as the reaction proceeds C. Remains the same as the reactions proceeds D. May decrease or increase as the reaction proceeds
407	Which particle have greater wave nature.	A. Electron B. Proton C. Neutron D. a particles
408	The S.I. units for the molar heat capacity are	A. Joule Cm⁻³degree⁻¹ B. Joule deg⁻¹atm⁻¹ C. Joule deg⁻¹mol⁻¹ D. Joule deg⁻¹kg⁻¹
409	The molecule of CO2 in dry ice form the.	A. Ionic crystals B. Covalent crystals C. Molecular crystals D. Any type of crystals
410	The pH of 10^{-3}mol $dm^{-3}$of an aqueous solution of $H_2SO_4$is	A. 3.0 B. 2.7 C. 2.0 D. 1.5
411	If strip of Cu metal is placed in the solution of FeSO4	A. Cu will be precipitated out B. Fe is precipitated out C. Cu and Fe both dissolves D. No reaction takes place
412	One mole of ethanol and one mole of ethane have an equal	A. Masses B. Number of atoms

	One mole of ethanol and one mole of ethane have an equal	C. Number of electrons D. Number of molecules
413	Almost forward reaction is complete when value of Kc is	A. very high B. Very small C. Neither large nor very small D. No correlation
414	Which is not use of electrochemical series.	A. Feasibility of reaction B. Measurement of EMF of cell C. Comparison of reactivity with water or acids D. Determination of atomic and ionic radii
415	Which one of the following gases cannot be liquefied by Line's method.	A. Water vapours B. NH3 C. Nitrogen D. H2
416	the substance which increase the rate of reaction but remains unchanged at the end of the reaction is called.	A. Indicator B. Promoter C. Catalyst D. Activated complex
417	Which statements not correct about Galvanic cell.	A. Anode in negatively charge B. Reduction occur at anode C. Cathode is positively charged D. Reduction occur at cathode
418	Which one of the following orbital will be filled first.	A. 4f B. 5d C. 3d D. 4s
419	The temperature of natural plasma is about.	A. 200000 ^oC B. 10000^oC C. 5000^oC D. 1000^oC
420	Bohr's model of atom is contradicted by	A. Planck quantum theory B. Quartization of energy of electrons C. Heisenberg's uncertainty principle D. Quartization of angular members
421	Rutherford's model fo atom failed because	A. The atom did not have a nucleus and electrons. B. It did not account for the attraction between protons and neutrons. C. It did not account for the stability of the atom D. Their is actually no space between the nucleus and the electrons.
422	Some impurities of MgCl2 are present in NaCl which separation technique can be used to separate the impurities.	A. Filtration B. Crystallization C. Common ion effect D. Chromatography
423	n+1 value of 6d orbital is.	A. 08 B. 09 C. 10 D. 18
424	Photosynthesis a photochemical reaction has order of reaction	A. 0 B. 1 C. 2 D. Fractional order
425	Stronger the oxidizing agent, greater is the	A. oxidation potential B. Reduction potential C. Redox potential D. E.M.F of cell
426	Half -Life period of a first order reacting is independent of.	A. Initial concentration of the compound B. Conditions of temperature C. Presence of catalyst D. All the above
427	How many molecules of CO2 are formed by burning 12 g carbon with excess of oxygen.	A. 3.01 x 10²³ B. 1 x 10²³ C. 6.02 x 10²³ D. 1.03x 10²³
428	Polymorphic substances have	A. Same physical and chemical properties B. Different physical and chemical properties. C. Same physical but different chemical properties D. Different physical and same chemical properties.
429	Whenever a reaction is endothermic, then it means that	A. Heat is transferred from surrounding to the system B. Heat is transferred system to the surrounding C. Heat content of the product is greater than that of reactants

		D. Heat content of the reactants is greater than the products
430	Which is not example of natural plasma.	A. Lightening bolt B. Aurora C. Neon sign D. Sum
431	Which of the following has coordinate covalent bond.	A. NH4 B. NaCl C. HCl D. AlCl3
432	In methanol, bond between carbon and oxygen.	A. Ionic B. Non polar C. Polar D. Co - ordinate
433	Solvent extraction is an equilibrium process and it is controlled by	A. Law of mass action B. The amount of solvent used C. Distribution law D. The amount of solute
434	If fluted fitter paper, rate of filtration increases as compared tot he cone shaped filter paper because.	A. It has greater number of holes in it. B. It has greater surface are of filtration C. Fluted filter paper has greater pore sizes than cone shaped filter paper. D. Thickness of paper is more than cone shaped filter paper
435	The mathematical relation between the rate of reaction and the concentrations of the reactants is known as the	A. Rate equation B. Rate law C. Arrhenius equation D. Both a and b
436	Half -Life for a given reaction is doubled if initial concentration is doubled. The order of reaction is.	A. 0 B. 1 C. 2 D. 3
437	The solubility product of AgCl is 2.0 x $10^{-10}$$mol^2$$dm^{-6}$The maximum concentration of Ag^+ions in the solution is	A. 2.0 x 10⁻¹⁰mol dm⁻³ B. 1.41 x 10⁻⁵mol dm⁻³ C. 1.0 x 10⁻¹⁰mol dm⁻³ D. 4.0 x 10⁻²⁰mol dm⁻³
438	Which of the following will have highest rate of diffusion	A. O2 B. CO2 C. NH3 D. SO2
439	The mass fo 1.505 x 10^{23}atoms of sulphur is.	A. 0.5 g B. 0.6 g C. 0.7 g D. 0.8 g
440	How many moles of water results by burning 4 mole of H2 with excess of oxygen.	A. 1 mol B. 2 mol C. 3 mol D. 4 mol
441	Which of the following can form H-bonds	A. NH₃ B. C₂H₆ C. NaCl D. CHCl₃
442	Fuel cells are mostly used in space air crafts as the source of.	A. Power only B. Drinking water C. Drinking water and power D. Fuel and drinking water
443	Ionic solids are characterized by.	A. Low melting points B. High vapour pressures C. Good conductivity in solid state D. Solubility in polar solvents
444	Ice float over water because.	A. Its structure is diamond like B. Its density is maximum at 4 ^oC C. It is less dense than water D. It has no regular arrangement of molecules.
445	Standard hydrogen electrode has an arbitrarily fixed potential	A. 0.00 volts B. 1.00 volt C. 0.10 volt D. None of these
446	Pressure remaining constant at which temperature the volume of a gas will become twice of what it is at 0° C	A. 546°C B. 200°C C. 546 K D. 273 K

447	To achieve a good separation, the two liquids are gently shaken to increase their area of.	A. Miscibility B. Separation C. contact D. Solubility
448	Vapour pressure of liquid depends upon	A. Amount of liquid B. Surface area C. Temperature D. Size of container
449	In which of the following Paris, do the elements form a compound by sharing electrons.	A. carbon and chlorine B. Lithium and iodine C. Neon and oxygen D. Potassium ad bromine
450	The quantitative relationship between rate and concentration is given by.	A. Law of mass action B. Rate law C. Both of these D. Le Chatelier's principle
451	In discharge tube, properties of X-rays depend upon the nature of.	A. Residual gas B. Cathode plate C. Anode plate D. All of these
452	Which has zero potential energy.	A. When H atom is independent B. When two H atoms combine to form H2 molecule C. When two H atoms super impose to each other D. When two H atoms have weak attraction between them
453	The cell in which a non spontaneous redox reaction takes place as a result of electricity is known as.	A. Voltaic cell B. Denial cell C. dry Cell D. Electrolytic cell
454	For a given process, the heat chagnes of constant pressure and at constant volume are related to each other as.	A. qp= qv B. qp<qv C. qp>qv D. None of these
455	Which of the following wave properties is inversely proportional to the energy for electromagnetic radiations	A. Frequency B. Wave number C. Velocity D. Wave length
456	Question Image	A. Fe is reduced B. Fe is oxidized C. Cl₂is oxidized D. None of these
457	_____ Molecule has zero dipole moment.	A. CO B. H2S C. SO2 D. CH4
458	In which of the following changes, nitrogen in reduced.	A. NH3 to NO B. NH3 to NO3 C. N2 to NH3 D. N-3 to N2
459	The oxidation of O -atom in OF3 is.	A. -2 B. +2 C. -1 D. +1
460	Colligative properties are used to determine the	A. Freezing points B. Boiling point C. Atomic mass of an element D. Molar mass of solute
461	Node is a surface on which probability of finding electron is	A. Zero B. More than 95% C. 50% D. Infinite
462	The line of the balmer series in the visible region of the spectrum, but the limiting line, in the series lies in	A. Visible region B. X-Ray region C. I.R region D. U.V. region
463	Which one of the following substances is not used as drying agent in desiccators.	A. Calcium chloride B. Phosphorus pentoxide C. Silica gel D. 50% NaCl
		A. 100%

464	Electrode of the lead storage battery are immersed in dilute H_2SO_4 which has strength by mass	B. 98% C. 30% D. 10%
465	Critical temperature of CO_2 gas is.	A. 31.1 ^oC B. 13.1 K C. 13.1 ^oC D. 1.31 ^oC
466	The H - H Bond energy in KJ mole -1 is.	A. 346 B. 436 C. 463 D. 336
467	The real gas obeying Van der Waal's equation will resemble ideal gas is.	A. both 'a' and 'b' are large B. both 'a' and 'b' and small C. 'a' is small and 'b' is large D. 'a' is large and 'b' is small
468	A molecular orbital can accommodate maximum electron	A. 2 B. 6 C. 8 D. 10
469	The best reducing agent is	A. F⁻¹ B. Cl⁻¹ C. Br⁻¹ D. I⁻¹
470	The percentage of s characters in sp3 hybrid orbital is.	A. 25% B. 33.3% C. 50% D. 75%
471	I molar volume of a gas at S.T.P is occupied by	A. 1 g of gas B. 6 x 10²³g of gas C. 22.4 m³of gas D. 1 gram molecular mass of gas
472	Buffer action can be explained by	A. Common ion effect B. Law of mass action C. Le Chateller's principle D. All above
473	The mass of alpha particle is equal to.	A. Four times the mass of one proton B. That of one hydrogen atom C. That of one electron D. That of one proton
474	Unit of rate constant is the same as that of the rate of reaction in	A. Zero order reaction B. 1st order reaction C. 2nd order reaction D. 3rd order reaction
475	In which system all the three axes are of equal length and all angles are at right angle.	A. Cubic B. Tetragonal C. Orthorhombic D. Hexagonal
476	The effect of temperature on equilibrium was studied by	A. Lewis B. Van der wall C. Arrhenius D. Vant hoff
477	An ionic compound A^+B^- is most likely to be formed when	A. The ionization energy of A is high and electron affinity of B is low B. The ionization energy of A is low and electron affinity of B is high C. Both the ionization energy of A and electron affinity of B are high D. Both the ionization energy of A and electron affinity of B are low
478	Azeotropic mixture	A. Obey Raoult's law B. Do not obey Raoult's law C. Boils at low temperature only D. Boils at high temperature only
479	pKa of CH_3COOH is 4.74. The pKb value of CH_3COO^- ions will be	A. 7 B. 14 C. 9.26 D. zero
480	Which is not is state function	A. Enthalpy B. Entropy C. Pressure D. work
		A. Dilute solutions which behave as nearly ideal

481	Colligative properites are the properties of	solution B. Concentrated solution which behave as nearly non-ideal solution C. Both a and b D. Neither a nor b
482	The azimuthal quantum number / = 2, then M(Magnetic quantum number) can have values as	A. +1, -1 B. +1, 0, -1 C. +2, +1, 0,1, -1, 2 D. +3, +2, +1, 0, 1, -2, -3
483	The nature of copper crystals is	A. Metallic B. Ionic C. Covalent D. Molecular
484	If absolute temperature of a gas is doubled and the pressure is reduced to one half, the volume of the gas will	A. Remain unchanged B. Increase four times C. Reduce to 1/4 D. Be doubled
485	If absolute temperature of gas is doubled and the pressure is reduced to one half, the volume of the gas will.	A. Remain unchanged B. Increase four times C. Reduce to 1/4 D. Be doubled
486	In a period of periodic table, atomic radii	A. Increases B. Decreases C. Remain same D. First decreases than increases
487	The unit of rate constant is the same as that of the rate of reaction is.	A. First order reaction B. Second order reaction C. Zero order reaction D. Third order reaction
488	The pK_avalue of CH_3COOH is 4.74 when we mix CH_3COOH and CH_3COONa in the ratio of 10:1, tehn the pH of the buffer is	A. 4.74 B. 5.74 C. 3.74 D. 7.00
489	Which one of the following substances is used as water absorber in combustion analysis.	A. Mg(ClO4)2 B. 50% KOH C. Lime water D. Dilute solution of NaOH
490	Which statement is incorrect about 64 g of SO2.	A. It is one mole SO2 B. The number of SO2 molecule are 6.02 x 10²³ C. The number of oxygen atoms are 6.02 x 10²³ D. The number sulphur atom are 6.02 x 10²³
491	One of the following liquids has lowest vapour pressure at 32°C. Indicate that liquid	A. Ether B. Chloroform C. Ethanol D. Water
492	Which of the hydrogen halides has the highest percentage of ionic character	A. HF B. HBr C. HCl D. HI
493	In solvent extraction, solute can be separated from solution, by shaking the solution with solvent in which the solute is.	A. More soluble B. Partially soluble C. Insoluble D. soluble at high temp
494	The unit of mole fraction is	A. Moles dm⁻³ B. Moles kg⁻¹ C. Gram dm⁻³ D. None
495	If reactants have very low activation energy it means that reaction is.	A. Slow B. Fast C. Endothermic D. Exothermic
496	Bond energy depends upon	A. Electronegativity B. Size of atom C. Bond length D. All of these
497	When concentration of one product is removed at equilibrium stage, in which direction it moves to reestablish equilibrium.	A. Forward B. Reverse C. Neither forward nor reverse D. Equally move in both direction

498	The voltage Nickel Cadmium cell is	A. 1 V B. 1.2 V C. 1.4 V D. 1.6 V
499	Acetone and chloroform are soluble in each other due to.	A. Intermolecular hydrogen bonding B. Dipole dipole interaction C. Instantaneous dipoles D. All of the above
500	In zero order reaction, the rate is independent of.	A. Temperature of reaction B. Concentration of reactants C. concentration of products D. None of these
501	If temperature of one mole of ideal gas at 273 K and one atmospheric pressure is increased by 1 K, amount of energy absorbed is.	A. 0.082 dm3 atm B. 1.987 cal. C. 8.313 J D. All are correct.
502	Which is not chargeable cell	A. Lead accumulator B. NiCAD cell C. Fuel cell D. Alkaline battery
503	Chlorine atom and chloride Cl- ions	A. Have same chemical and physical properties B. Are allotropes of chlorine C. Have same number of electrons D. Have same number of proton
504	Which is not used as drying agent in a desiccator.	A. Cacl2 B. NaCl C. P2O5 D. Salica Gel
505	The comparative rates at which the solutes move in paper chromatography depend on.	A. The size of paper used B. Rf values of solutes C. Temperature of the experiment D. Size of the chromatographic tank used
506	Which mixture of gases is used by the deep sea divers.	A. Oxygen and nitrogen B. Oxygen and helium C. Oxygen and carbon di oxide D. Oxygen and water vapours
507	Percentage ionic character of HF is.	A. 100% B. 80% C. 43% D. 57%
508	Which gas has highest e/m ratio	A. Hydrogen B. Helium C. Nitrogen D. Oxygen
509	The boiling point of water at the top mount Everest is.	A. 59^oC B. 69^oC C. 83^oC D. 75^oC
510	In paper chromatograghy the point at which the solvent rises to maximum extent is called	A. Event B. Chromatogram C. Solvent front D. Base line
511	The largest number of molecule are present.	A. 3.6 g of H2O B. 4.6 g of C2H5OH C. 2.8 g of CO D. 5.4 g of N2O5
512	Keeping the temperature constant of the gas is expanded.	A. Pressure will decrease B. Temperature will increase C. Kinetic energy of molecules will increase D. No. of gas molecules increases
513	Water and Phenol are partially miscible to each other at room temperature when both liquids are mixed together which is upper layer.	A. Water in Phenol B. Phenol and water C. Pure phenol D. Pure water
514	Which of the following compound has the highest % o f oxygen by weight	A. CH₃- OH B. C₂H₅OH C. HCOOH D. H₂O
515	If we want to change $O_2$to O_2^{-1}The electron is to be placed in	
		A. 1 B. 18

516	Molarity of pure water is	C. 55.5 D. 6
517	Which electron traveled more distance, when jump from	A. n1 to n2 B. n2 ato n3 C. n3 to n2 D. n3 to n4
518	Which properties of liquid is measured by polarimeter	A. Conductance B. Refractive index C. Optical activity D. Change in volume
519	Rutherford's model of atom failed because.	A. The atom did not have a nucleus and electron B. It did not account for the attraction between protons and neutrons. C. It did not account for stability of the atom D. There is actually no space between the nucleus and the electrons.
520	Repeated extraction using small portions of solvent are more.	A. Accurate B. efficient C. Slow D. Rapid
521	Orbitals having same energy are called	A. Hybird orbitals B. Valence orbitals C. Degenerate orbitals D. D-orbitals
522	One of the following substances is not used as a drying reagent in a desiccator	A. Cons. H₂SO₄ B. P₂O₅ C. Silica gel D. 50% KOH
523	Which one of the following has the greater ionic characters in it.	A. HF B. HCl C. H2O D. H2
524	The tendency of an tom to attract shared pair of electron towards itself is called its.	A. Ionization energy B. Electronegativity C. Electron affinity D. dipole moment
525	Rate of a chemical reaction generally increase rapidly even for small increase in temperature because of rapid increase in the	A. Collisions frequency B. Activation energy C. Average KE of molecules D. Fraction of molecules with energies more than activation energy
526	Quantum number values for 3p orbitals are.	A. n = 0, l = 3 B. n = 3 , l = 1 C. n = 2, l = 1 D. n = 2 , l = 3
527	A filtration process could by very time consuming if it were into aided by a gentle suction which is developed.	A. If the paper covers the funnel upto its circumference B. If the paper has got small sized pores in it. C. If the stem of the funnel is large so that it dips into the filtrate D. If the paper fits tightly
528	BF3 has zero while NH3 has 1.49 D dipole moment because.	A. B is less electronegative than N B. F is more electronegative than N C. BF3 is pyramidal while NH3 is planar D. NH3 is pyramidal while BF3 is trigonal planar
529	The molal boiling point constant is the ratio of elevation of boiling point to	A. Molarity B. Mole fraction of solvent C. Molality D. Mole fraction of solute
530	If four moles of sulphur dioxide are oxidized to sulphur trioxide, how many moles of oxygen are needed.	A. 0.5 B. 1.0 C. 1.5 D. 2.0
531	In the reaction 2Fe+3Cl2 ---------- FeCl2	A. Fe is reduced B. Fe is oxidized C. Cl2 is oxidized D. None of these happens
532	A limiting reactant is one.	A. Which is present in least amount B. Which produces minimum number of moles of product C. Which produces maximum number of moles product D. Does not effect the amount of product.

533	In endothermic reactions, the heat content of the.	A. Products is more than that of reactants. B. Reactants is more than that of products C. Both a and b D. Reactants and products are equal
534	Which has greater reduction potential	A. Na B. H2 C. Zn D. F2
535	Which of the following molecules has zero dipole moment	A. NH₃ B. CHCl₃ C. H₂O D. BF₃
536	Depression in the F.P is directly proportional to	A. Molarity of solution B. Molarity of solvent C. Molality of solvent D. Molality of solution
537	Fuel cells are the means by which chemical energy may be converted into	A. Heat energy B. Magnetic energy C. Sound energy D. Electric energy
538	The distillation of liquid under reduced pressure is called.	A. Destructive distillation B. Vaccum distillation C. Simple distillation D. Fractional distillation
539	What happens to the enthalpy change when the coeffficients of a chemical equation are douubled	A. It doubles B. It becomes half C. It does not change D. It cannot be predicted
540	NH3 shows a maximum boiling point among the hydrides of V-A group elements due to.	A. Very small size of nitrogen B. Lone pair of electron present on nitrogen C. enhanced electronegative character of nitrogen D. Pyramidal structure of NH3
541	In mass spectrometry, ions are produced by	A. Heat at high temperature B. Passing gas through high voltage plates C. Throwing fast moving electrons on gas molecules D. All of them
542	Azeotrpic mixture of two liquids boils at a lower temperature than either of them, when	A. It is saturated B. Is shows positive deviation from Raoult's law C. It shows negative deviation from Raoult's law D. Is is metastable
543	Which of the following value of heat of formation indicates that the product is least stable.	A. -94 KJ B. -231.6 KJ C. +21.4 KJ D. +70 KJ
544	Solvent extraction is an equilibrium process and it is controlled by.	A. Law of mass action B. The amount of solvent used C. Distribution law D. The amount of solute
545	Forces of attraction between He atoms are.	A. Hydrogen bonding B. London forces C. Debye forces D. Ion dipole forces
546	When a chemical reaction is completed the	A. Instantaneous rate > average rate B. Instantaneous rate = average rate C. Instantaneous rate is zero D. Both average and instantaneous rates become zero
547	Large value of distribution coefficient K means.	A. Component of solute dissolved large in mobile phase B. Components of solute do not dissolve in mobile phase C. Components of solute remains at original spot D. All statements are correct
548	The wave number of the light emitted by a certain source is 2 x $10^6 m^{-1}$The wave length of this light is.	A. 500 nm B. 500 m C. 200 nm D. 600 m
549	Calorie is equivalent to	A. 0.4184 J B. 41.84 J C. 4.184 J D. 418.4 J
550	Which one of the following salts do not hydrolyses	A. CuSO4 B. Na2CO3 C. NaCl

		C. NaCl D. AlCl3
551	Which pair of compound are isomorphic in nature.	A. NaCl and KNO3 B. KNO3 and MgO C. MgO and NaF D. CaF and CaCO3
552	How many atoms are present in half mol of oxygen gas. Gas exist in diatomic state.	A. 3.01 x 10²³ B. 6.02 x 10²³ C. 2 x 10²³ D. 1.003 x 10²³
553	Spontaneous processes are mostly	A. Reversible B. Irreversible C. Not irreversible D. None of these
554	After 3 half life of a chemical reaction, amount of reactant un reactive will be.	A. 50% B. 25% C. 12.5% D. 6.25%
555	Which of the following molecule has zero dipole moment.	A. NH3 B. CHCl3 C. H2O D. BF3
556	NaCl and sand can be separated by one of the following without filtration	A. Formation of solution and filtration B. Formation of solution and evaporation without filtration C. Sublimation D. Chromatiograghy
557	The volume occupied by 16 g of CH4 at S.T.P.	A. 224.14 dm3 B. 22.4 dm3 C. 1.12 dm3 D. 2.24 dm3
558	During the process of crystallization, the hot saturated solution.	A. Is cooled very slowly to get large sized crystals. B. Is cooled at a moderate rate to get medium sized crystals C. Is evaporated to get the crystals of the product. D. Is mixed with an immiscible liquid to get the pure crystals of the product.
559	Chromatography involves the distribution of a solute between.	A. Two stationary phases B. Two mobile phases C. A stationary phase and a mobile phase D. Two stationary and two mobile phase.
560	A type of meals are usually used as catalyst.	A. Coinage metal B. Alkali metals C. Transition metals D. alkaline earth metals
561	Which one of the following methods will be used to separate the mixture of NaCl and sand.	A. Chromatography B. Solvent extraction C. Sublimation D. Filtration
562	The molecule having zero dipole moment is.	A. NH3 B. CHCl3 C. H2O D. BF3
563	10 g of NaOH has been dissolved per dm3 of solution. The molarity of solution is.	A. 0.5 M B. 0.25 M C. 1 M D. 2 M
564	In silver oxide battery, anode is made of.	A. Zinc B. Copper C. Lead D. Graphite
565	Which statement is incorrect about order of reaction	A. It cannot be determined experimentally B. It is determined experimentally C. Sum of exponents in rate equation D. It can have fraction value
566	Ascorbic acid is vitamin.	A. A B. B C. C D. D
567	Rate of diffusion of CO and N_2 are same at room temperature due to the reason, that	A. Both are diatomic molecules B. Both have same multiple bond in them C. Both have lone pairs in them

	reason, that	C. Both have ions pairs in them D. Both have same molar masses
568	Calcium has isotopes	A. 7 B. 9 C. 1 D. 6
569	The electrode reaction of a voltaic cell can be reversed when	A. Concentrations of solutions are changed B. Temperature is increased C. Electrodes are interchanged D. Electric circuit is employed to supply the source of electricity
570	The paramagnetic behaviour of oxygen is well explaned on the basis of.	A. M.O Theory B. N.B Theory C. VSEPR Theory D. CF theory
571	A filtration process could be very time consuming if it were not aided by a gentle suction, which is developed.	A. If the paper covers the funnel up to its circumference B. If the paper has got small sized pores in it C. If the stem of the funnel is large so that it dips into the filtrate D. If the paper fits tightly
572	The Rutherford experiment of using a stream of alpha particles on a piece of gold foil proved that.	A. The atom was a solid sphere B. The atom had electron C. The atom had neutrons D. The atom had a great empty space in it
573	In a electrolytic cell the electrons flow from	A. Cathode to anode B. Anode to cathode C. From cathode to anode or opposite, depending upon the nature of electrolyte D. All of the above
574	From which quantum number is the shape of an orbital determined.	A. Principal B. Magnetic C. Azimuthal D. Spin
575	The octet rule in not followed in the formation of	A. NF₃ B. CF₄ C. CCl₄ D. PCl₅
576	The relative lowering of vapour pressure is equal to the mole fraction of the solute. This law is known as	A. Ostwald dilution law B. Raoult's law C. Vant hoff's law D. Henry's law
577	Which technique is used ot determine the absorption of radiations.	A. Spectrometry B. dilatometer method C. Refractometric method D. Optical rotation method
578	Diamond is bad conductor because.	A. It has a tight structure B. It has a high density C. It is transparent to light D. There are o free electros present in the crystal of diamond to conduct electricity.
579	Ionic compound do nto show the phenomenon of Isomerism because bond are.	A. Directional and rigid B. Non directional and rigid C. Non directional and non rigid D. All above
580	Electrolysis is used for	A. Electroplating B. Refining of copper C. Manufacture of caustic soda D. All of the above
581	In which , case particles are separated from each other.	A. Fusion B. Condensation C. Neutralizations D. Vaporization
582	Which has greater enthalpy of vaporization	A. F2 B. Cl2 C. Br2 D. I2
583	Along period of periodic table shielding effects.	A. Increases B. Decreases C. Remain constant D. First increases than decreases
584	The cathodic reaction in the electrolysis of dill. $H_2SO_4$with Pt electrodes is	A. Reduction B. Oxidation C. Both oxidation and reduction

		D. Neither oxidation nor reduction
585	Existence of an element in more than one crystalline form is known as.	A. Anisotropy B. Allotropy C. Isomorphism D. Unit cell
586	Total pressure of mixture of two gases is.	A. The sum of their partial pressures. B. The difference of their partial pressures C. The product of their practical pressures D. The ratio of their partial pressures
587	Cathode rays cast shadow when an opaque object is placed in their path. This behavior of cathode rays show that.	A. They move is straight line B. They are negatively charge C. They possess momentum D. They are energetic
588	In stoichiometric calculations	A. The reaction can be reversile B. Side products can be formed C. Law of conservation of mass may not be obeyed D. Law of definite proportions is definitely obeyed
589	NH_3shows a maximum boiling point among the hydrides of V-A group elements due to	A. Very small size of nitrogen B. Lone pair electrons present on Nitrogen C. Enhanced electronegative character of Nitrogen D. Pyramidla structure of NH₃
590	The rate of diffusion of a gas of molar mass 72 as compared to H2 will be.	A. 1/6 times B. 1.4 times C. 6 times D. same
591	According to MOT, which molecular orbital has highest energy.	A. sigma 1s B. pi+ 2S C. pi 2py D. Pi+ 2px
592	Which process is endothermic and spontaneous	A. Neutralization of NaOH with HCl B. Formation of NH3 from H2 and N2 C. Formation of H2O from H2 and O2 D. Evaporation of sea water
593	CO+ is an example of.	A. Free radical B. Cationic molecular ion C. Anionic molecular ion D. Stable molecule
594	In a group of periodic table, ionization energy.	A. Decreases B. Increases C. Remains same D. First increases than increases
595	Those elements whose electronegativities are 1.2 and 3.2, react to form	A. Ionic bond B. Covalent bond C. Gaseous substance D. Definiting a liquid substance
596	Normal temperature and pressure (S.T.P) of gas rafers to	A. 273 K and 76 mm Hg B. 273° C and 760 mm Hg C. 273 K and 760 mm Hg D. 273° C and 76 mm Hg
597	Which one of the following correctly describe the shape of NH3 molecules.	A. tetrahedral B. Pyramidal C. Angular D. Square planar
598	Molal boiling point elevation depends upon	A. Nature of solvent B. Natrue of solute C. Vapour pressure of solution D. None of these
599	In triclinic unit cell	A. All axial lengths are equal B. All internals lengths and angles are equal C. Both axial lengths and angles are equal D. Both axial lengths and angles are unequal
600	Which statement is true about Na and Na+	A. size of Na is greater than Na+ B. Size of Na is smaller than Na+ C. Both have equal size D. Both have same properties
601	If we plot a graph between I/V at x-axis and pressure at Y -axis	A. a parabolic graph is obtained B. By increasing temperature straight line move toward x axis C. By increases temperature straight line move toward y axis. D. No. change in line by increasing temperature.

602	Which one of the following molecule have angle of 120 ^{o}	A. Be Cl2 B. BF3 C. CH4 D. NH3
603	Which molecules is 100% covalent	A. H2 B. H2O C. HF D. NH3
604	Which element has highest ionization potential.	A. Li B. B C. Be D. C
605	Rutherford's model of atom failed because	A. The atom did not have a nucleus and electrons B. It did not account for the attraction between protons and neutrons C. It did not account for the stability of the atom D. There is actually no space between the nucleus and the electrons
606	The pressure of oxygen inside the bomb calorimeter is.	A. 100 atm B. 50 atm C. 25 atm D. 20 atm
607	For a gas obeying Boyle's law if pressure is doubled, the volume becomes.	A. Double B. One half C. Four times D. Remains constant
608	Which of the following has bond angle of 120 ^{o}	A. BeCl2 B. BF3 C. CH4 D. NH3
609	The unit of rate constant depends upon	A. Number of reactants B. Concentration terms C. Order of reaction D. Molecularity of reaction
610	If the salt bridge is not used between two half cells, then the voltage	A. Decreases rapidly B. Decreases slowly C. Does not change D. Drops to zero
611	Chromatographic technique is very useful for	A. Isolation B. Purification C. separation D. All of them
612	Which of the following mixtures of liquids show negative deviation	A. Methyl alcohol water B. Hydrochloric acid water C. Carbon di sulphide chloroform D. Chlorobenzene bromobenzene
613	Chromatography in which stationary phase is a solid is called.	A. Partition chromatography B. Paper chromatography C. High pressure liquid chromatography D. Adsorption chromatography
614	Long chains of amino acids are coiled about one another into a spiral by	A. Covalent bond B. Ionic bond C. Hydrogen bond D. Van Der Waal's forces
615	The molar volume of $CO_2$is maximum at	A. STP (0°C and 1 atm) B. 127° C and 1 atm C. 0°C and 2 atm D. 273°C and 2 atm
616	The unit of the rate constant is the same as that of the rate of reaction in	A. First order reaction B. Second order reaction C. Zero order reaction D. Third order reaction
617	When 6d orbital is complete, the entering electron goes into.	A. 7f B. 7s C. 7p D. 7d
618	Azeotropic mixture can be separated into pure components by	A. Distillation B. Fractional distillation C. Vacuum distillation D. None
		A. Intermolecular forces B. Size of molecules

619	Observed pressure is less than ideal pressure for any gas due to	B. Size of molecules C. Boiling point of molecules D. Both a and c
620	The velocity of photon is	A. Independent of its wavelength B. Depends on its wavelength C. Equal to square of its amplitude D. Depends on its source
621	How many moles of AgCl are produced by combination of 1.0 mole of $AgNO_3$and 2.0 mole of NaCl	A. 1.0 B. 2.0 C. 3.0 D. 4.0
622	Feeling uncomfortable breathing in un pressurized cabins is due to	A. High pressure of CO2 B. Fatigue C. Low pressure of O2 D. Low presssure of CO2
623	Positive rays were discovered by.	A. J.J.Thomson B. Goldstein C. Ruther ford D. William Crookes
624	During combustion analysis, CO2 produced is absorbed in	A. Mg (CLO4)2 B. 50% KOH C. CaCl2 D. P2O5
625	Which one of the following substances is not amorphous	A. Polymer B. Rubber C. Glass D. AgNO₃
626	Which of the following species has unpaired electrons in antibonding molecular orbitals.	A. O2⁺² B. N2⁻² C. B2 D. F2
627	Quantum number values for 2p orbitals are	A. n = 2, l = 1 B. n =1, 1 = 2 C. n =1, l = 0 D. n = 2, l = 0
628	Under which conditions of temperature and pressure will a real gas behave most like an ideal gas.	A. Low temperature and how pressure B. High temperature and high pressure C. Low temperature and high pressure D. High temperature and low pressure
629	Which statement is incorrect about activated complex	A. Short lived B. Maximum energy C. Unstable combination of atoms D. Less energy than Ea
630	Which of the following orbitals is not possible.	A. 3p B. 4s C. 2d D. ls
631	When an atom reacts chemically and loses one or more electrons it is.	A. Decomposed B. Reduced C. Oxidized D. Catalyzed
632	Solvent extraction method is particularly useful technique for separation when the product to be speared is.	A. Non volatile or thermally unstable B. Volatile or thermally stable C. Non volatile or thermally stable D. Volatile or thermally unstable
633	An azeotropic mixture of two liquids boils at lower temperature than either of them when.	A. It is saturated B. It shows positive deviation from Raoult's law C. It shows negative deviation from Raoult's law D. It is metastable
634	Tin has Isotopes	A. 7 B. 9 C. 11 D. 5
635	Electromotive force of the cell is the	A. Difference of two electrode potentials B. May be sum or the difference of two electrode potentials C. Sum of two electrode potential D. Depends upon the nature of the cell
636	The molecules of a gas show more deviation from ideal behaviour at low temperature, because	A. Attractive force dominate at low temperature B. Kinetic energies are increased C. Collisions become less frequent D. Densities of the gases increase

637	When water freezes, its volume increase.	A. 12% B. 9% C. 15% D. 18%
638	If 2 mol of an ideal gas at 546 K occupy a volume of 44.8 dm3, the pressure must be.	A. 1 atm B. 2 atm C. 3 atm D. 4 atm
639	Conduction of electricity through gases under reduced pressure is due to the transportation of.	A. positive charge B. Negative charge C. Both types of charges D. None of these
640	The net change in a chemical reaction is same whether it takes place directly or indirectly is	A. Henry's law B. Charles's C. Hess's lass D. Graham's law
641	Which of the following precautions in necessary for smooth filtration	A. The filter paper should be of big size B. The tip of funnel should not touch the side of the beaker C. The stem of the funnel should be very small D. The stem of he funnel should remain continuously full of liquid
642	The Avogadro constant is the number of.	A. Atoms in 1 g of helium ga B. Molecules in 35.5 g of chlorine gas C. Atoms in 6 h graphite D. Atoms in 24 g of magnesium
643	When fast neutron carries nuclear reaction with nitrogen it ejects aprticles.	A. Alpha B. Gamma C. Beta D. Nil
644	Diamond is a bad conductor because.	A. It has tight structure. B. It has a high density C. There is no free electron present in the crystal of diamond to conduct electricity D. None of the above
645	Density of a gas is usually expressed in	A. kg m-3 B. kg dm-3 C. g dm-3 D. g cm-3
646	Salt of weak acid with strong base when dissolved in water gives.	A. Acidic solution B. Basic solution C. Neutral solution D. None of above
647	Isotopes are the atoms of same element with similar chemical properties but different	A. Atomic number B. Atomic volume C. Atomic weight D. Atomic structure
648	Gas molecules show more deviation from ideal behaviour at high pressure because.	A. Velocity of molecules increases B. Velocity of molecules decreases C. Force of attraction between molecules increases D. Force of collision per unit area increases
649	The substance which decrease the activity of a catalyst is called.	A. Promoter B. Activator C. Inhibitor D. Positive catalyst
650	Catalyst used in preparation of NH_3 from N_2 and H_2 is.	A. Ni B. Fe C. Pt D. V_2O_5
651	Gases deviate from ideal behaviour at high pressure. Which of the following is correct for non-ideal behaviour of gases	A. At high pressure, the gas molecules move in one direction only B. At high pressure, the collisions between the gas molecules are increased C. At high pressure, the volume of the gas becomes insignificant D. At high pressure, the intermolecular attraction becomes significant
652	the number of moles of CO_2 which contain 8.0 g of oxygen.	A. 0.25 B. 0.50 C. 1.0 D. 1.50

653	A solution of glucose is 10% to volume in which 1 g mole of it is dissolved will be	A. 1 dm³ B. 1.8 dm³ C. 200 cm³ D. 900 cm³
654	At equilibrium stage of chemical reaction	A. The concentration of reaction is equal to concentration of products B. The rate constant of forward reaction is equal to rate constant of backward reaction C. The rate of forward reaction is equal rate of backward reaction D. The energy of activation of forward step is equal to energy of activation of backward step
655	Anode rays were discovered by	A. J. Stoney B. Rutherford C. J.J. Thomson D. Goldstein
656	The unit of the rate constant is same as that of the rate of reaction in	A. First order reaction B. Second order reaction C. Zero order reaction D. Third order reaction
657	The number of Na, ions which surround each Cl^{1-} ion the NaCl crystal lattice is	A. 8 B. 12 C. 6 D. 4
658	Solvent extraction is an equilibrium process and is controlled by.	A. Law of mass action B. The mount of solvent used C. The amount of solute D. Distribution law
659	Which of the following solution s has the highest boiling point.	A. 5.85% solution of sodium chloride B. 18.0 % solution of glucose C. 6.0% solution of urea D. All have the same boiling point
660	When solid KI dissolved in water, its heat of solution is positive. What would happen to dissolution when temperature is increased.	A. Increases B. Decreases C. Remain same D. Firs increases than decreases
661	When small amount of acid or base is added to buffer, its pH.	A. Remain same B. Always increases C. Always decreases D. slightly increases or decreases
662	In a solution 7.8 g of benzene and 46 g of toluene is present The mole fraction of benzene is.	A. 1/2 B. 1/3 C. 1/5 D. 1/6
663	Which pair are iso electronic.	A. Na+ and Cl- B. Na+ and Mg+2 C. N-3 and P-3 D. H+ and H-
664	Spectrum produced due to the transition of electron from M-Shall to L-Shell is.	A. Absorption B. Emission C. Continuous D. X rays
665	pH of rain water.	A. 7 B. Slightly basic C. slightly acidic D. Highly basic
666	The volume occupied by 1.4 g on N_2 at S.T.P is	A. 2.24 dm³ B. 22.4 dm³ C. 1.12 dm³ D. 112 cm³
667	In Daniel cell, if salt bridge is removed between the two half cells, the voltage.	A. Drops to zero B. Does not changes C. Increases gradually D. Increases rapidly
668	Which one of the following statements is incorrect.	A. Enzymes are protein in nature B. Enzymes are catalyst C. Enzymes can catalyze any reaction D. Urease is an enzyme
669	The volume of a gas at 0 oC is 273 dm3, the pressure remaining constant. At which temperature its volume will be doubled.	A. 273 K B. 273 ^oC C. 546 ^oC D. 316 K

670	In azeotropic mixture showing positive deviation from Raoult's law, the volume of the mixture is.	A. slightly more than the total volume of the components B. Slightly less than the total volume of the component C. Equal to the total volume of the components D. None of these
671	If the empirical formula of compound is CH_2 and its molecular mass is 56 than what is the actual molecular formula of this compound.	A. CH_2 B. C_2H_4 C. C_3H_6 D. C_4H_8
672	The volume occupied by 1.4 g of N_2 at S.T.P is	A. 2.24 dm^3 B. 22.4 dm^3 C. 1.12 dm^3 D. 112 cm^3
673	Which is not use of liquid crystals.	A. Temperature sensor B. Liquid crystal display C. Skin thermography D. Energy supply in electrical devices.
674	Suppose a new element 'J' has discovered and has seven electron in the valence shell. Which statement about this element would be correct.	A. It is monatomic B. It form covalent bond with hydrogen C. It forms stable positive ion D. It forms covalent bond with group IA element
675	The born Haber cycle is the best application of law.	A. Boyle's B. Dalton's C. Hess's D. Graham's
676	The mass of two moles of electrons is	A. 1.10 mg B. 1.008 mg C. 0.184 mg D. 1.673 mg
677	the rate of reaction when concentration of reactants are taken unity is called.	A. Average rate B. Instantaneous rate C. Specific rate D. Rate equation
678	Down the VII -A group, polarizability generally.	A. Increases B. Decreases C. Remain constant D. Negligible
679	Chemical reactivity of different substance is controlled by	A. Atomic number B. Electronic arrangement C. Mass number D. Number of isotope of reactant elements
680	If uncertainty in position of electron is zero, the uncertainty in its momentum would be.	A. zero B. Less than zero C. Infinite D. One
681	Many elements have fractional atomic masses. This is because	A. The mass of the atom is itself fractional B. Atomic masses are average masses of isobars C. Atomic masses are average masses of isotopes D. Atomic masses are average masses of isotopes proportional to their relative abundance
682	In $H_2SO_4$the oxidation number of 'S' is	A. +2 B. +6 C. +8 D. +4
683	Equal masses of methane and oxygen are mixed in an empty container at 25°C, the fraction of total pressure exerted by oxygen is	A. 1/3 B. 8/9 C. 1/9 D. 16/17
684	An excess of aqueous silver nitrate is added to aqueous barium chloride and precipitate is removed by filtration. What are the main ions in the filtrate	
685	When aqueous NaCl is electrolyzed, which of the following ions gas discharged at anode.	A. Cl^- B. OH^- C. Na^+ D. H^+
686	Solubility of which substance decreases by incressing temperature.	A. $NaNO_3$ B. KNO_2 C. NaCl D. $Ce_2(SO_4)_3$
687	Which one of the following expressions is for ideal gas equation.	A. PM= nRT B. PV = nRT C. PV = dRT D. PV= nTP

688	Transition from various energy levels to the lowest energy level gives.	A. Lyman series B. Balmer series C. Panchen sereis D. Pfund series
689	Energy and wavelength of a photon are related as.	A. Direct B. In direct C. No correlation D. Inverse under root
690	Stronger the oxidizing agent greater is the	A. Oxidation potential B. Reduction potential C. Redox potential D. E.M.F of cell
691	When HCl is added to H2S aqueous solution, Its ionization	A. Decrease B. Increase C. Remains constant D. First increases than decreases
692	The net heat change in a chemical reaction is same whether it is brought about in two or more different ways in one or several steps. It is known as	A. Henry's law B. Hess's law C. Joule's principle D. Law of conservation of energy
693	The molecular shape of SO3 is.	A. Triangular planar B. Tetrahedral C. Pyramidal D. Linear
694	If salt bridge is not used between two half cells, than the voltage.	A. Decreases rapidly B. Decreases slowly C. Does not change D. Drops of zero
695	The total number of protons and neutrons present in the nucleus of an atom is called.	A. Mass number B. Atomic number C. Molecular mass D. Relative atomic mass
696	Le-Chatelier Braun principle is sometimes known as	A. Law of mass action B. Law of mobile equilibrium C. Law of active mass D. All of these above
697	Which is not decay product of free neutron	A. Proton B. Electron C. Neutron D. Antineutrino
698	The number of electrons in one mole of hydrogen gas is.	A. 6.02 x 10²³ B. 12.04 x 10²³ C. Only two D. Indefinite
699	Molal boiling constant for water is 0.52 ^{o}C. If 6 g of urea is dissolved in 100 g of water, what will be its boiling point.	A. 100.52 ^oC B. -100.52^oC C. 100^oC D. 99^oC
700	Solubility of which substance decreases by increasing temperature.	A. NaNO3 B. KNO2 C. NaCl D. Ce2(SO4)3
701	Which one of the following substances is used as decolouring agent	A. Animal charcol B. Concentrated H₂SO₄ C. CaCl₂ D. Silica gel
702	The shape of H_3O is	A. Tetrahedral B. Angular C. Trigonal planer D. Pyramidaj
703	The value of pH and P^{oH}of pure water at 25° C is	A. 14 B. 7 C. 1 x 10⁻¹⁴ D. 1 x 10¹⁴
704	the value of delta H and delta E for liquids and solids is almost same because.	A. No change in temperature B. Heat absorbed C. No change in volume D. Heat evolved
		A. The nature of electrode B. The nature of discharge tube

705	The nature of positive rays depends on	C. The nature of residual gas D. All of the above
706	The total kinetic energy of one mole of an ideal gas is given by	A. 3/2 RT B. 1/2 KT C. 1/2 RT D. 3/2 KT
707	One mole of Carbon -12 has mass	A. 0.012 kg B. 1 kg C. 0.022 kg D. 12 kg
708	The rate of reaction determined at any given time is called.	A. Average rate B. Instantaneous rate C. Spontaneous rate D. Over all rate
709	Which pair of mixture is called ideal solution.	A. Chlorobenzene and bromobenzene B. Water alcohol C. Water ether D. HCl and water
710	Standard enthalpy of combustion of carbon is -394 kJ mol-1 than, which is the standard enthalpy of formation of CO2	A. +394 kJ B. -394 kJ C. 0 kJ D. +197 kJ
711	The repulsion of electronic clouds of the molecules are responsible for the attractive forces among the molecules. These forces are	A. Dipole-induced dipole forces B. Ion-dipole forces C. Instantaneous dipole-induced dipole forces D. Dipole-dipole forces
712	The molar boiling point constant is the ratio of the elevation of boiling point to .	A. Molarity B. Molality C. Mole fraction of solvent D. Mole fraction of solute
713	During the process of crystallization, the hot saturated solution;	A. Is cooled very slowly to get large-sized crystals B. Is cooled at a moderated rate to get medium-sized crystals C. Is evaporated to get the crystals of the product D. Is mixed with an immiscible liquid to get the pure crystals of the produce
714	A chemical reaction A ---------- B is said to be in equilibrium when	A. Complete conversion of A to B has taken place B. Conversion of A to B is 50% complete C. Rate of transformation of A to B is equal to B to A D. 50% Reactant have been changed to B
715	An aqueous solution of ethanol in water has vapour pressure	A. Equal to that water B. Equal to that of ethanol C. More than that of H₂O D. less than that of water
716	When a reaction proceeds in a sequence of steps, the overall rate is determined by	A. Fastest step B. Slowest step C. Order of different steps D. Molecularity of all steps
717	Which substance is nto a dehydrating agent.	A. CaCl3 B. CdCl2 C. Silica gel D. P2O5
718	The number of bonds in nitrogen molecules is.	A. One pi and one sigma B. One pi and two sigma C. Thre sigma only D. Two pi and one sigma
719	The boiling point of pure water at 1 atm pressure is.	A. 98^oC B. 100^oC C. 69^oC D. 120^oC
720	An Ideal gas can not be liquefied because.	A. Its critical temperature is always above 0 ^oC B. It molecules are relatively smaller in size C. Its solidify before becoming a liquid D. Force operative between its molecules are negligible
721	According to Boyle's law which parameters give a straight line parallel to x -axis when we plot a graph between	A. P and V B. P and 1/V C. P and PV D. V and T
722	A material or a collection of materials which is under study is called	A. State function B. Degree and joule C. Degree and erg

		C. Degree and ergs D. Calorie and joule
723	The Number of moles of CO_2 which contain 8.0 of oxygen.	A. 0.25 B. 0.15 C. 0.35 D. 1.45