PPSC Chemistry Part I Physical Chemistry Online Test

Sr	Questions	Answers Choice
1	During the preparation of ethane by Kolbe's electrolytic method using inert electrodes the pH of the electrolyte.	A. Increases progressively as the reaction proceeds B. Decreases progressively as the reaction proceeds C. Remains constant throughout the reaction D. May decrease if the concentration of the electrolyte is not very high
2	A stable molecule is a group of atoms held together by	A. Chemical forces B. Physical forces C. Valence force D. None of above
3	Which of the following process is involved in nitrogen flotation	A. Non symmetric fixation of nitrogen B. Fixation by soil bacteria C. Fixation by yeast D. Fixation by blue green algae E. All above
4	During the last two centuries, the atmospheric CO2 contents are increased by	A. 15% B. 25% C. 35% D. 50%
5	The elements with highest electron affinity belongs to.	A. Period 2 , group 17 B. Period 3, group 17 C. Period 2, group 18 D. Period, 2 , group 1
6	Which of the following molecule does not contain the covalent bond between similar atoms.	A. N2H4 B. F2O2 C. H2F2 D. H2O2
7	Orion is polymer of.	A. Styrene B. CF2 = CF2 C. Vinyl chloride D. Acrylontrile
8	Which of the following substance is a volatile metals.	A. Lead B. Zinc C. Mercury D. Sodium
9	Dull red flame is observed with	A. Calcium salt B. Barium salt C. Strontium salt D. Sodium salt
10	Which of the following statement is not related with the effect of thermal pollution.	A. Decrease in BOD B. Increase in BOD C. Reduction in DO D. Change in algal production
11	Which of the following functional groups is not involved in ion exchange chromatography.	A. Weak acids B. Strong acids C. Strong bases D. Carbohydrates
12	The digits which are necessary to express the result of a measurement to the precision with which the measurement is made are called.	A. Non significant figures B. Mathematical figures C. Significant figures D. Reagent errors
13	Which of the following can act both as a Bronsted acid and a Bronsted base.	A. Na2CO3 B. OH- C. HCO3- D. NH3
14	What is prefix in steel identification means it is made in an electric furnaced.	A. E B. H C. B D. Z

15	The IUPAC suffix used for _____ NC group is	A. Cyanide B. Isocyanides C. Carbylamines D. Nitrite
16	Which of the following factors effect the strengths of acids and bases.	A. Inductive effect B. Romance effect C. Hydrogen effect D. All above
17	The number of electrons involved in bonding in Lewis structure of oxalate ion is	A. 20 B. 14 C. 22 D. 18
18	Which of the following to non -auditory effect of noise on human body.	A. Changes in the Vascular tone B. _{Increase in the blood pressure} C. Wakening of the coloured vision D. All above
19	Apoenzyme is	A. Hydrolytic enzyme B. Oxidative enzyme C. Coenzyme D. Protein part of enzyme after removal of coenzyme
20	Which of the following is not obtained when Br2 is added to ethylene in the presence of aqueous NaCl solution.	A. Br CH2CH2Br B. Br CH2CH2Cl C. ClCH2 CH2Cl D. ClCH2CH2Cl
21	Carbon tetra chloried has no net dipole moment because of.	A. Its planar strcture. B. Its regular tetrahedral structures. C. Similar sizes of carbon and chlorine atoms D. Similar electron affinities of carbon and chlorine.
22	Which of the following statements is not correct with respect to applications of H-bonding.	A. It explains the usual b.p. and m.p of certain class of compound. B. It explains the solubility of certain organic compounds in hydroxylic solvents C. It explains the lack of ideal behavior in gases and solutions D. It has stonrg influence on the configuration of certain molecules.
23	Which is the correct order of wave number of the following redistions.	A. X-rays > uv > Infrared > visible> radio waves B. X-rays > uv > visible > Infrared > radio waves C. X-rays > radio waves > uv > visible > Infrared D. X-rays > Infrared > uv> visible > radio waves
24	Which of the following is strongest reducing agent.	A. Be B. Mg C. Ca D. Sr
25	A thionic acid	A. H2S2O3 B. H2S2O6 C. H2S2O8 D. H2S2O7
26	Which of the following item is not symmetry element.	A. Pllane of symmetry B. Inversion centre C. Improper rotation D. Optical activity
27	Particulate from soil and mineral primarily contains	A. Sodium compounds B. Calcium compounds C. Silicon compounds D. Calcium, aluminum and silicon compounds
28	Which of the following is NOT a hardware requirement for die casting.	A. Water cooled metal cavities<o:p></o:p> B. Machined metal holding blocks<o:p></o:p> C. <p class="MsoNormal" style="margin-

		C. Ejection mechanism<o:p></o:p> D. Metal mold<o:p></o:p>
29	How many sigma and pi bonds are there in a CO2 molecule.	A. 2 sigma B. 2 sigma and 4 pi C. 2 sigma and 2 pi D. 4 sigma and no pi
30	Which of the following pose threat to historical monument Taj.	A. Floods in Yamuna river B. Temperature mediated spoilage of marble C. Air pollutants from Mathura refinery D. Weathering of marble
31	Which of the following properties of a system does not change in a state of equilibrium.	A. Density B. Pressure C. Colour D. All above properties
32	What is graphene.	A. A new material made from carbon nanotubes B. A one atom thick sheet of carbon C. This film made from fullerene D. A software tool to measure and graphically respresent nanoparticles.
33	Xe reacts directly with	A. O2 B. Cl2 C. F2 D. Br2
34	Each of the following when present at para position decreases the acidic strength of phenol except.	A. -NH2 B. -Cl C. CH3O- D. CH3-
35	The enrichment of chemical substance at the surface of a solid is called	A. Adsorption B. Absorption C. Sorption D. Isotherm
36	Which of the following detector is used in GC analysis	A. Thermal conductivity detector B. Flame ionization detector C. Mass spectrometer D. All above
37	Given A + 3B _____ 2C + D This reaction is first under with respect to reactant A and second order with respect to reactant B . If the concentration of A is doubled and the concentration of B is halved, the rate of the reaction would _____ by factor of _____	A. Increase ,2 B. Decrease ,2 C. Increase ,4 D. Decrease ,4
38	The volume of a given mass of gas at constant temperature varies inversely with the pressure. This is a statement of.	A. Charlea's law B. Avogadro's law C. Boyle's law D. Dalton 's law
39	Photochemical smog consist of excessive amount of X in addition to aldehydes ketones, PAN etc. X is.	A. Methane B. Carbon monoxide C. Ozone D. Carbondioxide
40	Which of the following information is correct about a typical packed column in GC.	A. 10-100 m long and 2 to 6 cm to diameter B. 1-10 m long and 0.2 to 0.6 cm in diameter C. 0.1-1 m long and 0.02 to 0.00 cm in diameter D. None of the above
41	Which of the following combination is used to make buffer.	A. NaOH and HCl B. KOH and H2SO4 C. CH3COOH and CH3COONa D. CH3COOH and NH4OH
42	Gutta percha is	A. Cis poly imprene B. Trans -polyisoprene C. Polyethylene D. Polyisobutylene
43	Mostly used solvents for ionic compounds	A. Liquid ammonia B. Liquid SO2

43	Mostly used solvents for ionic compounds.	C. Liquid HF D. All above
44	Which of the following technique is the application of voltammetry at a fixed potential to detect changes int he currents as a function of the concentrating of the analyte	A. Amperometry B. Coulometry C. Polarography D. Potentiomertry
45	In the Lewis formula of which of the following species, the number of single double and dative bonds are equal.	A. N2O3 B. HNO3 C. SO2 D. SOCl2
46	Which of the following is not a characteristic of phthalocyanine dyes.	A. They are metal complex B. the are insoluble in water C. They have porphin nucleus D. They are used in photographic plates
47	When CH3COOH is titrated against NaOH the pH as the equivalence point is.	A. 7 B. > 7 C. o >7 D. 6.8
48	In the Mendeleev's periodic table elements are arranged in the increasing order of their .	A. Numbers of neutrone. B. Atomic number C. Atomic mass D. Atomic volume
49	The splitting of H2O can be carried out through	A. Photolysis B. Electrolysis C. Dialysis D. Hydrogenation
50	Which of the following statements is not related with flame photometric analysis.	A. Vaporization of the solvent leaving back the residue B. Conversion of solid slat to the gaseous state C. Dissociation of gaseous molecules into free atoms D. Measurement of the intensity of absorbed tradition
51	Which of the following has the bighest value.	A. Transnational partition function B. Rotational partition function C. Vibrational partition function D. Electronic partition function
52	Phosphoric acid is the most important of the phosphorus oxy acids. Industrially phosphoric acid is prepared by.	A. The Ostwald process B. The Haber's process C. The reaction of phosphate rock with sulphuric acid D. The reaction P4O10 with water.
53	On industrial scale chlorine is prepared by	A. Dennis method B. Deacon's process C. Plantner's process D. Aludels process
54	Co enzyme cna be separated from enzyme by	A. Precipitation B. Dalysis C. Hydrolysis D. Distillation
55	Which of the following is renewable resources of energy.	A. Hydropower B. Wind power C. Solar power D. All above
56	Which of the following health effect is caused by lead.	A. Cancer B. Neurotoxin C. Hypertension D. Kidney damage
57	Sodium metal cannot be stored under	A. Hexane B. Benzene C. Kerosene D. Ethanol
58	Magnesium burns in air to give.	A. MgO B. MgCO3 C. Mg3N2 D. Both A and C
59	_____is best in its cleaning action.	A. Soap B. Detergents C. Surfactant D. None of these
		A. It has trigonal planar geometry

60	Pick out the incorrect statement for ClF3	B. It is used to make gaseous UF6 which is useful in making enriched U-235 fuel C. It is used as powerful fluorinating agent for inorganic compounds D. ClF2 has been used as fuel in short range rockets reating with hydrazine.
61	Copper is mainly extracted from witch of the following ore	A. Sulphide ores B. Carbonate ores C. Oxides ores D. Non sulphide ores
62	DDT is	A. Biodegradable pollutant B. Nodegradable contaminant C. Air pollutant D. An antibiotic
63	Inorganic acids (HCl, HBr, HNO3 etc) have K value.	A. < 1 B. >1 C. >10 D. <10
64	The rotation of plane polarized light when it posses through 1 dm of a solution containing 1 gram of the substance per cm3 of the solution is called.	A. Molar rotation B. Molar refraction C. Specific refraction D. Specific rotation
65	The shape of SO_4^{2-} ion is.	A. Tetrahedral B. Trigonal planar C. Square planar D. Octahedral
66	Cement containing higher percentage of gypsum than required.	A. Sets slowly B. Sets repidly C. _{Does not set at all} D. Has no effect
67	Which of the following substance act as photochemical oxidant	A. Ozone B. NOx C. peroxyacetyl nitrate D. All above
68	Nitric acid is used in manufacturing of.	A. Explosive B. H2SO4 C. Fertilizer D. All above
69	An element with high electronegativity has	A. High IE and high EA B. High IE and low EA C. Low IE and High EA D. Low IE and low EA
70	Which of the following responsible for depletion of ozone layer in upper strata of the atmosphere.	A. Polyhalogens B. Ferrocene C. Freons D. Fullerencs
71	What is caustic potash	A. NaOH B. KOH C. NaCl D. KCl
72	An emulsifier is an agents which	A. Stabilizes an emulsion B. Homgeneises and emulsion C. Causes coagulation of an emulsion D. Helps in the formation of an emulsion
73	In Glass of vitreous state solid the atoms are arranged in.	A. Regular fashion B. Random fashion C. linear fashion D. All of these
74	The maximum oxidation shown by managanese is.	A. +2 B. +7 C. +4 D. +5
75	In DTA , theriac effect may be exothermic of endothermic These are cause by	A. Fusion B. Crystal structure inversion C. Destruction of crystal lattice D. All of above
76	Which of the following statement about molecularity is not correct.	A. It cannot be fraction B. It can be obtained from balanced equation C. It may be or may not be equal to the order of the reaction D. it can not be more than 3

77	Aluminium hydroxide is.	A. An acid B. An amphoteric hydroxide C. A base D. An explosive hydroexide
78	Alums are generally used	A. In Dying and water proofing of fabric B. In arrest bleeding C. IN water purification D. All above
79	Which of the following does not represent Lewis base.	A. Pyridine B. NaNH2 C. PCl3 D. NaOH
80	Metal crystallize is system having co ordination number	A. 8 B. 12 C. 14 D. any one of above
81	The change of chemical potential of any component with temperature an constant P and composition, is euqal to.	A. Partial molar enthalpy of that component B. Partial molar volume C. Partial molar free energy D. Negative of the partial molar entropy
82	A colloidal system in which a liquid is dispersed in a solid is called a/an	A. Emulsion B. Sol C. Gel D. Precipitate
83	What is a coal that has been previously burned in an oxygen poor environment?	A. Tuyere<o:p></o:p> B. Coke C. Silver D. Diamond
84	The oxidation number of Mn in KMnO4	A. +5 B. +7 C. +4 D. +3
85	The formation of daughter DNA's from parent DNA is called.	A. Transalation B. Transcription C. Reproduction D. Replication
86	Each fat or oil in made up of	A. A distinctive mixture of several different triglycorides B. A distinctive mixture of several aldehydes C. Mixture of above both D. None of above
87	The kinetics of the decomposition of ammonia on the tungsten surface follows	A. Zero order B. First order C. Second order D. Third order
88	A system is said to be in the colloidal state if the particle size of the dispersed phase ranges from	A. _o I to 10 A B. 10 to 10000 A C. 10 to 100 A D. 1000 to 10000 A
89	Among the solvents given below, with dielectric constant (E) given in parentheses which has highest solubility of KCl?	A. Benzene (E=O) B. Carbon disulphide (E = O) C. Methanol (E =32) D. Acetone (E = 2)
90	Homolytic fission of convalent bond results in the formation of.	A. Free redicals B. Carbocations C. Carbonions D. Both B and C
91	When to a solution of weak electrolyte a strong electrolyte with a common ion is added, the dissociation of weak electrolytes is suppressed . This is known as.	A. Stark effect B. Salt effect C. Common ion effect D. Zeman effect
92	Solid substances consist of an ordered any of ions and solid as a whole is electrically.	A. Conductor B. Neurtal C. Acidic D. Basic
93	A unit cell having dimension , a = b c, alpha, beta, gama = 90^{o} is known as.	A. Cubic B. Hexagonal C. Orthorhombic

		D. None of them
94	In which of the following characteristics does hydrogen resemble halogens.	A. Hydrogen is the lightest gas B. H atoms contains one electron each C. Hydrogen forms ionic hydrides with alkali metals D. Hydrogen has three isotopes.
95	The mole of photon is knonw as.	A. Quantum B. Einstein C. Energy packet D. None of the above
96	The expected specific waste fo petroleum industry is.	A. Asphalt and tars B. Paper C. Cloth D. Fibre
97	An example of nitro dyes is.	A. Martius yellow B. Auramine O C. Malachite green D. Methyl red
98	Which of the following is the most stable towards heat.	A. CaCO3 B. BaCO3 C. Na2CO3 D. MgCO3
99	The increase in boiling points of noble gases from He to Xe is due to the	A. Decreases in ionization energy B. Increases in polarizability C. Increase in electron affinity D. Increase in atomic volume
100	Zero group of the periodic table consists of.	A. Four elements B. Five elements C. Six elements D. Eight elements
101	Which one of the following sets of elements has the strongest tendency to form positive ions in gaseous state.	A. Li, Na, K B. F, Cl, Br C. Be, Mg, Ca D. O, S , Se
102	The depolarizer used in dry cell batteries in.	A. NH4Cl B. MnO2 C. KOH D. Na2PO4
103	Which of the following radical is not a member of II group.	A. Cu²⁺ B. Cd²⁺ C. Ba³⁺ D. K+
104	The compounds whose formation require a host compound and a guest compound are called.	A. Exclusion compounds B. Inclusion compounds C. Crystal compounds D. None of the above
105	Which of the following is class of nanorods	A. metals B. alloys C. Metal oxide and Metal sulphite D. All of the above
106	The link between classical thermodynamics and quantum mechanics is prevented by	A. Statiatical mechanics B. Boltzmann law C. Wave mechanics D. Matrix mechanics
107	Which of the following statements is not related to the decomposition phenomenon occurring in nature.	A. Decomposition is due to autotrophic organisms B. Decomposition involves bacteria and fungi C. During decomposition organisms carry out specific reactions D. Many species of decomposer are present in the biosphere
108	Electronegativity of Oygen is.	A. 2.5 B. 3.5 C. 2.4 D. 2.1
109	Oxalic acid when heated withe conc. H2SO4 it gives out.	A. H2O and CO2 B. CO and CO2 C. CO2 and H2S D. Oxalic sulphate
		A. R - R

110	When alkyl iodidies are decomposed by light then the product obtained is.	B. R - H C. RCH2I D. RCHI2
111	The angle between corresponding planes forming the external surfaces of the crystal remains constant for a given substances This is known as.	A. Steno's law B. Henry's law C. Bragg law D. Pascal law
112	Lithium shows diagonal relationship with	A. Beryllium B. Sodium C. Magnesium D. Calcium
113	The freezing point of a solvent	A. Will increase on adding a solute B. Will decrease on adding a solute C. Will note change on adding solute D. None of the above
114	Duralumin is an alloy of.	A. Mg + Al B. Ai+ Mg+Mn C. Mg + Ai + Cu D. Mg + Ai + Cu + Mn
115	The reagent which can react with 1- chlorobutane to give substitution product is	A. Al Cl3 B. KOH -CH3OH C. NaCN D. Mg/ether
116	The magnitude of electron affinity depends on.	A. Atomic size B. Nuclear charge C. Electronic configuration D. All of the above
117	Which are not considered member of d-block elements.	A. Zn B. Cd C. Hg D. All above
118	Smoke is a dispersion of	A. Gas in gas B. Gas in solid C. Solid in gas D. Liquid in gas
119	Green houses are responsible for keeping our plant warm and sustaining life on the earth.	A. CO2 & water vapours B. CO2 & CFC C. CO2 & H2O D. CO2 & CH4
120	The temperature at which the vapour pressure becomes equal to external pressure is called.	A. Saturation point B. Critical temperature C. Consolute temperature D. Boiling point
121	Ozone depletion in stratosphere will result in	A. Forest fires B. Increased incidence of skin cancer C. Global warming D. None of the above
122	Un-like s -block elements d-block elements form which compounds as well	A. ionic compounds B. Co valent compound C. Co ordinate compounds D. None of above
123	If there are only two components in a solution with mole fraction X_A and X_B then which of the following relation is correct.	A. X_A + X _B = 0 B. X _A + X _B > 1 C. XA = XB < 1 D. XA = 1 - XB
124	Which of the following relation corresponds to Faraday law of electrolysis.	A. m = ZI t B. E = mc² C. E = ho D. None of the above
125	High density polyethylene has which type of structure.	A. Linear B. Branch chain C. Cross linked D. Any one of these
126	The suffix '-ene' in the name of fullerene shows the presence of ___ in the molecule.	A. One triple bond B. One double bond C. Two single bonds D. Two triple bonds
127	The bond along Sp2 hybridization is.	A. 180^o B. 120^o C. 109.5^o

		D. 160^o
128	If 20 ml of 0.5 N salt solution is diluted in one litre. what is the new concentration.	A. 0.01 N B. 0.001 N C. 1 N D. 10 N
129	The following are primary alloying ingredients of Group H steel except.	A. Malybdenum B. Cobalt C. Chromium D. Tungsten
130	H2SO4 acts as gent	A. Reducing B. Oxidizing C. Both A and B D. None of above
131	In an adiabatic system, if work in done, the temperature must.	A. Increase B. Decrease C. Remain the same D. Increase than decrease
132	Which of the following potassium fertilizers are more useful for horticultural crops tobacco and potatatoes.	A. KNO3 B. KCl C. HNO3 D. H2SO4
133	Which one of the following has the biggest electron affinity.	A. F2 B. Cl2 C. Br2 D. I2
134	Fats and oil are_____	A. Acids B. Alcohols C. Salts D. Base
135	The oxidation Number of I in HIO4 is.	A. +6 B. + 7 C. + 3 D. + 14
136	Which of the following is not a property of Cr.	A. it is brilliant silvery metal B. it is malleable C. It can take very high polish D. Its surface is tarnished easily
137	Among the elements A,B,C and D having atomic numbers 9,10,11, and 12 respectively, the correct order of ionization energies is.	A. A > B > C >D B. B > A > D > C C. B > A > C > D D. D > C > B > A
138	Which of the following molecule contains two dative bonds according to Lewis structure.	A. NH3 B. SO3 C. PCl5 D. BF3
139	Ten elements Sc (Z = 21) to Zn (Z = 30) fill their 4s orbitals first and then 3d orbitals are called elements. of.	A. 3 d series. B. 4d Series C. 5d Series D. None of above
140	In an isochoric process	A. Energy remains constant B. Volume remains constant C. Pressure remains constant D. Temperature remains constant
141	Carbon in wrought iron is present as	A. Silicon carbide B. Iron carbide or comentite C. Graphite D. Partly as iron carbide and partly as graphite
142	Sodium silicate is used	A. In the paint industry B. For fixing labels to glass C. In a soap industry D. All above
143	The full form of STM is	A. Scanning Tunneling Microscope B. Scientific Technical Microscope C. Systematic Technical Microscope D. SuperTensile Microscope
144	Which of the following is not related to crystallography .	A. Law of rational indices B. Law of anymmetry C. Law of constancy of interfacial angel D. Henry's law
		A. CO+ NO

145	Which pair of species can undergo chemical reaction with each other.	B. LiH and H2O C. CO2 and HCl D. CaH2 and Sl H4
146	What of the following is not a Lewis base.	A. CN- B. AlCl3 C. NH3 D. ROH
147	When Phosphate rock Ca3(PO4) 2 is converted to phosphorus.	A. One of the products of the reaction is water B. Sulphuric acid is added to generate insoluble calcium sulphate C. Hydrogen is used to reduce the phosphate to phosphorus D. Silica is added to form a calcium silicate slag
148	In the extraction of iron, the furnace change consists of iron ore, coke and limestone. The function of limestone is to act as.	A. An oxidizing agent B. A reducing agent C. Flux D. Slag
149	The valence shell electronic configuration of group lll A is.	A. ns1 p2 B. ns2 p1 C. ns3p2 D. ns2p2
150	The number of phases of mixtures of four gases enclosed in a container is	A. 1 B. 4 C. 4-1 D. zero
151	Which of the following would decompose at lowest temperature.	A. MgCO3 B. SrCO3 C. BaCO3 D. CaCO3
152	Chemical compounds which are added to reduce to reactivity of glass are called.	A. Formers B. Modifiers C. Stabilizers D. None of these
153	Neon is used in neon signs for advertising purpose because.	A. Neon lights are visible from long distance B. Neon light are visible though fog & mist C. Both A and B D. None of the above
154	Most Hazardous metal pollutant of automobile exhaust is.	A. Tin B. Mercury C. Cadmium D. Lead
155	Which of the following is not a colligative property.	A. Elevation of B.P. B. Depresaion in F.P C. Viscosity D. Osmotic pressure
156	Which type of the coal preferred for metallurgical coal.	A. Lignite B. Peat C. Bituminous coal D. None of these
157	Which cast iron is hard and wear resistant.	A. Grey iron B. White iron C. Melleable iron D. None of these
158	In which pair of species, the Lewis formulae contain same number of ion pairs and bond pairs but they are not isoelectronic.	A. O2, N2 B. SO2, O3 C. PCl3 , BF3 D. SOCl2, COCl3
159	The geometry of Xe F2 is	A. Triangular planar B. Square planar C. Linear D. Trigonal bipyramidal
160	Which statement is false.	A. If a reaction is thermodynamically spontaneous it may occur rapidly B. If a reaction is thermodynamically spontaneous it may occur slowly. C. Activation energy is a kinetic quantity rather than a thermodynamic quantity. D. If a reaction is thermodynamics spontaneous, it must have a low

		activation energy.
161	What impurity in steel can cause ted shortness which means the steel becomes unworkable at high temperature.	A. Sulphur B. Silicon C. Magnesium D. Aluminium
162	Which of the following hydroxides is most stable.	A. Mg (OH)2 B. Ca(OH)2 C. Sr (OH)2 D. Ba (OH)2
163	Which of the following generally increases on going from top to bottom in a group.	A. Metallic charcter B. Electronegativity C. Oxidising behaviour D. Raducing behaviour
164	The law of trinds was proposed by	A. Dobereiner B. Newlands C. Lother Mayer D. Chancourtois
165	Ingold's isoprene rule states that in tepenoids isoprene units are joined.	A. Head to tail B. Head to Head C. Tail to Tail D. In a random order
166	Enfleurage process is used to extract the essential oils from	A. Back of plant B. Seeds of plant C. Leaves of plant D. Flowers of plant
167	How many stereoisomers are possible for CH3CH = CHCHCH(Br) CH3	A. 2- geometrical isomers B. 2- optical isomers C. 2- geometricla nad 2- optical isomers D. 2- geometrical and 1 optical isomers
168	Which of the following species is very good oxidizing agent.	A. MnO₄ B. H+ C. Zn²⁺ D. Fe³⁺
169	Which of of the following statement is not correct in respect of Arrhenius concept.	A. This concept is applicable only for aqueous systems. B. Neutralization takes place in aqueous medium only C. H+ ion concept remain as such in water D. This concept is applicable for non aqueous system only.
170	The percentage of nitrogen in ammonia is _____%	A. 32 B. 82 C. 25 D. 55
171	Which of the following is not alloy of aluminium.	A. Aluminium bronze B. Magnalum C. Duralumin D. Stellite
172	The value of comprehensibility factor (z) = pV/nRTfor an ideal gas is equal to.	A. R B. 1 C. 2 D. 3
173	Finely divided iron combines with CO to give.	A. Fe(CO)5 B. Fe2(CO)9 C. Fe(CO)12 D. Fe(CO)6
174	Aluminium halides is.	A. White crystalline solid B. Hygroscopic C. Sublimes at 180^oC D. All above
175	Among the elements of second period the element with highest melting point belongs to group.	A. 1 B. 14 C. 17 D. 18
176	Biogical role of nucleic acid doe snot include	A. Genetic continuity B. Protein syathesis C. Hybridization D. Mutation
		A. Pulp is disperse din water to make slurry B. Mechanical refining or heating of the

177	Which treatment is done with pulp before delivering it to paper making machine.	fibers C. Addition of chemical additives and recycled fibres from the waste paper plant D. All above
178	Used in Geiger counter to detect radioactivity	A. He B. Ne C. Ar D. Kr
179	Which of the following statements is not correct regarding the structure of DNA.	A. It has a double helix structure. B. There are hydrogen bonds in its structure C. Unlike RNA there is no fixed ratio of bases in DNA D. The code for protein synthesis is given by the sequence of bases in DNA
180	When rain is accompanied by a thunderstorm, the collected rain water will have pH	A. Slightly lower than that of rain water without thunderatorm B. Slightly higher than that of rain water without thunderastorm C. Uninfluenced by occurrence of thunderatorm D. Which depends on amount of dust in air
181	The tyndall effect is not observed in	A. Suspensions B. Emulsions C. Colloidal solutions D. True solutions
182	The number 7.43 is rounded to	A. 7,44 B. 7.4 C. 7.45 D. 7.3
183	For which of the following compounds is the rate of hydrolysis by aqueous alkali most likely to be independent of the hydroxide ion concentration.	A. 1-Chlorobutane B. 2- Bromobutane C. 1- Iodobutane D. 2- Bromo -2- methyl butane
184	The process of extracting a metal in pure form its ores is known as.	A. Crushing B. Grinding C. Dressing D. Metallurgy
185	Which of the following is not an alkali metal	A. Rb B. Sb C. Cs D. Fr
186	The value of an Einstein	A. Is independent of wavelength B. Decrease with increase in wavelength C. Increase with increase in wavelength D. Depends on the temperature of the absorbing system
187	Which of the following source of energy is abundant everlasting and non polluting.	A. Nuclear B. Electric C. Solar D. All above
188	If steel is heated to a temperature well below red heated and is then cooled slowly the process is called.	A. Annealing B. Quenching C. Tempering D. Nitriding
189	What is considered as the general purpose oldest type and widely used case iron.	A. Grey iron B. Alloy iron C. Black iron D. Ductile iron
190	In their ionic compounds halogens exhinit the oxidation states of.	A. -1 B. -2 C. -3 D. -4
191	Calander stock is a process in paper making in which.	A. Thickness of the paper is reduced B. Surface of paper is made smooth C. Moisture is removed D. Both A and B
192	The particle motion in solids is	A. Only vibratory B. Only translator C. Vibratory and rotatory D. Only translatory

193	The H2SO4 obtained by the contact process having purity	A. 70% B. 74% C. 78% D. 82%
194	Buffer solution are used to.	A. Increase the pH B. Resist the pH C. Decrease the pH D. None of above
195	Which of the flowing operator combination would yield eight value equation	A. d/x (sin x) B. d/dx (cos x) C. d /dx (sin 4x) D. d /dx (cos 4x) E. d/dx (e^x)
196	Which of the following expressions represent the equivalent conductance.	A. A = l s x 1000/V B. A = Ls x 1000/C C. A = Ls l/A D. A = Ls/V
197	The isotonic nucleotide X and Y have mass numbers 35 and 37 respectively if the atomic number of X is 17 the atomic number of Y will be.	A. 15 B. 17 C. 19 D. 18
198	Which of the following radical is a member of VI group.	A. Mg²⁺ B. Na+ C. K+ D. NH₄⁺ E. All above
199	Which of the following pollutant result from roasting and heating processes.	A. Dust B. Smoke C. Metal fumes D. All above
200	Which of the following is the statement of third law of thermodynamics.	A. Entroy of perfectly crystalline substance is zero at T = 0 B. Entropy of a perfectly crystaline substance is zero at standard state conditions C. Entropy and enthalpy of a substance become equal at T = 0 D. Free energy of a crystalline substance is zero at T = 0
201	When a solute is dissolved in two immiscible solvents it will distributes itself between two phases and the ratio of the concentration of the solute in two phases will be constant, This is known as.	A. Starke law B. Distribution law C. Equilibrium law D. Snell's law
202	The solution of NaOH pH -10.46 contain [OH-]	A. 2.0 X. 10⁻⁴ B. 4.6 X 10⁻⁴ C. 4.6 X 10⁻² D. 4.6 X 10⁻³
203	Which of the following statements is false about transition metals.	A. They form complexes B. They show variable valency C. All transition metal compounds are paramagnetic D. They form coloured ions
204	Compounds formed when noble gasses get entrapped in the cavities of crystal lattices of certain organic and inorganic compounds are called.	A. Interstitial compounds B. Hydrates C. Clathrates D. Picrates
205	What types of bonding occurs in d-block elements.	A. Ionic B. Covalent C. Metallic D. Both B and C
206	Which of the following is not biological characteristics of water.	A. COD B. Animals C. Plants D. Viruses
207	Which of the following is a source of energy but does not cause pollution.	A. Gaslone B. Nuclear power plant C. Fossil fuels D. Sun
208	The most stable oxidation state shown by lead is.	A. +2 , +4 B. +2 only C. +3 , +4 D. +4 only

209	Lime water is an aqueous solution of.	A. MgSO4 B. Ca (OH)2 C. CaCO3 D. CaSO4
210	If the values of standrd deviations for the first and second method differ, then which of the following test helps one to know whether this difference is significant.	A. Student's test B. F-Test C. Chi square test D. Standard deviation
211	The IUPAC name of C2H3, CO , OC OC2H5 in	A. Prepanoic anhydride B. Ethanoic anhydride C. Diketoethoxy ether D. None of the above
212	What term is used to denote a family of thermosetting polymers that are reaction products of alcohols and acids.	A. Alkaline B. Alkydes C. Alcocide D. Ketones
213	The range of sound pressure which is painful is as	A. 130-140 dB B. 100 - 120 dB C. 90 - 80 dB D. All above
214	A high frequency sound has frequency	A. 100 Hz B. 200 HZ C. 300 Hz D. 500 Hz
215	In emulsions , the dispersed phase and the dispersion medium are.	A. Both solids B. Both liquids C. Both gases D. Phase is liquid and medium is solid.
216	What is the approximate chromium range of a ferritic stainless steel.	A. 12% to 18% B. 16% to 20% C. 20% to 24% D. 12% to 16%
217	Has the highest value of electronegativity	A. F B. Cl C. Br D. I
218	Which of the following pollutant is not secondary pollutnat.	A. SO3 B. NO2 C. SO2 D. Ozone
219	The half life period of any first order reaction.	A. Is half the specific rate constant B. Is independent of the initial concentration C. Is always the same whatever the reaction D. Is directly proportional to the initial concentration of the reactant
220	The pH of the tears is	A. 7.0 B. 7.4 C. 7.8 D. 8.2
221	Ziegler -Natta catalysta is	A. (C2H3)3 Al B. TiCl4 C. (C2H5)3 Al/TiCl4 D. (C2H3)3 B/TiCl2
222	Hydrolysis of nucleoprotein result in the formation of.	A. Proteins B. Nucleic acids C. Both A and B D. They do not hydrolyse
223	The pH of milk is	A. 6.0 B. 6.5 C. 7.0 D. 7.5
224	Sugar and common salt in a mixture can be separated through then process of.	A. Sublimation B. Distillation C. Ion exchange D. Crystallization from solution in ethanol
225	a- pinene hydrochloride on warming rdarranges to form bornyl chloride.The rearrangement is known as.	A. Pinacol pinacolone B. Hofinann C. Wager Mecrwein D. Wolff
		A. Wave mechanism

226	The branch of chemistry which deals with the rate of reaction as well as mechanism is known as	B. Classical thermodynamcis C. Chemical kinetics D. Phtochemistry
227	RNA is involved int eh synthesis of	A. Protein B. Nucleic acid C. Carbohydrates D. Fats
228	The statement that heat cannot flow spontaneously from a colder to a hotter body is the result of.	A. The first law of thermodynamics B. The second law of thermodynamics C. The third law of thermodynamics D. Henry's law
229	The pink colour of phenolphthalen in in basic medium is due to the	A. Cationic form B. Anionic form C. Natural form D. OH- ions of the base
230	Example of inter molecular H-bonding is	A. NH3 and H2O B. HF C. CH3COOH D. All of abvoe
231	NH4OH in the presence of H2S is used as a group reagent for which of the following group.	A. Group I B. Group II C. Group III D. Group IV
232	Dyes which can be applied to cellulosic fibre from water solution are called.	A. Ingrain dyes B. Substantive dyes C. Mordant dyes D. Vat dyes
233	Among oxides of nitrogen all are gases except.	A. N2O5 B. N2O C. NO D. N2O3
234	Select the correct IUPAC name for [FeF4(OH)2]-	A. Diaquatrafluoriron (III) ion B. Diaquateratrafluoriferrate (III) ion C. Diaquatertrafluoroiron (I) D. None of these
235	The temperate of a gas below which only the gas cools when allowed to expand is know as.	A. Inversion temperature B. Ideal temperature C. Critical temperature D. Joule Thomaon temperatu4re
236	Ground state electronic configuration of valence shell in N2 m lecule is written as (a2s)2, (o*2s)2 , (pi sp)4, (o2p)2, Hence, the bond order of N2 molecule is.	A. 1 B. 2 C. 3 D. 0
237	Considering the elements F, Cl ,O and N, the correct order of their chemical reactivity in terms of oxidizing property is.	A. F > Cl > N B. F > O > Cl > N C. Cl > F > O > N D. O > F > N > Cl
238	White Phosphorus is kept under	A. Cold water B. Ammonia liquor C. Ethanol D. Kerosene
239	The correct order of electron affinities is.	A. C > Si, > Na > Ar B. Si > Cl > Na > Ar C. C > Na > Si > Ar D. C > Si > Ar > Na
240	The oxidation state shown by phosphorus is.	A. - 3 B. + 3 C. + 3 and +5 D. -3 ,+ 3 and +5
241	Which of the following elements has the highest value of second ionization energy.	A. Lithum B. Beryllium C. Boron D. Magnesium
242	Deviation in a particular measurement is the difference between the measured value and the average value The arithmetic mean of the different deviations observed in several measurements of the same quantity is known as.	A. The standard deviation B. The average deviation C. Relative mean deviation D. variance
243	During sintering densification is not due to	A. Atomic diffusion B. Surface diffusion C. Bulk diffusion D. Surface tenstion

244	Major ingredients of traditional ceramics	A. Silica B. Clay C. Feldspar D. All
245	Since the acid gives both acidic and normal salts so the acid is.	A. di acid B. di basic C. double salt D. Any of above
246	Which of the following health effect is caused by mercury.	A. Nerve damage B. Brain damage C. Kidney damage D. All above
247	Which of the following hydroxide is amphoteric.	A. B(OH)3 B. Al(OH)3 C. Ga (OH)3 D. In (OH)3
248	Which of the following analytical technique is used for the separation of an interfering substance or analyte from the mixture.	A. Precipitation B. Distillation C. Electrode position D. All above these
249	Reacts violently with water	A. AlH3 B. AlCl3 C. Lia IH4 D. Al2Cl6
250	The presence of which of the following in drinking water is responsible for mottling of teach.	A. Mercury B. Iodine C. Chlorine D. Flourine
251	Among the unit cells given below, which has the highest symmetry	A. Monoclinic B. Cubic C. Hexagonal D. Orthorhombic
252	Which of the following has the maximum tendency to form complexes.	A. K B. Na C. Rb D. Li
253	In hydrogen bonding a hydrogen atom is bonded to which of the highly electronegative atoms.	A. N B. O C. F D. N,O,F
254	Bromine number is measure of.	A. Paraffins B. Unsaturates C. Saturates D. None of these
255	Which of the following statement is not related to the characteristics of gaseous state.	A. The inter molecular forces of attraction are not strong in gaseous state B. The gases do not have definite shape and volume C. The gases are characterized by low density. D. The gases have low comprehensibility
256	What is the colour of pulp obtained from chemical pulping.	A. Black B. Brown C. Blue D. Red
257	Ammonia when used directly as a fertilizer is to be injected about_____ under the surface to keep it from seeping out.	A. 2 inches<o:p></o:p> B. 4 inches<o:p></o:p> C. 6 inches<o:p></o:p> D. 10 inches<o:p></o:p>
258	The electronic configuration of some elements are given below. The element with highest	A. 1s2, 2s2, 2p3 B. 1s2, 2s2, 2p4

258	electron affinity is	C. 1s2, 2s2, 2p5 D. 1s2, 2s2, 2p6
259	Elements in which differentiating electron enters the (n-1) the d-orbitals of the (n-1) the main shell are called elements.	A. s- block B. p-block C. d-block D. f-block
260	The solution of the transition metal complexes having one or more unpaired electrons in the d-orbital are.	A. Coloured B. Colourless C. White D. None of above
261	Organic substance responsible for the smell of the Flowers etc are grouped together in chemistry as.	A. Perfumes B. Terphenoids C. Flavonoids D. Alkaloids
262	In a system of designating wrought aluminum alloys. what does the second digit represents.	A. The purity of aluminum B. The identity of the alloy C. The modification of the alloy group or impurity limits D. None of above
263	Which show maximum number of oxidation states in 3d series.	A. Mn B. Ni C. Co D. Zn
264	When two atoms of hydrogen combine to form a molecule of hydrogen gas the energy of the molecule.	A. higher than that of the separate atoms B. Equal to that of the separate atoms C. Lower than that of the separate atoms D. Sometimes lower and sometime higher.
265	Chlorine when attached to benzene has	A. +1 and + R effect B. -1 and - R effect C. -1 and +R effect D. None of the above
266	Which one of the following has the highest boiling point.	A. H2O B. H2S C. H2Se D. H2Te
267	The number of degrees of freedom and number of components for a system of containing undissolved salt , in equilibrium with water vapor are.	A. 2,2 B. 3 , 2 C. 1 , 1 D. 1 , 2
268	The rate constant for 3rd order reaction has the dimentions of.	A. mol-2 s-1 B. l2 mol-2 s-1 C. mol l -1 s-1 D. l-1 mol -1 s-1
269	A molecule is said to be chiral	A. If it contains plane of symmetry B. If it contains centre of symmetry C. If it can be superimposed on its mirror image D. None of the above
270	Blue color of glass of due to the presence of .	A. Cobalt (II) B. Chromium (III) C. Iron (III) D. copper (II)
271	Which of the following statement is not true with respect to electrode potential.	A. Feasibility of a chemicals reaction B. Rate of chemical reaction C. Nature of a chemical reaction D. Free energy of a chemical reaction
272	The emission of light characteristics of metal and correlation of intensity of the light emitted with concentration of that metal forms the basis of.	A. Roman spectroscopy B. IR spectroscopy C. Flame photometry D. Rotational spectroscopy
273	Layer of the C -atom in graphite are hold together by	A. Covalent bonds B. Free electrons C. Ionic bond D. Van Dar Waals forces
274	The hardest material found in nature is	A. Steel B. Topaz C. Diamond D. Quartz
275	Which law of thermodynamics helps in calculating the absolute entropies of varies	A. Zeroth law B. 1st law

275	substances.	C. Second law D. Third Law
276	Which of the following is the best indicator for titration of CH3COH with NaOH	A. Methyl orange B. Methyl red C. Phenophthalein D. Eosin
277	The central metal atom or ion and the ligands that are directly attached to it are enclosed in a square bracket called.	A. Coordiantion complex B. Coordination sphere C. Coordination number D. Coordination compounds
278	The formula of copper pyrite is.	A. CuFeS B. CuFeS2 C. Cu2FEs D. Cu Fe2S
279	Which of the following statements is not true for both B and Al	A. They burn in oxygen to give oxides at high temperature B. Their halides are Lewis acids C. They combine with nitrogen to form nitrides D. They react with HCl to form chlroides.
280	Chemical and physical properties of metal nano particles of atoms were observed to change periodically depending upon	A. Number of atoms in a particle B. Shape of particle C. type of organization D. All of the above
281	The percentage of s-character in the hybrid orbitals sp, sp2 and sp3 follows the pattern.	A. sp3 > sp2 > sp B. sp > sp2 > sp3 C. sp = sp2 >sp3 D. sp = sp2 =sp3
282	Oil of turpentine contains.	A. a-pinene B. p- pinene C. Both A and B D. None of these
283	According to CFT the metal ligand bond is considered to be ionic to presentage.	A. 100% B. 90% C. 50% D. 70%
284	The atomic number of Potassium is 19 and that of manganese is 25. Although the coloured of MnO4 is dark violet yet the K+ is colourles.. This is due to the fact that	A. Mn is a transition element while K+ is not B. [MnO4]is negatively charged while K+ has a positive charge C. The effective atomicnumebr of Mn is [MnO4] is 26 while for K+ the atomic number is 18 D. The Mn in a high positive oxidation state allows charge transfer transitions
285	Among the following statements in the nitration of aromatic compounds, the false one is.	A. The rate of nitration of benzene is almost the same as that of hexadeutero benzene B. The rate of nitration of toluene is greater than that of benzene C. The rate of nitrationof benzen is greater than that of hexadeutero benzene. D. Nitration in an electrophite substitution reaction.
286	The units of coefficient of viscosity are.	A. kg m-1 n-1 B. gm -1, s-1 C. kgm-1, min -1 D. None of the above
287	The number of degree freedom at the triple point for the water system in.	A. One B. Two C. Three D. Zero
288	The point at which the reaction is observed to be complete is called.	A. The equivalence point B. The end point C. The triplet point D. The equilibrium point
289	Types of carides	A. Ionic carides B. Covalent carbides C. Interstitial carbides D. All above
290	Which of the following statement is no true with respect to nitrogen dioxide.	A. It is produced by the oxidation of NO B. Its small concentration has been detected to lower stratosphere

		C. It is major pollutant D. It does not absorb sunlight.
291	Which of the following range is correct for macro analysis.	A. Minimum 100 mg B. Minimum 10 mg C. Minimum 1 mg D. Minimum 1000 mg
292	In which pair of species, the Lewis formula contain same number of Lone pairs and bond pairs but they are not iso electronci.	A. O2 B2 B. SO2, O3 C. PCl3, BF3 D. SOCl2, COCl2
293	Vitamin which contains cobalt is.	A. Vitamin B1 B. Vitamin B2 C. Vitamin B6 D. Vitamin B12
294	Which of the following properties are not related to an atom.	A. An atom consists of two basic parts , a nucleus and one or more electons. B. The nucleus is the central core of an atom C. An electron is a heavy and negatively charged particle. D. The nucleus itself consiste of two particles.
295	In Dumas method, the volume of the gas collected is equivalent to which of the following gases set free from the compound.	A. Ammonia B. O2 C. N2 D. NO
296	The size of nanoparticles is between _____ nm	A. 100 to 1000 B. 1 to 100 C. 0.1 to 10 D. 0.01 to 1
297	Which of the following statement is related with CO.	A. It is a colorless and tasteless gas B. It has less affinity to words hemoglobin C. It has a boiling point of -192 ^oC D. It is a dangerous asphyxiant
298	One arm of each t-RNA terminates in the base sequence.	A. UGU B. GGC C. ACT D. CCA
299	The quantum yield of a Photo chemical reaction in	A. Always less than unity B. Always equal to unity C. Always greater than unity D. Can have any value > 0 depending on the reaction
300	Which of the following electrolytes will be most effective in the coagulation of arsenic sulphide sol.	A. NaNO3 B. Al PO4 C. MgSO4 D. K4[Fe(CN)6]
301	Gold dissolves in aqua regia forming	A. AuCl B. Au(NO3)3 C. AuCl3 D. HAuCl4
302	Which of the following steps is not involved in chemical analysis.	A. Separation of sample in pure form B. Separation of the sample in the mixture form C. Preparation of sample for the analyisis D. Validity of experimental results
303	Which of the following process is used for the removal of particulates.	A. Wet removal by precipitation B. Sedimentation C. Diffusion and impaction D. All above
304	Polyamide jinkage is present in	A. Nylon B. Silk C. Protein D. All of these
305	Lactic acid is a molecule which shows	A. Epimersim B. Tautomerism C. Opical isomerism D. Metamerism
		A. High ionization energy of the metallic atom and high electron affinity of the non

306	The most important conditions for the formation of ionic bond are.	metallic atom. B. Low ionization of the metallic atom and low electron affinity of the non metallic atom. C. Low ionization energy of metallic atom and high electron affinity of the non metallic atom D. High ionization energy of the metallic atom and high electron affinity of non metallic atom.
307	Hydrolytic reaction of fat with caustic soda is known as _____	A. Esterification B. Saponification C. Acetylation D. Carboxylation
308	The chief ore of aluminium is.	A. Cryolite B. Bauxite C. Kaolin D. Carnalite
309	The magnetic quantum number (m) specifies the individual orbital in a Sub shell for a given l, m can be.	A. l,l- l.....-1 B. l.....2, l -3.....-2l C. l-l-2,.....-l D. l-2,l-4, ...-4l
310	Ethylene belongs to.	A. C_{2v} group B. D_{2h} group C. C₂ group D. D_{ah} group
311	ClF is	A. Chlorine monoflouride B. Fluourine C. Monochlorine fluoride D. Monofluorine chloride
312	Conjugation of chromophore	A. Deepens the colour B. Lightene the colour C. Shifts absorption to shorter wavelength D. All of these
313	Which type of organic compounds does fat belong to.	A. Alkene B. Ester C. Alkanol D. Alkanoic acid
314	Which of the following statements is not correct with respect to applications of Hammett equations.	A. It develops a quantitative relationship between structure and reactivity B. This equation on can be used to calculate the value of pK_a C. This equation does not help to calculate the rate of some reactions D. This equation has mechanistic implications
315	The formula of hexa borane is.	A. B4H10 B. B6 H10 C. B5 H9 D. B8 H12
316	Pick out the incorrect statement about K2Cr2O7	A. It is thermally stable B. It dissolves in alkali to form chromate C. It oxidizes acidified FeSO4 solution to Fe2(SO4)3 D. It is used as cleansing agent for glassware. etc. When mixed with cold con. H2SO4
317	What refers to the application of any process whereby the surface of steel is altered so that it will become hard.	A. Caburizing<o:p></o:p> B. Case harden zing<o:p></o:p> C. Ammealing<o:p></o:p> D. Surface hardening<o:p></o:p>

318	In second group of inorganic qualitative analysis, the S^{2-} ions does not form precipitate with which of the following ions.	A. ^{Hg2+} B. Cu²⁺ C. Ai³⁺ D. Cd³⁺
319	Which one of the following does not exhibit paramegnetion.	A. NO B. NO2 C. CiO2 D. ClO-2
320	The common oxidation state of elements of group V A is.	A. -3 B. +3 C. +5 D. Any above
321	Which of the following property of liquids concern with the interval resistance to its flow.	A. Refractive inded B. Viscosity C. Optical activity D. Dipole moment
322	Which of the following is not a component of a gas chromatography system.	A. Carrier gas B. Capillary column C. Packed column D. Cathode lamp
323	Which of the following is not a property of Ni.	A. it is a soft silvery white metal B. It is malleable and ductile C. It is highly magnetic D. It has high electrical and thermal conductivities
324	Which of the following is not related to the limitations of Bohr's model.	A. It does not applicable to more than one electron system. B. It does not explain the extra lines obtained in the H-spectrum C. It considers the electron as particle D. It considers the electron as a wave.
325	Any substance which has solidified from the liquid state with crystallization is known as	A. Steel B. Fibre C. Glass D. Asbestos
326	The fluoride tooth paste contains	A. SnF2 and Sn2P2O7 B. NaF C. CaF2 D. None of these
327	Glass electrode cannot be used to measure the pH of pure.	A. Acetic acid B. Ethyl alcohol C. Gelatin D. All above
328	Which of the following reacts with hemoglobin of blood and produce toxic effect.	A. Carbon dioxide B. Carbon monoxide C. Oxygen D. Carbon suboxide
329	The volume of given mass of gas at constant pressure is directly proportional to the absolute temperature.This is a statement of.	A. Charles's law B. Boyle's law C. Avogadro's law D. Dalton's law
330	What exactly is quantum dot	A. A semiconductor nanostructure that confines the motion of conduction band electrons, valence band holes or excitation in all three spatial directions B. The sharpest possible tip of an atomic force microscope C. A fictional term used in science fiction for the endpoints of wormholes D. Unexplained spots that appear electron microscopy images of nanostructures smaller than 1 nanometer
331	The fraction of the total current carried to an ion is called itss.	A. Ionic mobility B. Transport number C. Limiting ionic conductance D. None of these
332	What is a method of casehardening involving diffusion in which the steel to be casehardened is machined, heat treated placed in an air tight box and heated to	A. Annealing<o:p></o:p> B. Normalizing<o:p></o:p>

	about 1000 ^{o}F	C. <p class= MsoNormal" style= margin-bottom:0in;margin-bottom:.0001pt;line-height: normal">Carburizing<o:p></o:p> D. Decomposition<o:p></o:p>
333	The vapours attacks the eyes and mucous membrane of nose and throat	A. F B. Cl C. I D. Br
334	What is the raw material of sugar industry.	A. Sugar cane B. Potato C. Carrot D. Sugar heat E. Both A and C
335	The molecule returns from the first excited triplet sate to the ground state singlet. The light emitted in known as.	A. Inter system crossing B. Phosphorescence C. Fiuoreacence D. Quenching
336	Which of the following analytical technique is used for separating similar substance by preferential adsorption or partition between two phases.	A. Distillation B. Dialysis C. Chromatography D. Solvent extraction
337	Used for sterilizationof drinking water	A. F B. Br C. Cl D. I
338	Which of the following methods is chemical in nature.	A. Acid bas titration B. Redox titration C. Complexometric titration D. All above methods
339	Hydrocarbon X (C6H12) on oxidation with hot alkaline (KMnO4) gives a mixture of prop ionic acid and dimethyl ketone. The structure of compound X is	A. CH3CH = CHCH2CH2CH3 B. (CH3)2 C = CH CH2 CH3 C. CH3CH2CH = CHCH2CH3 D. (CH3)2 C = C (CH3)2
340	The smog is essentially caused by the presence of.	A. O3 and N2 B. O2 and N2 C. Oxides of sulphur and nitrogen D. O2 and O3
341	Aluminium is used for.	A. Making ultensile & framea B. Making alloys C. Reducing agent D. All above
342	The most abundant metal in earth's crust is.	A. Fe B. Al C. Ti D. Ca
343	Which of the following analytical technique is based on the emission of light radiation.	A. Flame photometry B. Atomic absorption spectrophotometry C. Raman spectroscopy D. Conductometry
344	Which of the following case of acid or base strength is not explained by inductive effect.	A. Formic acid> acetic acid B. Dimethyl amine > trimethyl amine C. Dimethyl amine > methyl amine D. Chloroacetic acid > acetic acid
345	Which of the following statements is wrong.	A. Covenant compounds are generally soluble is polar solvents. B. Covalent compounds have low melting and boiling points C. Lower than that of separate H atoms D. Sometimes lower and sometimes higher than that of separate H
346	The entropy of the universe	A. Tends towards a maximum B. Tend towards a maximum C. Tends to be zero D. Remains constatn
347	Finely divided iorn combines with CO to give	A. Fe(CO)3 B. Fe2 (CO)9 C. F33(CO)12 D. Fe(CO)6
		A. They are gaseous and liquids

348	Which of the following statement is not true with respect to hydrocarbons.	A. They are gaseous and liquids B. They can be saturated or unsaturated C. They in air by themselves alone cause harmful effects D. They form photochemical oxidants
349	The process of passing of a precipitate into colloidal solution, on adding an electrolyte is called.	A. Dialysis B. Peptization C. Electrophoresis D. Electromsmosis
350	J.J. Thomson established certain properties about cathode rays. Which of the following is not related to cathode rays.	A. Cathode rays from a gas discharge tube consists of negatively charged particles B. Cathode rays are called electrons. C. The e/m ratio of cathode rays depends on the gas inside D. Cathode rays are affected by electric and magnetic fields.
351	The term 'brass' is very commonly used to designate any alloy primarily of.	A. Copper and zinc B. Aluminum and iron C. Copper and aluminum D. Zinc and nickel
352	The bonding of transition metal complex was not well understand until the pioneer work of.	A. Ps JAISWAL B. GS MANKU C. BR thukral D. Alfred Weriner
353	The first ionization energy of Mg is lower than	A. Na B. Ca C. Al D. Be
354	Inter halogens are of types.	A. 3 B. 4 C. 5 D. 6
355	The mole of photon is known as	A. Quantum B. Eienstein C. Energy Packet D. None of the above
356	Beside the common silica based SPE particles, polymer supports are also available They have advantages over silica based SPE particles, Which of the following reason is possible.	A. These are stable over a wide pH range. B. These do not possesses residual silica groups C. These are designed to be wettable and have high capacity than silica base particles. D. All above
357	Which of the following solutions of sulphuric acid will exactly neutralize 25 mL. of 0.2 M NaOH	A. 12.5 mL of 0.1 M solution B. 24 mL OF 0.1 m Solution C. 50 mL of 0.1 M solution D. None of the above
358	Lithum silicide reacts with concentrated hydrochlric acid to give lithium chlride along with.	A. H2 and SI B. Si H 4 gas C. Disilane gas D. Si3H8
359	In the electrolysis of alumina, cryolite is added to.	A. Lower the melting point of alumina B. Increase the electric la conductivity C. Minize anodize affect D. Remove impurites from alumina
360	Which of the following is always true for the adiabatic expansion of gas.	A. Temperature rises B. Pressure rises C. W=0 D. Q = 0
361	A chromophore is an isolated fractional group which has	A. Coloured appearance B. Absorption in UV visible region C. Only sigma bonds D. Absorption in the region
362	Which of the following is component of the ecosystem.	A. Inorganic substances B. ORGANIC Substances C. Animal and plants only D. All above
363	Select the major product obtained from the addition HBr to 1-methyl cyclohexene.	A. 1- bromo -2- methyl cyclohexane B. 6- bromo-1- methyl cyclohex - 1- ene C. 3- bromo-1- methyl cyclohex -1- ene D. 1- bromo-1- methyl cyclohexane
		A. Decreasing pressure

364	The degree of dissociation of weak acid increases with.	A. Decreasing pressure B. Increasing pressure C. Increasing concentration D. Decreasing concentration
365	A trend which is common to elements of both the group IA and group VII A ongoing from top to bottom.	A. Boiling point increases B. Electron affinity increases C. Oxidizing power increases D. Ionization energy decrease
366	In smelting process the ore is mixed with	A. Silica B. Coke C. Limestone D. All
367	What is the lowest temperature diffusion hardening process and does not require a quench	A. Carburizing<o:p></o:p> B. Tempering<o:p></o:p> C. Nitriding<o:p></o:p> D. Melting<o:p></o:p>
368	What refer to the casehardening process by which the carbon content of the steel ear the surface of a part is increased?	A. Carburizing<o:p></o:p> B. Annealing<o:p></o:p> C. Normalizing<o:p></o:p> D. None of these
369	Which one of the following ions is colourless.	A. Cu+ B. Co2+ C. Ni2+ D. Fe3+
370	The dipole moments of the given species are such that.	A. BF3 > NF3 > NH3 B. NF3 > BF3 > NH3 C. NHE > NF3 >BF3 D. NH3 > BF3 > NF3
371	The electronic configuration of sodium (Z=11)	A. 1s2, 2s2, 2p4 B. 1s2, 2s2, 2p6, 3s2 , 2p5 C. 1s2, 2s2, 2p6, 3s1 D. 1s2, 2s2, 2p6, 3s2
372	Which of the following does not apply to nanotechnology.	A. It is a general purpose technology B. It can be called Green technology C. Newtonian mechanics can describe it. D. It involves rearrangement of atoms
373	Which of the following elements has the highest density.	A. Mg B. Na C. K D. Rb
374	What refers to a shape achieved by allowing a liquid to solidify in a mold.	A. Casting<o:p></o:p> B. Molding<o:p></o:p> C. Forming<o:p></o:p> D. All of the choices<o:p></o:p>
		A. It exist as AlCl3 molecules B. It is not easily hydrolysed

375	Which of the following statements about anhydrous aluminium chloride is correct.	B. It is not easily hydrolysed C. It sublimes at 100 ^oC under vacuum D. Boron does not form B³⁺ ions
376	In C4-axis of rotation, an object in rotated through an angle of.	A. 120^o B. 180^o C. 100 ^o D. 90^o
377	The high oxidizing power of halogens is favored by.	A. Low heat od dissociation of X2 B. A high electron affinity of the atom C. A higher hydration energy of the ion D. All of above
378	Which of the following statement is not true is case of catalytic reforming.	A. Dehydrogenations high endothermic B. Dehydrogenation is exothermic C. Hydrodealkylation reactions are endothermic D. None of these
379	Which of the following configuration of an ionic species represents psedue noble gas configuration.	A. ns2 B. ns2 np6 C. ns2 np6 nd 10 D. ns2 np3
380	For dilute solutions colligative properties depend on.	A. The number of the particles of the solute and nature of solvent. B. The number of the solute particles and on their nature C. The number of the solute particles and nature of solute and solvent D. The number of the solute particles and irrespective of the nature of the solute and solvent.
381	Hot isostatic pressing is not a viable option if the chief criterion is	A. Strength without gram growth B. Lost cost C. Zero porosity D. Make it hard
382	Which among the following hydride is ionic in nature.	A. Ammonia B. Protium oxide C. Calcium hydride D. Sulphane
383	Considering the elements B, Al, Mg and K , the correct order of their metallic character is.	A. B > Al > Mg > K B. Al > Mg > B > K C. Mg > Al > K > B D. K > Mg > Al > B
384	Granulated sugar contains _____% sucrose	A. 80 B. 99.30 C. 60 D. 90
385	Which of the following is the cause of Brownian movement of colloidal particles.	A. Convection currents int he fluid B. Bombardment by the molecules of the dispersion medium C. Setting of dispersed phase under gravity. D. Thermal gradient in the medium
386	Which of the following compounds cannot be a monomer.	A. CH3-CHOOH -CH2OH B. NH2 -CH2-NH2 C. CH3-CH2-NH3 D. NH2-CH2-CH-CH2 -NH2 CH3
387	Which configuration has lowest potential energy.	A. Eclipsed B. Staggered C. Skew D. All have same energy
388	In radial direction the thermal conductivity of a nano tube is _____ watt/(m.k)	A. 3500 B. 385 C. 0 D. 350
389	Hypo is used in photography to.	A. Reduce AgBr to metallic silver B. Remove silver a silver salt C. Remove undecomposed silver bromide as soluble complex D. Remove reduced silver
390	What is the most common alloying ingredient in copper?	A. Brass B. Zinc C. Cobalt

		D. Nickle
391	Identify a dye which was ot originally obtained from plant source.	A. Alizarin B. Tyrian purple C. Indigotin D. Quercitrin
392	The separation efficiency of a column can be expressed in terms of number of.	A. Solvents used B. Theoretical plates C. Stationary phases D. Mobile phases
393	Iron which contains up to 1% carbon is called.	A. Steel B. Cast iron C. Wrought iron D. Pig iron
394	Which of the following compounds has highest boiling point.	A. HI B. HF C. HBr D. HCl
395	Sulphur can exist in	A. One phase B. Two phase C. Three phase D. Four phase
396	Which of the following is not chemical characteristics of water.	A. pH B. COD C. BOD D. Colour
397	Which of the following is not a chemical pollutant.	A. Solid waste B. Noiso C. Insecticides D. Liquid waste
398	Which of the following statement represent disadvantages of sanitary landfill	A. Public opposition B. Uneconomical C. Health hazard D. All above
399	Which process of adsorption of hydrogen on palladium is known as.	A. Syneresis B. Occlusion C. Diffusion D. Erosion
400	Which of the ionic possesses highest bond energy.	A. C-C B. Si -Si C. Ge - Ge D. Sn -Sn
401	Egyptians were using _____ to prepare make up for eyes.	A. Nanoaluminium B. Nanocopper C. Nanosteel D. Nanolead
402	Which is the second most abundant element occurring the earth crust.	A. Iron B. Cu C. Cr D. Ni
403	The decrease in electron density at one position accompanied by a corresponding increase at other position is called.	A. Inductive effect B. Asymmetric effect C. Electromeric effect D. Resonance effect
404	The nutrients which are required in very small amount for the normal growth of plants are called.	A. Nitrogenous fertilizers<o:p></o:p> B. Micronutrients<o:p></o:p> C. Phosphorus fertilizer<o:p></o:p> D. All of the above<o:p></o:p>
405	Regarding the internal energy of the molecules, which one of the following statements in not correct.	A. It is the sum of vibration rotational and electronic energy B. It is a path function C. It is a state function D. It is an exact differential

		D. it is an exact differential
406	In the Lewis formula of which of the following species, the number of single double and dative bonds are equal	A. N2O5 B. HNO3 C. SO2 D. SOCl2
407	The attraction which exists between carbon dioxide molecules in solid carbon dioxide is due to.	A. Van der Waal's forces B. Molecule ion forces C. ionic bonds D. hydrogen bonds
408	Complexing reactions are useful for which of the following method of analysis	A. Gravimetry B. Spectrophotometry C. Interfering ions masking D. All of the above
409	In order to increase the rate of the reaction one should.	A. Increase the concentration of products B. Decrease the concentration of reactants C. Decreases the concentration of products D. Both C and D statement are correct
410	Which of the following compounds shows optical activity	A. Lactic acid B. Maltose C. Glucose D. All above
411	A mixture of weak acid and its salt is.	A. Alkaline buffer B. Acidic buffer C. Neutral buffer D. All of above
412	The ions Sc3+ , Ca2+ and K+ have same electronic configuration as that of.	A. Neon B. Argon C. Krypton D. Xenon
413	The law of triads is applicable to	A. Lithium, beryllium, boron B. Fluorine, chlorine, bromine C. Chlorine, bromine, iodine D. Sodium, potassium, Rubidium
414	Aviation Fuel contains.	A. Light Naphtha B. Medium Naphtha C. Kerosene D. Diesel
415	The plate height is the length of the column divide by	A. Length of the column B. Width of the column C. Number of theoretical plates D. Number of components of the mixture.
416	Which of the following is not an ore of iron.	A. Haematite B. Magnetite C. Siderite D. Monazite
417	The aluminium alloy used to make parts of aircrafts is.	A. Magnalium B. Aluminium bronze C. Duralumin D. All of the these
418	Nano particles may interact with the support to be.	A. Partially oxidized B. Partically reduced C. Both a and b D. None
419	The most widely used method of extracting metal ions is the formation of a chelate molecule with an organic chelating agent The chelating agents are.	A. Strong acids B. Strong bases C. Weak bases D. Weak acids
420	Which of the following organic molecule is not aromatic.	A. Benzene B. Naphthalene C. Anthracene D. Cyclo-octatetraene
421	In a standard Weaton cell the cathode is	A. Cadmium amalgam B. Mercury C. Platinum D. Carbon
422	Which of the following elements with excess oxygen to form proxides.	A. Ca B. Mg C. Li D. Ba

423	The property associated in thermometric tittration is	A. Change in weight B. Rate of change in weight C. Heat evolved or absorbed D. Change in temperature
424	The types of coordinate compounds.	A. Labila B. Inert C. Both A and B D. None of above
425	The wire of flash bulb is made up of.	A. Cu B. Ag C. Mg D. Ba
426	Steel is an alloy of iron and carbon with limits on the amount of carbon to less than _____ percent.	A. 2 B. 3 C. 1 D. 4
427	Which of the following haloacids is stronger acids.	A. FCH2COOH B. ClCH2COOH C. Br CH2COOH D. ICH2COOH
428	The atomic and ionic radii value on moving from left to right in the sereis.	A. Increase B. Decrease C. Does not change D. None of above
429	Select the correct IUPAC nae for [Co(NH3)6]2+	A. Hexammoniacobaltate (II) ion B. Hexaamminecobaltate (II) ion C. Hexammoniacobalt (II) ion D. Hexaamminecobalt (II) ion
430	Molecule is a diatomic	A. Nitrogen B. Phosphorous C. Arsenic D. Antimony
431	In a system , when the chemical potential of each component is the same for all phases. the equilibrium is said to be in	A. Metastable equilibrium B. Thermal equilibrium C. Composition equilibrium D. Mechanical equilibrium
432	The process in which ore is heated generally in the absence of air, to expel water from a hydrated oxide at temperature below their melting points is called.	A. calcination B. Roasting C. Froth floatation D. Bessemerization
433	During the preparation of soap the liquid separated by distillation is	A. Sodium hydroxide B. Oil C. Fats D. Glycerol
434	Which one of the following statements regarding BF3 is not correct.	A. It is an ionic compound B. It is an electron deficient compound C. It is a Lewis acid D. It forms adducts
435	Coordination compound show	A. Structural isomerism B. Stereo isomerism C. Both A and B D. None of above
436	In which of the following techniques the solvated molecules are separated according to their size by their ability to penetrate a sieve like structure.	A. Adsorption chromatography B. Partition chromatography C. Ion exchange chromatography D. Gel permeation chromatography
437	Which of the following unit cells has least symmetry.	A. Monocline B. Cubic C. Triclinic D. Tetragona
438	Which of the following salt is colourless.	A. Zn salt B. Co salt C. Ni salt D. Mn salt
439	Which of the following alkaline earth metals occurs in radioactive form in nature.	A. Ca B. Mg C. Ra D. Ba
		A. Milk B. Fruit

440	Pesticide residues appear in which of the following foods.	C. Fish D. Vegetables E. All above
441	The following ceramic product is mostly used as pigment in paints.	A. TiO2 B. SiO2 C. uo2 D. ZrO2
442	Number of unpaired electrons in Cu2+ ions are.	A. 1 B. 2 C. 3 D. 4
443	Which of the following statement is not correct with reference to cell constant.	A. The dimensions of cell constant is cm-1 B. It is used to determine the specific conductance C. It is measured with KCl solution D. Specific conductance does not vary with concentration.
444	The steroid which plays an important role in carbohydrate metabolism is.	A. Oestrone B. Progestrrone. C. Androsterone D. Cortisone
445	When the colourless liquid chlorobenzene is shaken with bromine water, the chlorobenzen becomes a yellow-orange colour. Which of the following is the best interpretation of this.	A. An addition compound of chlorobenzene and bromine has been formed. B. The chlorine atom has been replaced by a bromine atom C. The bromine is mor esoluble in chlorobenzene than in water D. A hydrogen atom has been replaced by a bromine atom
446	In the electronic structure of acetic acid,the total number of shared and unshaped pair of electrons are respectively.	A. 16 ,8 B. 8 ,4 C. 12 ,8 D. 8 ,12
447	Boric acid is added to glass because is.	A. Makes the glass opalescent B. Reduces the coefficient of expansion C. Makes the glass brittle D. Increase refractive index of the glass.
448	The base which in not present in DNA is	A. Adenine B. Guanine C. Thymine D. Cytosine
449	Which is incorrect statement for Xe F2.	A. It has linear structure. B. It is hydrolyzed rapidly in aqueous solution of a base C. It oxidizes Cl and I to Cl2 and I 2 respectively D. It cannot act as F donor
450	The alternate feasible fuel for existence of mankind to	A. Uranium B. Wood C. Bontonite D. Cloth residues
451	Which of the following can be used as drying agent of ammonia.	A. CaO B. Anhydrous CaCl2 C. P2O5 D. Conc. H2SO4
452	Low quality steels with an M. Suffix on the designation intended for non structural application is classified as.	A. Merchant quality B. Commercial quality C. Drawing quality D. Low quality
453	The green colour of glass is due to the presence of.	A. Chromium (III) B. Cobalt (II) C. Mn (IV) D. Iron(III)
454	The geometry of the molecule is primarily decided by	A. Bond pairs around the central atom B. No of k bond around the central atom C. No of bond pairs as well as lone pairs around the central atom D. No. of lone pairs on central atom
455	Not a Characteristic property of ceramic material	A. High temperature stability B. High mechanical strength C. Low elongation D. Low hardness

456	Which of the following technique is used to separate substance of high molecular weight of different charges.	A. Dialysis B. Electrophoresis C. Solvent D. None of the abvoe
457	To complete transfer of a shared pir of electrons to one of the atoms joined by a double or triple bond at the requirement of an attacking reagent is known as.	A. Inductive effect B. Resonance effect C. Eletromeric effect D. Stark effect
458	The tensile strength of a carbon nanotube is _____ times that of steel.	A. 10 B. 25 C. 100 D. 1000
459	What is clinker.	A. Roasted calcareous material B. Roasted argillaceous material C. Roasted calcareous and argillaceous material D. Roasted gypsum
460	Linear molecules have _____ axis of rotation	A. C1 B. C2 C. C D. C3
461	What is the ratio of the maximum load in a tension test to the original cross sectional area of the test bar.	A. Tensile strength<o:p></o:p> B. Yield strength<o:p></o:p> C. Shear strength<o:p></o:p> D. Torsion<o:p></o:p>
462	The correct order of ionization energies of alkali metals is.	A. Li > Na > K > Rb B. Na > K > Rb > Li C. Rb > K > Na > Li D. Rb > K > Li > Na
463	Different arrangement of groups in space which can be converted into one another by rotation around a single bond are caled.	A. Conformations B. Metameres C. Enatiomers D. All of the above
464	Which of the following is not true as compared with alkaline earth metals.	A. Alkali metals are more reactive B. Alkali metals have lower density C. Alkali metals are more electro positiveness D. Alkali metals have stronger metallic bonds
465	An element with atomic number 20 is placed in which period of the periodic table.	A. 1 B. 2 C. 3 D. 4
466	Diamond and carbon are the _____ forms of carbon	A. Isotropic B. amorphous C. Allotropic D. Isomeric
467	Which trihalide is not hydrolysed by water	A. NF3 B. NCl3 C. PCl3 D. AsCl3
468	The vibration degrees of freedom for a linear and non liner poly atomic molecule of seven atoms each an respectively	A. 30 and 29 B. 30 and 32 C. 28 and 29 D. None of above
469	For a given mass of a gas, if pressure in reduced to half and temperature in doubled, then volume.	A. 2V² B. 4V C. 8 V D. V²
470	The terpenoid responsible fo the smell	A. Camphor B. Genenial C. Citral D. Carvone

		D. Carvone
471	Which of the following analytical method is based on the rotation of light ratiation	A. Refractomerty B. Polarimetry C. Interformetry D. Polarography
472	Which of the following is not correct.	A. Rusting of iron can be stopped by increasing the concentration of CO2 in water B. Rusting of iron is electrochemical in nature. C. Rusting of iron takes place in moist air D. Rusting of iron produces hydrated iron (III) oxide
473	Which of the following is a pseudohalide.	A. I3- B. IF7 C. CN- D. ICl
474	Transition elements, in general, exhibit the following properties, except one, Name that property.	A. Variable oxidation state B. Natural radioactivity C. Tendency to form complexes D. Formation of alloys
475	What corrosion occurs under organic coating on metals as fine wavy hairlines?	A. Stray current corrosion<o:p></o:p> B. Microbiological corrosion<o:p></o:p> C. Filiform corrosion<o:p></o:p> D. Simple corrosion<o:p></o:p>
476	In which property listed below hydrogen does not resemble alkali metals.	A. Tendency to form cation B. Nature of oxide C. Combination with halogens D. Reducing character.
477	What is the advantage of quench hardening?	A. Imporoved strength<o:p></o:p> B. Hardness<o:p></o:p> C. Wear characteristics<o:p></o:p> D. All of the choice
478	Which of the following state is not true with respect to copper.	A. it is malleable and ductile B. It is a best conductor of heat and electricity C. It forms alloys easily D. Moltan copper absorbed carbon dioxide
479	The electrode Pt/Fe2+ (C1) Fe 3+ (C2) belong to the type.	A. Gas electrodes B. Inert metal electrodes C. Magam electrodes D. Metal metal insoluble salt electrode
480	Xenon reacts best with	A. The most electropositive elements B. The most electronegative elements C. The hydrogen halides D. Non metals
481	Greeks and Romans had used nanoparticles in the manufacture of.	A. Cosmetics for eyes B. Medicines C. Metals D. Hair -dye
482	Carbylamine reaction proceeds via the intermediate formation of.	A. Alkyl isocyanide B. Chloride ion C. Alkyl carbonion D. Dichloro methylene
		A. XeO3

483	The first noble gas compound was	A. XeO3 B. XeF4 C. XeF6 D. Xe +[PtF6]
484	What is the following is incorrect.	A. Water is more polar than H2S B. H2O2 is a planar molecule C. Heavy water is produced by the exhauative electrolysis of water made acidic D. H2O2 act both as oxidising as well as reducing agent in acidic medium
485	Which of the following method is used to separate small molecules form the larges molecules from the larger molecules in diffusing through a membrane.	A. Dialysis B. HPLC C. FPLC D. TLC
486	Glass was first made by about_____	A. 40 BC B. 400 BC C. 4000 BC D. 100 BC
487	Non localised bonds are referred as	A. Metallic bond B. Long range bonds C. Ionic bond D. Covalent bonds
488	The ionic product equilibrium constant is.	A. Ka B. Kb C. Kc D. Kw
489	Which of the following type of lattice has maximum numb of atoms per unit cell.	A. Simple cubic B. Body centred cubic C. Face centred cubic D. All of them
490	Which of the following technique in current voltage technique	A. Amperometry B. Voltammetry C. Poteatiomertry D. Polarography
491	C is -2 butene on reaction with bromino give 2,3 -dibromobutane which is	A. Recemic mixture B. Meso isomer C. Dextoroisomer D. Levoisomer
492	Which of the following materials is not suitable as adsorbent for chromatography.	A. Silica gel B. Activated charocal C. Alumina D. Calciu7m chloride
493	_____ is preferred for horticultural crops and for tobacco and potatoes.	A. Potassium Chloride<o:p></o:p> B. Potassium Sulphate C. Potassium Nltrate D. None of these
494	Which of the following is not a component of flame photometer.	A. Pressure regulator and flow meter B. The atomizer C. The burner D. Hallow cathode lamp
495	Out of seven crystal system, how many can have body centered unit cell.	A. 3 B. 4 C. 2 D. 7
496	Type of hybrid orbitals used by the chlroine atom in ClO2 is.	A. sp2 B. sp3 C. sp D. None of these
497	Aluminium does not corrode as does iron because.	A. Al does not react with O2 B. a-protective layer of Al2O3 forms on the metal surface C. Al is harder to oxidize than is Fe D. Fe gives chathodic protection to Al
498	All the halogen form oxyacide, except	A. Florine B. Chlorine C. Bromine D. Iodine
499	Which of the following solution has highest normality.	A. 1 N H2PO4 B. 0.5 N H2SO4

		C. 6 g NaOH per 100 cm3 D. 4 g NaOH PER 1000 cm3
500	The osmotic pressure of a solution with definite composition.	A. Varies directly as the volume and temperature. B. Various inversely as the temperature. C. Varies inversely as the volume and directly as the temperature. D. None of the above
501	Which of the following process is not physical in nature.	A. Mixing B. Flocculation C. Sedimentation D. Activated sludge process
502	A boy accidently splashes a few drops of conc. H2SO4 on his cotton shirt. A few minutes later, the splashed part blacken and holes appear.This is because the sulphuric acid.	A. Heats up the cotton so that it burns B. Dehydrates the cotton C. Causes cotton to react with oxygen of the air D. Removes the elements of water from cotton
503	The matrix is usually in the form of.	A. Sand B. Limestone C. Rocks D. All
504	Which of the following techniques involves the distribution of solute between two immiscible liquid phases.	A. Chromatography B. Electrophoresis C. Solvent extractions D. Solid phase extraction
505	What is the function of Head Box in paper making machine.	A. It dry the paper B. It reduces thickness of paper C. It makes the surface of paper smooth D. It discharge the pulp at the screen of fourdrinier table
506	The group H steels can be used n what temperature range.	A. 600^oC to 1100 ^oC B. 1000 ^oC to 1500 ^oC C. 1100 ^oC to 2000 ^oC D. 200 ^oC to 800 ^oC
507	Which of the following substance acts as gaseous pollutant.	A. NO B. NO2 C. CO D. SO2 E. All above
508	The inert gasses AR, Ka, and Xe form solid compounds with certain organic molecules under pressure..	A. Halides B. Hydrates C. Clathrates D. All of above
509	Organic farming is the technique of raising crops through uses of.	A. Manures B. Biofertilizers C. Resistant varieties D. All of these
510	Which among the following is a false statement.	A. SiO2 has a structure similar to that of CO2 B. Natural Si exists only in the combined state C. Si can be prepared by reducing SiO2 with Mg D. Si does not exist in graphite like structure, but exists only ni diamond like structure.
511	The conductance of 1 cm3 of an electrolytes solution is called its.	A. Specific resistance B. Specific conductance C. Molar conductance D. Equivalent conductance
512	A device which is used to measure the interracial angle is known as	A. Voltmeter B. Potentiometer C. pH Meter D. Goniometer
513	SO2 is generated from which of the following industry.	A. Drying and packing B. Paper C. Pulp D. paper and pulp
		A. The tendency towards concatenation

514	A general trend in the properties of elements of carbon family shows that with increase in atomic number.	increases B. The tendency to show +2 oxidation state increase C. Metallic character decreases D. The tendency to form complexes with convalency higher than four decreases.
515	Which of the following bonds will be non polar.	A. N - H B. O - H C. C - H D. C l - Cl
516	Which of the following statement is not related with environmental pollution.	A. Direct or indirect change in any component of the biosphere B. Undesirable change in the physical characteristics of the air C. Undesirables change in the biological characteristics of the soil D. not affecting adversely the industrial progress
517	30 mL of an acid solution is neutralized by 15 mL of 0.2 N base. The strength of acid solution is.	A. 0.1 N B. 0.15 N C. 0.3 N D. 0.4 N
518	When fullerencs were discovered they were thought to be	A. First example of spherical aromatic molecule B. First example of spherical non aromatic molecule C. First example of diamond lime molecule D. None of the above
519	The 'shape' of molecule ." Xe F6 is.	A. Pentagonal bipyramidal B. Regular octahedral C. Distorted octahedral D. Square planar
520	The movement of an electric charge produce a magnetic field is known from the	A. Elementary Physics B. Elementary Chemistry C. Both A and B D. None of above
521	Which one of the following statements if false with respect to CFT.	A. In an octahederal crystal field. the d electron on a metal ion occupy the ex of orbitals before they occupy the t98 not of orbitals. B. Diamagnetic metal ions cannot have an odd number of electrons C. Low spin complexes can be paramagnetic D. Low spin complexes contain strong field ligands.
522	What is the possible number of optical isomers for a compound contained 2 dissimilar asymmetric carbon atoms.	A. 2 B. 4 C. 6 D. 8
523	A correct reaction mechanism for a given reaction usually is.	A. The same as the balanced chemical equation B. Obvious if its heat of reaction is known C. Sometimes difficult to prove D. Obvious if the activation energy is known
524	Which of the following halogen exist in solid state.	A. F2 B. I2 C. Cl2 D. Br2
525	Red brass contain about how many percent of zinc.	A. 20 % B. 15 % C. 30 % D. 25 %
526	Which one of the following oxides is basic.	A. MnO B. Mn2O3 C. MnO2 D. Mn2O7
527	WIhich of the following can act as a protective colloid	A. Gelatin B. Silica gel C. Oil in water emulsion D. All three
		A. ammonia

528	Which of the following compounds has fishing ordure	B. Organic sulphides C. Amines D. H2S
529	Which of the following steps are involved in the extraction of copper.	A. Roasting B. Smelting C. Refining D. All
530	Which of the following metals form volatile carboyl with CO below 80 ^{o}C	A. Cu B. Fe C. CO D. Ni
531	Which of the following is not an intensive property.	A. Melting point B. Refractive index C. Entropy D. Density
532	Which of the following statements regarding phenols is not correct.	A. Phenol ls are stronger acids than water and alcohols. B. Phenol are weaker acids than carboxylic acids C. Phenol are solubel in both aqueous NaOH and aqueous sodium hydrogen carbonate D. Phenoxides ions are more stable than the corresponding phenol
533	Which of the following elements of group 15 is a typical metal.	A. P B. As C. Bi D. Sb
534	The only oxidation state of alkali metals in their compounds is.	A. +1 B. +2 C. -1 D. 0
535	Which of the following acid radical give organic layer test.	A. Cl- B. CO3 C. I D. S²⁻
536	Which of the following statements is not true with reference to ionic conductors.	A. Ionic conductance is due to movement of the ions B. It involves the transfer of matter C. It involves oxidation reduction reactions D. It decreases with rise in temperature.
537	Solution with components which obeys Raoult's over the entire composition range are said to be.	A. Real solution B. Regular solutions C. Dilute solutions D. Ideal Solution
538	Which of the following trihalides of nitrogen behaves as the weakest base.	A. NF3 B. NCl3 C. NBr3 D. Nl3
539	Which of the following solution would exhibit abnormal colligative proportions.	A. 0.1 M NaCl B. 0.1 M urea C. 0.1 M sucrose D. 0.1 M glucose
540	Which of the following system has low as well as upper consolute temperature.	A. Nicotine - water B. Aniline -water C. Triethlylamine -water D. Phenol -water
541	When a large block of silicon wafer is reduced to smaller component and hence non material is formed this approach is called.	A. Bottom up B. Top down C. Left to right D. Right to left
542	Which of the following property has a higher value for trans isomer as compared to cis isomer.	A. Density B. Dipole moment C. Melting point D. Boiling point
543	Which of the following is not an extensive property.	A. Work B. Entropy C. Free energy D. Volume
		A. SO3 is obtained by the catalytic oxidation of SO2 B. SO3 has trigonal planar geometry in

544	Which among the following is a Talse statement.	gaseous state C. SO3 in nauseous state has all S-O bonds equivalent D. SO3 gas shows more solubility in water than in H2SO4
545	When orthoboric acid is heated strongly it gives.	A. B2O3 B. H2B3O7 C. HBO2 D. B
546	The pKa of acetic acid is 4.74 which implies that.	A. pH of 1N solution is 4.74 B. At pH 4.74 the dissociation of acetic acid is maximum C. At pH 4.74 half of the acetic acid molecules are dissociated in the solution. D. At pH 4.74 the dissociation of acetic acid is minimum.
547	Which element amongst the following has the highest boiling point.	A. Na B. Mg C. Ca D. K
548	The decreasing order of the second ionization energies of K, Ca and Ba is	A. K > Ca > Ba B. Ca > Ba > K C. Ba > K > Ca D. K > Ba > Ca
549	B.P of heavy water is	A. equal to that of ordinary water B. greater than that of ordinary water C. Less than that of ordinary water D. equal to that of distilled water
550	The penultimate shells have pscudo inert gas type configuration.	A. Ga B. In C. TI D. All above
551	Which of the following characteristics of adsorption is wrong.	A. Adsorptoin on solids is reversible in nature B. Adsorption, in general increase with increase in temperature. C. Adsorption is generally selective in nature. D. Both enthalpy and entropy of adsorption are negative
552	Which of the following metal acts as pollutant.	A. Hg B. Pb C. Zn D. Ni E. All above
553	The compound contains two types of X and Y its crystal structure is a cubic lattice with X-atoms at the corners of the unit cells and Y-atom t the body centre, The simplest formulae of this compound is.	A. X2Y B. XY C. XY2 D. X8Y
554	Which of the following is not true for metalloids.	A. They are borderline elements B. They usually act as electron during with non metals. C. B, Si, and Ge D. They are all solids at room temperature.
555	Which of the following is the most abundant alkaline earth metal.	A. Be B. Mg C. Ca D. Sr
556	Which compound among the following does not contain an ionic bond.	A. NaOH B. HCl C. KaS D. LiH
557	What is called black gold.	A. Petroleum B. Coal C. Coal tar D. Natural gas
558	Ozone layer of stratosphere requires protection from indiscriminate use of.	A. Fungicides, insecticides, bactericides and medicines B. Aerosols and high flying jets C. Atomic explosions and industrial wastes D. Weather ballons

559	Which element are non metals.	A. N & P B. Sb & Bi C. As & Sb D. N & Bi
560	Iodine is a grey black solid and its vapours are in color	A. Grey B. Black C. Yellow D. Violet
561	The emission of light in a biological reaction is known as	A. Fluorescence B. Phosphorescence C. Bioluminescence D. Photolysia
562	Which of the following is not an organic precipitating agent.	A. Diemethglyoxime B. Cuperon C. Oxime D. Acetate
563	An organic liquid (X) containing C, H and H has a pleasent odour with a boiling point of 78 oC. On boiling X with conc. H2SO4 a colourless gas is produced which decolourless bromine water and alkaline KMnO4 One mole of this gas also takes one mole of H2. The organic liquid (X) is.	A. n-C3H7OH B. iso-C3H7OH C. C2H5CHO D. CH3CH2OH
564	In a period, the element with biggest electron affinity belong to.	A. Group 1 B. Group 2 C. Group 17 D. Group 18
565	A molecule returns from the excited singlet state to the ground singlet state with emission of light This process is known as	A. Fluorescene B. Scattering C. Phosphorescence D. Chemiluminescence
566	Iodination of benzene takes place in the presence of iodine and	A. HNO3 B. HIO3 C. HgO D. All of these
567	Nanoscience can be studied with the help of	A. Quantum mechanics B. Newtonain mechanics C. Macro dynamics D. Grophysics
568	The diameter of fly ash particles is._____ micro meter	A. 5-10 B. 10-20 C. 20-30 D. 100
569	The sample characteristics affecting the weight loss curve include.	A. Amount of sample B. Sample particle site C. Heat of decomposition reactions D. All
570	In the kinetic study of a reaction A _____ products. A straight line was observed when a graph between time and 1/C2 was plotted. the reaction is.	A. Second order B. First order C. Third order D. Zero order
571	a -amino acids when heated alone form	A. Cyclic lactum B. a-b-unsaturated acid C. Fatty acids D. Diketopiperzines
572	The addition HCl to 2-pentene give	A. 3-Chloropentane B. 2- Chloropentyne C. 2- Chloropentane D. 2-Chloro-2-methyl butane
573	What is a measure of rigidity?	A. Stiffiness<o:p></o:p> B. Jardmess<o:p></o:p> C. Strength<o:p></o:p> D. Modulus of elasticity<o:p></o:p>
		A. Fat

574	Which of the following does NOT react with sodium hydroxide solution.	B. Vinegar C. Ethanol D. Water
575	Which one has a co ordinate bond.	A. Al2Cl6 B. BF3 C. NaCl D. O2
576	In which of the following species the bonds are non directional.	A. NCl3 B. RbCl C. BeCl2 D. BCl3
577	Which one of the following elements shows the most stable oxidation state of +1	A. Al B. Ga C. In D. Tl
578	Which of the following is the active ingredient in ordinary household bleach.	A. HCl B. Cl2 C. NaCl D. NaClO
579	The size of E coli bacteria is._____ nm	A. 75000 B. 2000 C. 200 D. 5
580	The value of Kw increase with temperature because the ionization of water.	A. Positive B. Negative C. Endothermic D. Exothermic
581	Example of peseudohalonge group.	A. Cyanogen B. Thiocyanogen C. Selenocyanogen D. All above
582	Which of the following methods does not give the weight average molecular weight.	A. Sedimentation equilibrium B. Sedimentation velocity C. Light scattering D. Osmotic method
583	The number of significant figures in the number 0.216 is	A. 1 B. 2 C. 3 D. <strike>4</strike>
584	What is the purpose of molybdenum in steel alloying.	A. To increase dynamic and high temperature strength and hardness B. To increase brittleness C. To increase corrosion and resistance D. All above
585	Formula of orthophosphoric acid	A. H2PO4 B. H3PO2 C. H3PO2 D. H2P2O5
586	It is possible to distinguish between optical isomers.	A. Using chemical tests B. By mass spectrometry C. By IR spectroscopy D. By polarimetry
587	The process of transfer of genetic message from DNA to m-RNA is known as	A. Refplication B. Translation C. Transcription D. Transference
588	Which of the following is the most suitable catalyst for ammonia synthesis.	A. Pt<o:p></o:p> B. ZnO+ Cr2O3<o:p></o:p> C. Fe in fused mixture of Al2O3 + SiO2+ MgO<o:p></o:p> D. All of above
589	Which of the following orbitals does not make sense.	A. 6f B. 4f C. 7s D. 2d
		A. Linear

590	The structure of SO2 is	A. Linear B. Angular C. V-shaped D. Planner
591	The lightest alkali metal is.	A. Lithium B. Sodium C. Rubidium D. Caesium
592	A major constituent of materials one whose amount in the materials is	A. 1% or more B. 0.1% C. 0.01% D. 0.001 %
593	The entropy change accompanying any physical or chemical transformation approaches zero as T approaches zero. This statement refers to.	A. Helmholtz law B. Third law of thermodynamics C. Second law of thermodynamics D. Nernat heat theorem
594	The noble gases which does not I do not form any clathrates is.	A. He B. Ne C. Argpm D. Both He and Ne
595	HClO evolves Cl2 and O2 when dissolve	A. Ca B. Ni C. Cu D. Any of above
596	Which number of halogen family does not show positive oxidation state.	A. Fluorine B. Chlorine C. Bromine D. Iodine
597	Which of the following physical properties is employed int he analytical methods.	A. Electric current B. Transition temperature C. Surface tension D. All above
598	Natural fertilizers are materials derived from	A. Plants<o:p></o:p> B. Animal C. Algae D. All of above
599	Which of the following techniques does not belong to column chromatographyy	A. TLC B. HPLC C. Electrophoresis D. Ion exchange
600	Pick out the ideal conditions needed for the manufacture of H2SO4 by contact process.	A. Low temperature high pressure and high concentration of reactants B. Low temperature , low concentration of reactants and low pressure C. High temperature high pressure and high concentration of reactants D. Low temperature, low pressure and high concentration of reactants.
601	carbon monoxide is harmful to human beings as it.	A. Is carcinogenic B. Is antagonistic to CO2 C. Has higher affinity for haemoglobin as compared to oxygen D. Is destructive to O3
602	The maximum degree of freedom for a pure substance under equilibrium constitutions is	A. 1 B. 2 C. 3 D. zero
603	Which of the following statements not correct with the concept of Bronsted concept of acids and bases.	A. An acid can donate a proton B. A base can accept a proton C. This concept has many bases that have OH- ions D. This concept is more general
604	The state of hybridization of Xe in Xe F6 are	A. sp2 B. sp3 C. sp3 d D. dsp3
605	Shows a regular increase on moving down the group form carbon to lead	A. Atomic volume B. Atomic radius C. Density D. All above
		A. An electron in an atom revolves around the nucleus only in circular

606	Which of the following statements is not a part of Bohr's theory of the hydrogen atom.	around the nucleus only in circular paths. B. An electron does not absorb energy in the stationary orbit C. An electron does not emit energy in the stationary orbit D. Energy is emitted or absorbed in a discrete amount from the stationary orbit
607	The nature of bonds in compounds of carbon and silicon is mostly	A. Covalent B. Electrovalent C. Metallic D. Both A and B
608	What is the oxidation number of the central meal atom in the coordination compound. [Pt(NH#)#Cl]Cl	A. -1 B. 0 C. +2 D. +3
609	What ASTM test for shear strength is designated for plastics.	A. D 732 B. D 790 C. D 695 D. D 638
610	Which of the following process is not involved in the purification of bauxite.	A. Bayer's process B. Serpek's process C. Hall's process D. Goldsmith's process
611	The correct order of acid strength is.	A. HlO4 > HBrO4 > HClO4 B. HClO4> HBrO4 > HlO4 C. HBrO4 > HlO4 > HClO4 D. HBrO4 > HClO4 > HlO4
612	If the activation energy in the forwarded direction of an elementary step is 52 kj and the activation energy in the reverse direction is 74 kj. What is the energy of reaction Delta E for this step	A. 22 Kj B. -22 kj C. 52 kj D. -52 kj
613	Which of the following species is not a basic radical.	A. Ag+ B. Cl- C. Ba2+ D. K+
614	Which of the following biogeochemical cycle is not component of ecosystem.	A. Carbon cycle B. Potassium cycle C. Oxygen cycle D. Nitrogen cycle
615	Earth is protected from U.V. radiations by	A. Carbon dioxide layer B. Oxygen layer C. Ozone layer D. Troposphere
616	Aluminothermy used for on the spot welding of large iron structures is based upon the fact that.	A. As compared to iron, aluminium has greatest affinity for oxygen. B. As compared to aluminium, iron has greater affinity for oxygen C. Reaction between aluminim and oxygen endothermic D. Reaction between iron and oxygen is endothermic
617	The reduction of an alkyne to alkene using Lindlar's catalyst results into	A. Syn addition of hydrogen atoms B. Anti addition of hydrogen atoms C. A mixture obtained by ayn and anti addition of hydrogen which are equilibrium with each other D. A mixture obtained by syn and anti addition of hydrogen which are not in equilibrium with each other.
618	Which of the microscope techniques is similar to the Atomic Force Microscopy (AFM)	A. Scanning Electron Microscopy B. Scanning Tunneling Microscopy C. Transmission Electron Microscopy D. None of the above
619	Which of the following is not a property of aluminium.	A. An efficient electrical conductor B. A low density compared to other metals C. Is amphoteric D. Toxic to humans
620	Aromatic amine (X) was treated with alcoholic potash and another compound (Y) when foul smelling gas was formed with formula C2H3N (Y) was formed by reacting a compound (Z) with Cl2 in the presence of slaked lime . The compound (Z) is	A. C6H5NC B. CHCl3 C. CH3CH2OH D. C6H5NH2
		A. Study of interactions between human activities and its environment

621	Which of the following statement is not related with industrial ecology.	B. Industrial ecology seeks to optimize the total industrial materials cycle from virgin material to finished product C. Industrial impacts on the environment D. Economic system are viewed in isolating from their surrounding
622	Glass obtained by placing a layer of butyral plastic with a suitable adhesive between two layers of glass and cementing them by heat and pressure is called.	A. Glass wool B. Safety glass C. Optical glass D. Jena glass
623	A^{o} or 10 Dq is called crystal field.	A. Energy B. Splitting energy C. Stabilization energy D. None of above
624	Dyes used in photographic plates to make them panchromatic is.	A. Cyanine dyes B. Azine dyes C. Phthalocyanine dyes D. Acridine dyes
625	The number of vibrational degree of freedom for CO2 is	A. 2 B. 3 C. 4 D. 5
626	Which of the following pollutant result from combustion of fossil fuels.	A. SO2 B. NOx C. CO D. All above
627	Which of the following oxides is amphoteric..	A. CaO B. BaO C. BeO D. MgO
628	Which of the following statements is correct.	A. A sigma bond is weaker than a pi pond B. There are four coordinate bonds in the Lewis structure of NH4+ ion. C. The 1 covalent bond is directional in nature D. A single bond between the two atoms cannot be re bond.
629	Which of the following acid radical is not interfering.	A. Phosphate B. Borate C. Flouride D. Sulphate
630	Which of the following is not a characteristic of covalent compound.	A. They have low melting and boiling points. B. They ionize on dissolution in polar solvents C. Their molecules have definite geometry D. They are generally insoluble in water
631	In glass making the whole combination of ingredients is called a.	A. Gangue B. Batch C. Mixture D. None of these
632	Ionic compounds in general possess both	A. High melting point and non - directional bonds B. High melting points and low boiling poinits C. Directional bonds and low boiling points D. High solubility in polar and non -polar bonds.
633	The pH Value 4.2 is of	A. Vinegar B. Lemons C. Oranges D. Tomatoes
634	The most stable carbonium ion is	A. See butyl B. n-butyl C. Tert butyl D. None of the above
635	How many planes of symmetry are present in benzene.	A. 1 plane B. 3 planes C. 5 planes D. 7 planes
		A. 2,3-dicvano butanedinitrile

636	The IUPAC name of C2(CN)3 is	B. 2,3 -dicyano -2- butenedinitrile C. 1,1,2,2-tetrcyanoethane D. 1,1,2,2, tetracyanocthenc
637	In reverse phase chromatography which of the analyte will be eluted more readily.	A. Polar B. Non polar C. Semi polar D. All above
638	What is abuckyball	A. A carbon molecule B. Nickname for Mercedes -Benz's futuristic concept car (CIII) C. Plastic explosives nanoparticle (C4) D. Concrete nanoparticle with a compressive strength of 20 nanonewtons(C20)
639	The maximum number of electron is an atom with l = 2 and n = 3 is	A. 2 B. 6 C. 10 D. 12
640	Metal are	A. Hard B. Ductile C. Malleable D. All
641	Which of the following colligative properties can be used to characterize colloidal particles.	A. Lowering in vapour pressure B. Elevation in boiling point C. Depression in freezing point D. Osmotic pressure
642	Identify the incorrect statement regarding crystallization from the following.	A. It is an important procedure for purifying solids B. The impurities are removed by filtering the solution C. Crystals are separated by filtration D. In crystallization method, the solid is dissolved in a solvvent in which it is soluble at all temperature.
643	The juice is allowed to boil at lower temperatures to protect the sugar from	A. Hardening B. Solubility in water C. Caramelization D. Dwatering
644	What field of study encompasses the procurement and production of metals.	A. Metallury<o:p></o:p> B. Geology<o:p></o:p> C. Metagraphy<o:p></o:p> D. Nanochemistry<o:p></o:p> <o:p></o:p>
645	Flourine differs from the other members of its own group due to.	A. Its small size and low bond energy B. Its higher electornegativity C. None-availability of d-orbitals in its valence shell D. All the above
646	Which of the following reagent cannot be used to detect the phenolic group.	A. Neutral FeCl3 B. I2/NaOH C. NaOH solution D. Br2/H2O
647	A considerable number of atoms pertaining to the surface_____ with the decreasing the particle size.	A. Increase B. Decrease C. No effect D. Both a and b
		A. Vlay<o:p></o:p> B. Marine shells<o:p></o:p>

648	Argillaceous material does not include.	C. Slate<o:p></o:p> D. Blast furnace slag<o:p></o:p>
649	_____ is used as stablizer.	A. CaO B. SiO2 C. NaCl D. None of these
650	Setting of plaster of Paris volves.	A. Oxidation with atmospheric oxygen B. Combination with atmosphere CO2 C. Dehydration D. Hydration to yield another hydrate
651	Which of the following is an important aspect of industrial ecology.	A. Minimising air emissions B. Minimising liquid waste C. Recycling after use D. All above
652	Which one of the following is natural polymer.	A. Starch B. Nylon-6 C. Neoprene D. Buna-S, SBR
653	Which of the following is an example of molecular solids.	A. MgO B. ZnO C. Ice D. Graphite
654	Argon is used in filling of.	A. Discharge tubes B. Luminous tube C. Fluorescent tubes D. None of above
655	Which of the following species have undistributed octahedral structure.	A. SF6 B. PF6 C. Si F₆²⁻ D. XeF6
656	An example of acyclic polytropenoid is	A. Myrcone B. Buna -S C. Synthetic rubber D. Natural rubber
657	What is the effect of manganese in cast iron.	A. ^{To affect the machinability ductility and shrinkage depending on form} B. To reduce hardness by combining with sulfur below 0.5% and increase hardness above 0.55 C. To dioxide molten cast iron D. Have no effect
658	The addition of As to Ge makes the latter a	A. Metallic conductor B. Ionic conductor C. Intrinaic conductor D. Extrinsic semiconductor
659	The equivalent conductance of a 1 N solution of an electrolyte is nearly	A. The same as its specific conductance B. 10³ times more than its specific conductance C. 10-3 times its specific conductance D. 100 times its specific conductance.
660	Pick out incorrect statement regarding HF	A. It is used for making chlorofluorocarbon used as refrigerating fluids and as propellants in aerosols B. It is used in making ASIF3 and synthetic cryolite C. Aqueous HF is used for etchine glass D. HF does not react with B2O3 even in presence of conc. H2SO4
661	Galvanized steel are steel products coated with	A. Carbon B. Sulphur C. Zinc D. Iron
662	Which of the following should have the largest dipole moment.	A. Carbon tetrachloride B. Cis-stibeue C. Trans-atibeue D. Cis-dichlorocthylene
		A. The colloidal particles show a linking

663	Which of the following statement is false regarding lyphilic sols.	for the dispersion medium B. These are generally easy to prepare C. These are more stable than lyophobic sols D. The stability of the sols is mainly due to the electrical double layer
664	Hydrogen at the moment of its generation is generally called.	A. Protium B. Nascent hydrogen C. Atomic hydorgen D. Heavy hydrogen
665	Which of the following molecules can oxhibit geometrical isomerism.	A. CH3CH = CH2 B. CH3CH = CHCH3 C. (CH3)2 C = CH2 D. CH3CH = C(CH3)2
666	Soapy detergents and soapless detergents behave differently in hard water because they	A. Have different hydrophilic heads B. Have different hydrophobic hydrocarbon chains C. Have different pH values D. Above A and C both
667	Which of the following elements has the highest third ionization energy.	A. Sodium B. Magnesium C. Aluminum D. Silicon
668	Metallic magnesium is obtained by	A. Reduction of MgO with Coke B. Electrolysis of an aqueous solution of MgCl2 C. Electrolysis of molten MgCl2 D. Displacement of magnesium by iron form MgCl2 solution.
669	Which of the following is not a redox indicator.	A. Ferroin B. Diphaylamine C. Phenolphthalein D. Methyl blue
670	Peeling of ozone umbrella is due to.	A. CFCa B. PAN C. CO2 D. Coal burning
671	Which of the following represents the correct order of ionic radii	A. La+ < Na+ < K+ < Rb+ B. Li+ > Na + > K+ >Rb+ C. Li = Na + = K+ = Rb+ D. Rb +> Na+> K+ > Li+
672	Which of the following is not a component of hollow cathode lamp.	A. Anode B. Cathode C. Filter gas D. Atomic vapour
673	Reaction in which molecules absorbing light do not themselves react but induce other molecules to react are called.	A. Chain reactions B. Photosenaitized reactions C. Reversible reactions D. Free radical reactions
674	The maximum number of electrons in first energy levels are.	A. 1 B. 2 C. 8 D. 10
675	Which of the following pentahalides is not formed.	A. NF5 B. PF5 C. AsF5 D. BiF5
676	Is an instate able colourles gas with a sticky sweet odor and is extremely toxic.	A. B2 H6 B. B4 H10 C. B3 H9 D. B6 H10
677	Pick out the incorrect statement about K2Cr2O7	A. It is thermally stable B. It dissolves in alkali to form chromate C. It oxidizes acidified FeSO4 solution to Fe2(SO4)3 D. It is used as cleansing agent for glassware, etc. when mixed wiht cold conc. H2SO4
678	The relative lowering of vapour pressure of a solution on the addition of non -volatile solute.	A. Is equal to the mole fraction of solute B. Is equal to the sum of the mole fraction of the solute and solvent C. Depends upon the nature of the solute D. Depends upon the mole fraction of

		the solvent
679	The orientation of a crystalline surface is confidently defined in terms of.	A. Lijima Indices B. Miller indices C. Clausen indices D. None
680	Of the molecules, SF4 Xe F4 and CF4 which have square planar geometry.	A. SF4 , Xe f4 and CF4 B. SF4 only C. CF4 only D. XeF4 only
681	By applying an external force the ionic solid can be easily broken to powder form so the ionic solid are highly	A. Hard B. Brittle C. Tough D. Soft
682	Any property whose magnitude is independent of the amount of substance present is called a/an	A. Extensive property B. Colligative property C. Structural propety D. Intensive property
683	Organic substance responsible for the smell of flowers etc. are grouped together in chemistry as.	A. Perfumes B. Terpenoids C. Flavonoids D. Alkaloids
684	Used in filling luminous tubes.	A. Xenon B. Krypton C. Radon D. Helium
685	A type of a chemical bond which is formed by the mutual sharing of electrons between combining atoms of the same or different elements is called.	A. Ionic bond B. Covalent bond C. Co ordinate Covalent bond D. Metallic bond
686	Boron does not form B3+ ion because.	A. It has small size and high ionization energy B. It has high electromagnetically C. It has high charge density D. None of the above
687	When metal orbital are rotated in octahedral field the following representation obtained.	A. t2 g + lg B. a1 g C. t 1 u D. All above
688	Which of the following molecules belongs to C_{av} point group.	A. H2O B. H2S C. NH3 D. BF3
689	Which of the following species is very poor oxidizing agent	A. H+ B. Zn²⁺ C. Fe³⁺ D. MnO₄
690	The technique which involves measurement of the changes in conductance of the solution by employing high frequency alternating current in known as.	A. Potentiomerty B. Polarography C. Oscillometry D. Conductomerty
691	When a lead a storage battery is discharged .	A. SO2 is evolved B. PbS is consumed C. Pb is formed D. H2SO4 is consumed
692	In nature nickel is found in the form of.	A. Sulphides B. Silicates C. Arsenides D. All
693	What is defined as a local corrosion damaged characterized by surface cavities.	A. Cracking<o:p></o:p> B. Pitting<o:p></o:p> C. Cavitation<o:p></o:p> D. Corrosion<o:p></o:p>

694	Consider to violet colored compund.[Cr(OH)2)6 Cl3 and the yellow compound. [Cr(NH3)6]C;2 which of the following statements is false.	A. Both chromium metal ions are paramagnetic with 3 unpaired electrons. B. [Cr(NH3)6)3+ is calculated directly form the energy of yellow light C. For [Cr(OH)2)6]3+ is less than for [Cr(NH3)6]3+ D. The two complexes absorb their complementary colors.
695	The major role of Flurospar which is added in small quantities in the electrolytic reduction alumina dissolved in fused cryolite is.	A. As a catalyst B. To make the fused mixture very conducting C. To lower the temperature of the melt D. To decreases the rate of oxidation of carbon at the anode
696	A salt solution is treated with chloroform drops.Then it is shaken with chlorine water, chloroform layer become violet solution contains.	A. NO2 ion B. NO3 ion C. Br ion D. I- ion
697	Which of the following is not evoked in quantum theory?	A. Schrodinger wave equation B. The rigid rotor approximation C. The particle in a box D. Boltzmann distribution
698	Phosphorus normally exhibit a covalency of.	A. +1 and +2 B. +2 and +3 C. +3 and +4 D. +4 and +5
699	How many varieties of commercial iron are known.	A. 1 B. 2 C. 4 D. 3
700	A minor constant is one whose amount in the sample is	A. 0.1 to 1 % B. 0.01 to 1% C. 1 to 10% D. None of the above
701	The common oxidation state of lanthanides is.	A. +3 B. +2 C. +1 D. +4
702	Compounds HCN and HNC are.	A. Tautomers B. Metamers C. Functional isomers D. Conformers
703	Which of the following is not a general property of amino acids.	A. They have high m.p. and b.p B. They are soluble in water C. Their dipole moments are high D. They are amorphous solids
704	The sugar present in DNA is	A. D- Ribose B. D-Glucose C. 2- Doxy D-Ribose D. 3-Deoxy D-ribose
705	The rise of a liquid in capillary tube is due to.	A. Osmosis B. Diffusion C. Surface tension D. Viscosity
706	Which of the following is most soluble in water.	A. BaSO4 B. Sr SO4 C. CaSO4 D. MgSO4
707	Which of the following statements in incorrect.	A. Sodium hydride is ionic B. Beryllium chloride is covalent C. CCl4 gives a white ppt with AgNO3 solutions. D. Bonds in NaCl are non directional
708	What element is added to copper to make it extremely hard.	A. Aluminum B. Zinc C. Lead D. Tin
709	Temporary hardness of water is due to.	A. Bicarbonates of K B. Bicarbonates of Na C. Carbonates of Ca D. Bicarbonates of Ca
		A. Exhibit oxidation state of -4

710	Elements of group 14	A. Exhibit oxidation state of +4 B. Exhibit oxidation state of +4 C. From M3+ and M4+ ions D. Form M4- and M4+ iona
711	Of the following an amphoteric hydroxide is.	A. Ca(OH)2 B. NaOH C. Be (OH)2 D. Li OH
712	In B2H6 molecule	A. There exists a direct B-B a -bond B. All the atoms are in one plane C. All the B-H bonds are normal covalent bonds D. There exist two bonds between the boron atoms.
713	HS- is a conjugate base of.	A. S2- B. H2S C. H2SO3 D. H2SO4
714	In each period, the most electropositive element belongs to group.	A. 18 B. 17 C. 1 D. 2
715	_____ is used for fruits, vegetables and tobacco	A. Potassium Chloride B. Potassium Sulphate C. Potassium nitraite D. All above
716	Which of the following molecules has the lowest average speed at 273 K.	A. CO2 B. CO C. CH4 D. O2
717	d2 sp3 is oriented in a manner	A. Trigonal B. Tetrahedral C. Octahedral D. Trigonal bipyramidal
718	In vinyl cyanide, the number of a bonds in	A. 2 B. 3 C. 1 D. 4
719	The Lewis formula of SOCl2, the total number of bond pairs and lone pairs of electron around sulphur are.	A. 2 ,1 B. 2,2 C. 3,1 D. 3,0
720	The element with the highest first ionization potential is.	A. Boron B. Carbon C. Nitrogen D. Oxygen
721	The oxidation number Xe in XeOF2 is	A. 0 B. +2 C. +4 D. +3
722	The proper number of significant figures in the number 0.0780 is.	A. 3 B. 1 C. 4 D. 2
723	The sugar present in RNA is	A. D- ribose B. D-Arabinose C. D-Glucose D. Deoxyribose
724	The common temperature detecting device in DTA are.	A. Thermocouples B. Thermopiles C. Thermistore D. All
725	DTA is of great importance in which of the following field	A. Ceramic B. Metallurgy C. Mineralogy D. All
726	Bitumen is used in	A. Electric generators B. Road surfacing C. Coal tar D. All of above
		A. These take place in the presence of light B. Free energy of these reactions may

727	Which of the following statement is not true with respect to photo chemical reactions.	be positive or negative C. Light intensity affect these reactions D. Temperature has significant affect n rate of these reactions
728	Which of the following method is based on the solubility difference between the analyte and the unwanted components.	A. Distillation B. Complex formation C. Electrodepostion D. Precipitation
729	Which of the following is a non degradable pollutant.	A. Long chain phenoiics B. DDT C. Mercuric salts D. All above
730	The number of gram equivalents of the solute per dm3 of the solution is called.	A. Formality B. Normality C. Molality D. Molarity
731	IUPAC name of HCONH2 is.	A. Methanamide B. Methanoylamine C. Ammoethanal D. Formanide
732	The first ionization energy in electron volts of nitrogen and oxygen atoms are respectively given by.	A. 14.6, 13.6 B. 13.6, 14.6 C. 13.6, 13.6 D. 14.6, 14.6
733	Putrefaction is	A. Hydrolysis of proteins B. Reduction of proteins C. Bacterial oxidation of proteins D. All of these
734	Which of the following statement is not correct regarding dissociation constant (Ka)?	A. It is a measure of the tendency of an acid to split up into ions B. The greater the value of Ka, more is the dissociation C. It is determined by conductimetric method D. It is not a proper parameter for weak acids
735	Human hearing is sensitive to frequency in the range of about	A. 10,000 - 20,000 Hz B. 10 - 10,000 Hz C. 16- 20,000 Hz D. None of the above
736	Relative order of acidity of HF, HCl, HBr, and HI acids is	A. HCl > HBr > HI > HF B. HF > HCl > HBr > HI C. HI > HBr > HCl >HF D. HF > HI > HCl > HBr
737	The most reactive alkali metal among the following is	A. Li B. Na C. Cs D. Rb
738	Which of the following mixture is used as most popular flame in AAS.	A. Acetylene air B. Acetylene O2 C. Hydrogen air D. Hydrogen O2
739	The glow of yellow phosphorous as is result of slow oxidation in air is called.	A. Luminescence B. Chemiluminescene C. Bioluminescence D. Photolysis
740	Which of the following statements false about transition metals.	A. They form complexes B. They show variable valency C. All transiting metal compounds are paramagnetic D. They form coloured ions
741	The element having electronic configuration 1s2, 2s2, 3s2, 3p3 is.	A. Trivalent only B. Tetravalent only C. Trivalent and pentavalent D. Pentavalent only
742	Which of the following extractant is used to solid phase extraction	A. Bonding of C18 chains on silica B. Bonding of C20 on paper C. Bonding of C18 on glass D. Bonding of C20 on cellulose
743	Red colour of glass of due to the presence of	A. Cu2O B. CoO C. MnO2

		D. CdS
744	According to the Langumir isotherm , when the pressure of the gas is very large, the adsorption.	A. Is directly proportional to pressure B. Is inversely proportional to pressure C. Is directly proportional to the square of the pressure. D. Is independent of pressure
745	Which of the following term is not used in pulping.	A. Kappa number B. Copper number C. Bromine Number D. Octane Number
746	Which of the following statement is incorrect.	A. An alloy is a mixture of two or more metals B. An alloy is a mixture of two or more metal and non metal elements that have metallic properties C. An alloy has a fixed composition D. An amalgam is an alloy containing Hg
747	The reaction of toluene with chlorine in the presence of light gives.	A. Benzoyl chloride B. Benzyl chloride C. m-chlorotoluene D. Mixture of 0 and p -chlorotoluene
748	2- Butanol is optically active because a contains	A. An asymmetric carbon atom B. A plane of symmetry C. Centre of symmetry D. A hydroxyl group
749	Pick out incorrect statement about K2Cr2O7	A. It oxidizes acidified solution H2SO4 to S B. It oxidizes KI to I2 C. It oxidizes HCl to Cl2 D. It gives oxygen, when treated with cold conc. H2SO4
750	The temperature at which two conjugate solutions change into one homogeneous solution is called.	A. Azeotrope B. Conjugate temperature C. Consolute temperature D. Transition temperature
751	The units of surface tension in SI system are	A. Joule m-1 B. Newton m-1 C. Erg cm-1 D. Dynes cm-2
752	Strength of H bond in inter mediate between	A. Van der Waals forces and covalent bond B. Ionic and covalent bond C. Ionic and metallic bond D. Metallic and covalent
753	Used in TV sets and sound movies to give ready response to electrical potential	A. He B. Ne C. Ar D. Kr
754	Bromine is used as	A. Fungicides B. Herbicides C. Germicides D. Insecticides
755	Which of the following halide has lowest melting point.	A. NaCl B. NaF C. NaBr D. NaI
756	For assciated liquids, the value of d/M n x 10^8 should be (where d is the density, M is the molar mass and n is the coefficient of viscosity)	A. Zero B. Infinte C. Higher than 70 D. Less than 70
757	Boric Acid is used	A. In manufacture of pottery glaze B. In medicine as an antiseptic C. In tanning industry D. All above
758	Which of the following term refers to nearness between several measurements of the same quantity.	A. Accuracy B. Precision C. Standard error D. Standard error of mean
759	Which of the following techniques involve gas as the mobile phase.	A. HPLC B. GLC C. TLC D. Paper chromatography

		D. Paper chromatography
760	Length of semiconductor nanorods are in the range of.	A. 1.50 nm B. 1-50 micro meter C. 100-500 nm D. 50-100 nm
761	In Dannis's method the end of the copper caps into which graphite electrode are fixed with cement.	A. Portiant B. Bakelite C. Asbestos D. All of above
762	Among all halogens no oxyacid of the following is known	A. F B. Cl C. Br D. I
763	The equilibrium constants Kp and Kc are related as	A. Kp = Kx Pdelta n B. K p= Ks/P delta n C. Ks = Kp (RT)delta n D. Kx = Kp (P/RT) delta n
764	Which of the following water require zero hardness.	A. Boiler feed water B. Laundry water C. Paper will water D. Dyeing water
765	Visible light is just a portion of radiation emitted by atoms.Which of the following statements is not related with visible light.	A. visible light is electromagnetic in nature. B. It travels with the speed of light C. It is a mass D. The wave number of light is directly proportional to its wave length.
766	To increase the life of filament and to low the heat conductivity a mixture in filled in electric bulb.	A. Ar & N2 B. Ar & Kr C. Kr & N2 D. Xe & N2
767	Yellow colour of the flame is observed with	A. Calcium salt B. Barium salt C. Sodium salt D. Potassium salt
768	What is the effect of aluminum in cast iron.	A. To increase hardness above 0.5 % B. To deoxidize molten cast iron C. To affect machinability, ductility and shrinkage depending on form D. Both A and B
769	Which of the following represent the fuming sulphuric acid	A. H2S2O4 B. H2S2O3 C. H2S2O6 D. H2S2O7
770	Ionic bond are also forces called as.	A. Polar bond B. Electrovalent bond C. None polar bond D. Both A and B
771	The concentration required to give a signal equal to three times the standard deviation of the baseline is called.	A. Sensitivity B. Detection limit C. Signal to noise ratio D. None of the above
772	The order in O2+ is	A. 1.0 B. 1.5 C. 2.0 D. 2.5
773	Brass is an alloy of	A. Copper and tin B. Copper and zinc C. Aluminium and nickel D. Leed and tin
774	The basic strength of hydrides of group 15 elements very in the following order.	A. NH3 > PH3 > AsH3 > SbH3 >BiH3 B. PH3 > NH3 > AsH3> SbH3 > BiH3 C. BiH3> NH3 >PH3 > AsH3 > SbH3 D. NH3 > PH3 > SbH3 > AsH3 > BiH3
775	Which property is not exhibited by carbon in its compounds.	A. Forming bounds to other carbon atoms B. Formation multiple forms C. Exhibiting allotropic forms D. Forming compounds with coordination number bevond four

776	The role of the mineral cryolite Na2AlF6 in the Hall process for aluminum production is.	A. It is the source of aluminum B. it is a chemical reducing agent C. It forms a slag to remove impuriteis D. In the molten state, it is a solvent for alumina Al2O3
777	Which of the following statement is not correct regarding the constant R . and in ideal gas equation PV= nRT	A. Its value in independent of temperature B. Its value is independent of pressure C. In SI Units its value is 8.314 K⁻¹ mol⁻¹ D. It is called the universal gas constant per molecule.
778	Which one of following is paramagnetic and has the bond order equal to 0.57	A. N2 B. H2+ C. O2 D. F2
779	Which of the following compounds would be most ionic to charcter.	A. PbCl4 B. PbCl2 C. SnCl4 D. SnCl2
780	Stainless steel consists of which elements.	A. Fe only B. Cr only C. Fe and Ni D. Fe ,Ni and Cr
781	Bromine is soluble in	A. Alcohol B. Water C. Chloroform D. All above
782	Urea an enzyme used to estimate urea is a	A. Hydrolytic enzyme B. Oxidative enzyme C. Reductive enzyme D. Iso me rising enzyme
783	The height to which a liquid will rise in an open capillary tube is inversely proportional to.	A. Temperature of the liquid B. Surface tension C. Density of the liquid D. Air pressure
784	Water that easily forms a lather of films and frotha when agitated with a soap solution called.	A. Hard water B. Heavy water C. Soft water D. Washing water
785	Environmental pollution refers to.	A. Peeling of top soil B. Dissipation of energy C. Release of toxic materials in environment D. None of the above
786	The electronegativity of phosphorus is.	A. 3.0 B. 2.1 C. 2.0 D. 1.9
787	Colloids can be purified by	A. Peptization B. Coagulation C. The Breeding are method D. Dialysis
788	Is a peroxy acid	A. H2SO5 B. H2S2O6 C. H2SO4 D. H2S2O7
789	Indicate false statement about stainless steel	A. The density of stainless steel is about the same as carbon or low alloy steels<o:p></o:p> B. Stainless steels are poor conductors of heat<o:p></o:p> C. Stainless steels are poor conductors of electricity<o:p></o:p> D. Stainless steels have

		steps.000.1 pt ; Stainless steels have tensile moduli greater than those of carbon and alloy steels. <o:p></o:p></p>
790	Hybridization involves.	A. Orbitals of same atom with slightly different energies. B. Orbitals of different atoms, but with equal energies. C. Orbitals of the same atom but with widely different energies. D. Orbitals of different atoms with different energies.
791	The efficiency of a reversible heat engine depends only on the	A. Temperature of the heat sink B. Temperature of the heat source C. Temperature of the heat source and sink D. Pressure of the fluid
792	The bond between two identical non metal atoms has a pair of electrons.	A. Unequally shared between the two B. Transferred fully from one atom to another C. With identical spins D. Equally shared between them
793	Which of the following pairs of fundamental particles are present in equal numbers in a neutral atom.	A. Proton and neutron B. Proton and positron C. Electron and proton D. Neutron and electron
794	Acid rain effects	A. Human being B. Crops C. Aquatic life D. All above
795	The coordination number of closely packed hexagonal is.	A. 4 B. 6 C. 8 D. 12
796	Which of the following allows charge transfer through the solution but prevents mixing of the solution.	A. Anode B. Cathode C. Electrode cell D. Salt bridge
797	Which of the following is not a proper use of Ni.	A. It is used as catalyst B. It is used in alloy formation C. It is used in the preparation of Monel metal D. It is attached by alkalis
798	Sodium silicate is ued	A. In fire proofing of wood and textiles B. As a preservative of eggs C. As a furniture polish D. All above
799	The main constituents of _____ are boron oxide and silica.	A. Pyrex glass B. Low silica glass C. Soda lime glass D. Super hard glass
800	The element with maximum first ionization energy is.	A. B B. N C. O D. C
801	Which of the following is not a physical test.	A. Colour test B. Flame test C. Beed test D. Wet test
802	Which of the following contains isoprene unite.	A. Natural rubber B. Nylong -6,6 C. Polyethylene D. Decron
803	For the respiration of sea divers mixture is used.	A. He & O2 B. Ar & O2 C. Ne & O2 D. Kr & O2
804	Which of the following is the strongest oxidant.	A. F2 B. Cl2 C. br2 D. I2
805	Separation of isotopes of uranium is carried out by	A. CaF2 B. SF6

805	Separation of isotopes of uranium is carried out by	C. HF D. All above
806	In which of the following compounds does hydrogen bonding occur.	A. CCl4 B. NaH C. HI D. NH3
807	Which among the following elements has the highest value of IE.	A. Mg B. Na C. Ca D. Sr
808	Which is true for DDT it is.	A. Not a pollutant<o:p></o:p> B. An antibiotic<o:p></o:p> C. A non degradable pollutant<o:p></o:p> D. A pesticide<o:p></o:p>
809	Which of the following statement is not correct with respect to radioactive pollutnats.	A. Carcinoma and breast cancer B. Leukemia C. Increases biological immune system D. Somatic and generic disorder
810	Concentrated aqueous sodium hydroxide can separate a mixture of.	A. Al3+ and Sn2+ B. Al3+ and Fe3+ C. Al3+ and Zn2+ D. Zn2+ and Pb2+
811	It is known that AgCl is insoluble in HNO3 but dissolves readily in NH4OH solution .Which of the following statement is not correct.	A. Ag ion reacts to form complex with NH4OH solution B. The concentration of Ag ion decreases C. Ionic product is less than the solubility product D. Ionic product is greater than solubility product
812	The liquor is screened to exclude _____ material	A. Fibrous<o:p></o:p> B. Polymers<o:p></o:p> C. Maltose<o:p></o:p> D. Sucrose<o:p></o:p>
813	According to systematic nomenclature which hydrogen compound is sulphane.	A. HF B. Si H4 C. SF4 D. H2S
814	Steel that are used for axles, gears, and similar parts requiring medium to high and strength are known as.	A. Medium carbon steel B. Low carbon steel C. Very high carbon D. High carbon steel
815	Which of the following process is used for the removal of gases.	A. Precipitation B. Chemical reaction in the atmosphere C. Absorption D. All above
816	Pick out the incorrect statement for Xe F6	A. XeF6 is hydrolyzed practically to form XeOF4 B. It reacts with SiO2 to form Xe F4 C. On complete hydrolysis, it forms XeO3 D. It acts as F acceptor when treated with alkali metal fluoride, but cannot act as F donor to form complexes.
		A. BF3

817	The compound which does not act as Lewis acid is.	B. AlCl3 C. BeCl2 D. SnCl4
818	Nano technology in other words is.	A. Carbon engineering B. Atomic engineering C. Small technology D. Microphysics
819	Which of tetra chloride is resistant to hydrolysis.	A. CCl4 B. SiCl4 C. GeCl4 D. SnCl4
820	Valences bond theory was put forward by	A. Pauling and Slatter B. Heitler and London C. Lewis D. Pauli
821	The principal quantum number determines the overall size of the orbital and energy of the electron when it is associated with the orbital.It may have the values.	A. n = 1,3,5.....infinity B. n= 2,4,6.....infinity C. n = 1,2,3,4.....infinity D. None of the abvoe
822	The light absorbed in UV and visible region causes.	A. Vibrational energy changes B. Rotational energy changes C. Electronic excitation D. All of these
823	Which of the following symmetry element leaves the molecule or an object unchanged.	A. Proper rotation B. Improper rotation C. Inversion axis D. Identity
824	in the process of production of soap the soap can be salted out by adding	A. Concentrated sulphuric acid B. Concentrated potassium hydroxide solution C. Concentrated sodium chloride solution D. None of above
825	Molecular weight of proteins may be determined by	A. Osmotic pressure measurements B. Sedimentation methods C. Light scattering methods D. All of these
826	The group of steel are water hardened tool steels.	A. Groups S B. Groups W C. Groups O D. Group F
827	Which of the following substance has been advocated as fuel of future.	A. O2 B. N2 C. H2 D. H2O
828	The ionization energy of N is more than that of oxygen becasue.	A. Nitrogen has half filled p orbitals B. Nitrogen atom is smaller in size than oxygen atom C. Nitrogen contains less number of electrons D. Nitrogen is less electronegative
829	Which of the following pollutant is generated from combustion of fuel.	A. Smoke B. SO2 C. CO2 D. Metallic oxides E. All above
830	Which of the following is NOT true 7 ceramic materials are.	A. Hard, have high densities high compressive strength and very good thermal resistance and strength at higher temperature Silicon B. Hard, have low densities high compressive strength and very good thermal resistance and strength at higher temperature. C. Hard, have low densities low compressive strength and very good thermal resistance and strength at higher temperature. D. Hard, have low densities' high compressive strength and very good thermal resistance and strength at higher temperature.
831	Which of the following interaction is involved in solid phase extraction technique.	A. Van der Waals forces B. Dipolar attraction C. H bonding

		D. All of above
832	The flow of solvent into a solution when two are separated by a semi -permeable membrane is called.	A. Mixing B. Effusion C. Diffusion D. Osmosis
833	Rotary spinning process is used to produce	A. Glass wool B. Optical fibre C. Glass marble D. None of above
834	UV radiation from the sun causes a reaction in the atmosphere that leads to production	A. Fluorides B. Carbon monoxide C. Sulphur dioxide D. Ozone
835	Iso-osmotic solutions are those which have the same.	A. Vapour pressure lowering B. Osmotic pressure C. Molality D. Boiling point elevation
836	A closed system is one which can exchange with surrounding.	A. Matter but not energy B. Energy but not matter C. Both matter and energy D. Neither matter nor energy
837	The purification of Bauxite can be carried out.	A. Baeyer's process B. Hall's process C. Serpek's process D. Any of above
838	The Ostwald process is the main method for the manufacture of nitric Acid in the fist step in this process is.	A. Nitrogen and hydrogen react to form NH3 B. Ammonia is burned in O2 to generate N2 and H2O C. Nitrogen and oxygen react to form NO2 D. Ammonia is burned with O2 to generate NO and H2O
839	Ionization potential of carbon is.	A. 11.2 B. 7.8 C. 8.1 D. 7.3
840	Beryllium shows diagonal relationship with.	A. Mg B. Al C. Na D. B
841	Urea is fertilizer	A. Nitrogen fertilizer B. Potash fertilizer C. Phosphorous fertilizer D. Complete fertilizer
842	Which of the following state is not correct regarding Langmunir adsorption theory.	A. Adsorbent has specific equivalent sites B. One site can adsorbs only one molecule C. Adsorbed molecules cannot interact with each other D. Adsorption is a static process
843	Phosphorus has the oxidation state of +3 in	A. Orthophosphoric acid B. Hypophosphoric acid C. Metaphosphoric acid D. Orthophosphorus acid
844	Which of the following carbonates decomposes at the highest temperature.	A. Mg CO3 B. CaCO3 C. Sr CO3 D. Ba CO3
845	In plant noise control, which of the following method is used for reducing noise	A. Plant planning B. Control at the source C. Control of radiated noise D. All above
846	Which of the following techniques is bulk technique.	A. Powder XRD B. Single Crystal XRD C. SEM D. TEM
847	In XeF2 molecules, Xe atom undergoes hybridization	A. spd B. sp2 C. sp3 D. sp3d

848	Helium is used for	A. The preservation of food B. Filling electrical transformer C. Pressuring agent in rockets D. All of above
849	The most electronegative element of the third period is.	A. F B. P C. Br D. Cl
850	Bioconversion of biomass can be used for.	A. Heating purposes B. Power production C. Methane production D. All of the above
851	The correct order of electron affinities of Sl, P, and Cl is.	A. P > Si > Cl B. Cl > P > Si C. Cl > Si, > P D. Si > P . Cl
852	H-Bond has a preferred bonding direction like	A. Ionic bond B. Covalent bond C. Co ordinate bond D. None of these
853	What nickel alloy has high electrical and corrosion resistance and high strength at red heat temperature and contain 15 to 20% chromium.	A. Alnico B. Nichrome C. Invar D. None of above
854	The principle former of almost all glasses is	A. (SlO2)n B. (SiO3)n C. (SiO2) D. None of these
855	Which of the following reactions does not take place with light radiation.	A. Oxidation B. Reduction C. Polymerization D. Double displacement
856	Which of the following group will have hyper conjugation effect when attached to benzene.	A. ------ CH3 B. ----C6H5 C. ------C(CH3)3 D. ---------CH(CH3)2
857	Electron gas theory fails to explain	A. Specific heat of metals B. Electrical and thermal conductivity C. Paramagnetic behavior of metals D. All of the above
858	Which of the following statements is not correct.	A. The conductance of one cm3 of a material is called specific conductance B. Specific conductance increase while equivalent conductance decreases on progressive dilution C. The limiting equivalent conductance of weak electrolytes cannot be determined by extrapolation of the plot of A against concentration D. The conductivity of metals is due to the movement of elctrons.
859	Which metal can produce dihydrogen gas by reaction with dil H2SO4	A. Ag B. Fe C. Cu D. Pt
860	Sterols are steroids having the functional gruup.	A. Ketonic B. Al;coholic C. Phenolic D. Aldehydic
861	An equilibrium the free energy change delta F for a reaction is.	A. Maximum B. Minimum C. Zero D. Negative
862	An aromatic compound has a molecules formula C7H8O. How many isomers are possible for this compound.	A. 3 B. 4 C. 5 D. 6
863	Which of the following acids acts as acid waste from coal mines.	A. HCl B. HNO3 C. CH3COOH D. H3PO4
		A. Mg (OH)2

864	Which of the following hydroxides has the maximum solubility in water.	B. Ca (OH)2 C. Sr (OH)2 D. Ba (OH)2
865	The extinction co efficient has the units.	A. cm2 mol -1 B. cm3 mol-1 C. mol cm-3 D. mol cm-1
866	Aque regia is made by dissolving a mixture of HNO3 and HCl with ratio.	A. 1 : 1 B. 1 : 3 C. 1 : 2 D. 1 :10
867	Burning of fossil fuels is the main sources of which of the following pollutant.	A. Nitrogen oxide B. Nitric oxide C. Nitrous oxide D. Sulphur dioxide
868	Oxytocin, a pituitary hormone to	A. Amino acid B. Polypeptide C. Protein D. Conjugated protein
869	Iron is said to be abundant in nature. About how many percent of the earth's crust is iron.	A. 10% B. 5% C. 20% D. 8%
870	Which of the following polymers is chlorinated.	A. Orlon B. Neoprene C. Dacron D. None of these
871	The vitamin which is related to monossaccharides is.	A. Vitamin A B. Vitamin C C. Vitamin D D. Vitamin E
872	An ionic compound X + Y - is most likely to be formed if	A. Ionization enthalpy of X is high electron gain ethalpy of Y is low B. Ionization enthalpy of X is high electron gain enthalpy of Y is high C. Ionization enthalpy of X is low,electron gain enthalpy of Y is low D. Ionization enthalpy of X is low electron gain enthalpy of Y is high
873	Which among the following is secondary pollutant.	A. CO B. CO2 C. PAN D. Aerosol
874	Which type of the solids are generally good conductors of electricty.	A. Covalent B. Ionic C. Metallic D. Molecular
875	The normality of 2.3 M H2SO4 solution is.	A. 0.46 N B. 0.23 N C. 2.3 N D. 4.6 N
876	The Langmuir theory of unimolecular adsorption is generally valid at.	A. Low pressures and low temperature B. Low pressures and high temperature C. High pressures and low temperature D. High pressure and high temperature
877	Which of the following is not known.	A. KrF6 B. XeF6 C. XeO3 D. KrF2
878	The key element to be considered when evaluating a health hazard is.	A. The amount of material the employee is exposed. B. The total time of exposure C. The toxicity of the substance D. All above
879	Which of the following chloride is soluble in hot water.	A. Hg2Cl2 B. AgCl C. PbCl2 D. All above
880	Hydrogen bons holding the strand to nucleic acids are formed between	A. Sugar and base units B. Base unit C. Sugar ane phosphate units D. Sugar units

881	The increasing order of energies of various sub shells is	A. 1s < 2s<3s<2p<3p<4s<3d B. 1s <2s<2p<3s<3p<4s<3d C. 1s>2s>2p>3s>3p>4s>3d D. 1s>2s>2p>3p>3d>4s
882	The relative populations of gourd state and excited state populations at a given flame temperature can be estimated using.	A. Boltzmann distribution law B. Maxwell law C. Lambertie law D. Beer's law
883	According to R, S system the correct order of priority of the following groups is .	A. -CH2OH > - CHO > ----- COOH B. -COOH > ------CHO > ------ CH2OH C. ---- CH2OH -----> - COOH > ------CHO D. --- COOH > - CH2OH >----- CHO
884	Which of the following is the correct order of interactions.	A. Covalent < hydrogen bonding < Van Der Waal's < dipole -dipole B. Van der Waal's < hydrogen bonding < dipole -dipole < covalent C. Van der Waal's < dipole -dipole < hydrogen bonding < covalent D. Dipole-dipole < Van der Waal's < hydrogen bonding < covalent
885	Which of the following in not a characteristics of crystalline solids.	A. Sharp melting point B. Isotropic C. Long range orderly arrangemnt D. None of above
886	Give violet colour to flame	A. Gallium B. indium C. Thallium D. Aluminium
887	Which of the following have identical bond order.	A. CN- and O2- B. CN - and NO+ C. O2- and CN+ D. NO+ and CN+
888	Which of the following has highest ionization energy.	A. Oxygen B. Argon C. Barium D. Caealum
889	The wear-resistance of the material is attributed to its ability on _____ that is the hardness is increased greatly when the steel is cold worked.	A. Cold harden<o:p></o:p> B. Stress harden<o:p></o:p> C. Strain harden<o:p></o:p> D. Cool temperature<o:p></o:p>
890	Which of the following is not an acid radical	A. Cl- B. Br- C. K+ D. I-
891	In terms of the amount of the substance adsorbed per gram of the adsorbent (x/m), and pressure p of the gas, the Freudlich adsorption isotherm is represented as.	A. x/m = k/pⁿ B. x/m = kpⁿ C. p = k (x/m)ⁿ D. x/m = (k/p)ⁿ
892	When a drop of detergent solution is added onto a clean towel. It spreads instead of existing as a droplet Which of the following statements explains this phenomenon.	A. Detergent acts as an emulsifying agent B. Detergent reduce surface tension of water C. Detergent reduces surface tension of water D. All of above
893	Which of the following ions is smallest in size.	A. F- B. Cl- C. I- D. Br-
		A. Formality B. Molality

894	The number of moles of solute dissolved in 1000 gram of the solvent is called	C. Molarity D. Mole fraction
895	The correct order of thermal stabilities of hydriedes of group 15 is.	A. NH3 > PH3 > AsH3 > BiH3> SbH3 B. NH3 > PH3 >AsH3 > SbH3> BiH3 C. NH3 < PH3 < SbH3 > AsH3 > BiH3 D. BiH3 > Sb H3 > AsH3 > PH3 > NH3
896	For a given mass of a gas if temperature increase	A. Pressure and volume remain Constance B. Volume increases provided pressure is kept constant C. Pressure decreases provided volume is constant D. Both volume and pressure decrease
897	Group III A of the periodic table consist of elemetns.	A. 3 B. 4 C. 5 D. 6
898	Highly dangerous acid and produces severe wounds on the skin.	A. HClO B. HClO2 C. HClO3 D. HClO4
899	Example of intra molecular hydrogen bonding.	A. O-nitrophenol B. O-hydroxy benzaldehyde C. O- hydroxy benzoic acid D. All of the above
900	The titration involving oxidation reduction reactions is called.	A. Complex titration B. Simplex titration C. Redox titration D. Acid base titration
901	The dimensions for first order rate constant are.	A. s-1 B. s mol-1 C. mol-1 s-1 D. s
902	Monel metal is a alloy of Ni which constrains Ni uptown	A. 50% B. 60% C. 70% D. 80%
903	At extremely low pressures, the van der Waals equations for one mole may be written as.	A. PV = RT + Pb B. PV = RT C. PV = RT - a/V D. (P +a) (V-b) = RT
904	Coulometry is based on the measurement of	A. Electrical current B. Electrical potential C. Electrical conductance D. Dielectric constant
905	The common host compound for the formation of inclusion compound is.	A. Urea B. Thiourea C. Cholic acid D. All above
906	The reciprocal of the coefficient of viscosity in called.	A. Density B. Specific gravity C. Fluidity D. Conductance
907	Which of the following analytical method is based on scattering of radiation.	A. Emission spectroscopy B. Colorimetry C. Turbidimetry D. Polarimetry
908	The compound (CH3)3COH according to IUPAC is known as.	A. Tert Butanol B. 2,2 -Dumethyl -Propanol C. 2- Methyl -2-propanol D. Tert Alcohol
909	An equal volume mixture explodes with violence	A. H2 & N2O B. H2 & NO C. H2 & N2O4 D. H2 & N2O3
910	In quantum theory, which of the following tells us that the prediction of quantum mechanics must pass smoothly into those of classical mechanics as we progress in a continuous way from microsopic to macroecopic.	A. Uncertainty principle B. Correspondence principle C. Probability distribution D. Aufbau principle

		D. Aufbau principle
911	The most stable oxidation state of chromium is.	A. +6 B. +3 C. +4 D. +2
912	_____ surfactants perform well over a wide range of water hardness and pH.	A. Anionic B. Cationic C. Nonionic D. Neutral
913	Which of the following radical is not a member of IV group.	A. Mg²⁺ B. Co²⁺ C. Ni²⁺ D. Mn²⁺
914	An Ideal gas is one which obeys all the gas law at.	A. Low pressure B. High Pressure C. Low and High temperature D. All condition of pressure and temperate re
915	A molecule MX4 has a square planar shape, The number of non bonding pairs of electrons around M is .	A. 2 B. 1 C. 0 D. 3
916	Biomass refers to all the organic material derived from	A. Photolysis B. Photosynthesis C. Electrolysis D. Oxidation
917	Potassium reacts with excess of oxygen to form	A. K2O B. K2O2 C. KO2 D. K2O3
918	The Lewis formula of SOCl2 the total number of bond pairs and lone pairs of electrons around sulphur are.	A. 2,1 B. 2 ,2 C. 3 ,1 D. 3 ,0
919	Poise is a unit of.	A. Refractive index B. Optical activity C. Fluidity D. Viscosity
920	Bryllium salts on hydrolysis give.	A. Basic solutions B. Acidic solutions C. Neutral solutions D. Amphoteric solutions.
921	The electrophile in the sulphonation of benzene is.	A. SO3 B. SO3H C. HSO4 D. SO2
922	Which of the following analytical technique is based on the refraction of radiation.	A. Conductometry B. Refractometry C. Coulometry D. Potentiaometry
923	in the system of designating wrought aluminum alloys the letter F that follows the number indicates what condition of the alloy.	A. As fabricated B. Calcined C. Annealed D. Strain hardened
924	Which of the following techniques involves ion exchange phenomenon.	A. Size exclusion chromatography B. Ion exchange chromatography C. GLC D. HPLC
925	A pH of a neutral solution at 100 ^{O}C when Kw = 1.0 x 10^{-12}	A. 0 B. 7 C. 6 D. 7
926	A property which gradually increases on moving down group in the periodic table is	A. Ionization enthalpy B. Elemtronegativity C. Electron affinity D. atomic size
927	PCl5 is an example of hybridization	A. d sp³ B. d2 sp2 C. sp2 D. sp3
		A. Cylinders B. Pipes

928	Natural gas can be transported through	C. Barriers D. All of above
929	SO3 exists in form	A. a -so3 B. b-SO3 C. gama SO3 D. All above
930	In compressive strength of a nanotube _____ its tensile strength.	A. I less than B. Is greater than C. Is equal to D. Less than or equal to.
931	As it passes into food chain, the concentration of DDT	A. Remains same B. Decreases C. Increases D. Unpredictable
932	Which of the following is strong adheaive.	A. Epoxy resin B. Melamine -formadehyde resin C. Alkyd resins D. Bakelite
933	What is the most undesirable of all the elements commonly found in steels.	A. Sulphur B. Phosphorus C. Silocn D. Magnesium
934	Which of the following is planar?	A. CH2Cl2 B. CHCl3 C. CCl4 D. C2H2
935	Which of the following equations is the most general equation of state.	A. Vander Waal's equation B. Dielectric equation C. Clasuaiua equation D. Kamberling Onnes equation
936	Which is the purest form of iron.	A. Pig iron B. Cast iron C. Wrought iron D. Steel
937	Which of the following statements is not correct with respect to errors in flame photometry.	A. Errors rising form the phenomena developed in the Hollow cathode lamp B. Background effect C. Errors arising from test element itself D. Spectral interference
938	H2SO4 is used	A. In the preparation of aqua regia B. In the purification of gold and silver C. In the dental filling D. None of above
939	Which of the following substance is generally not considered an air polutant.	A. CO B. CO2 C. SO2 D. NO2
940	Setting of cement is improved by	A. Lime stone B. Clay C. Gypsum D. Water
941	The total number of crystal systems and the number of Bra via is lattices are.	A. 7,7 B. 7,14 C. 14,7 D. 14,28
942	In the formation of H2O molecule, the oxygen atom makes use of.	A. 2p orbitals B. sp hybrid orbitals C. Sp2 hybrid orbitals D. Sp3 hybrid orbitals
943	Which of the following detector is used for compounds containing electronegative atoms.	A. Mass specdtrometer B. ECD C. TCD D. UV-detector
944	Which is the strongest reducing agent.	A. HF B. HCl C. HBr D. HI
945	The pair of molecules or ions having identical geometry is.	A. BCl3, PCl3 B. BF3, NH3 C. CHCl3, CCl4 D. SiCl4, CCl4

946	Which of the following iso electronic spices has the highest IE.	A. Ne B. Na+ C. F D. O2-
947	Co ordinate compounds are	A. Polar B. Non polar C. Dem polar D. None of above
948	Which of the following are neutral ligands.	A. NH3 B. H2O C. CO & NO D. All of above
949	Which of the following process is not sorbent separation technolgy.	A. Penex B. Parex C. Molex D. Olex
950	CFT was originally applied to.	A. Ionic crystal B. Liquid crystal C. Solid crystal D. All above
951	BCl3 is a planar molecule because B atom is.	A. sp2 hybridized B. Sp3 hybridized C. sp hybridzed D. sp3 d hybridized
952	The SI unit of pressure is Pascal it is define da sa force per unit are of 1N/m2 one atmosphere of pressure is equal to.	A. 760 mm of Hg B. 1 bar C. 101 k Pa D. 760 torr E. All are correct
953	The gases H2, N2, O2 and NH3 . H2 =2 , N2 = 28, O2 = 32 and NH3 =17 will effuse in the order.	A. H2> N2> O2 > NH3 B. NH3 >O2 > N2 > H2 C. H2 > N2 > NH3 > O2 D. H2 >NH3 > N2 > O2
954	"There is a plenty of room at the bottom" This was stated by	A. Issac Newton B. Albert Einstein C. Richard Feynman D. Eric Drexler
955	The temperature of which the compound melts into a liquid to the same composition as the solid is called the	A. Congruent melting point B. Incongruent melting point C. Peritectic temperatures D. Metastable point
956	Correct order of increasing _____ I effect of groups is	A. ----- NO2 >----------CN > ----------COOH > ----------F B. --------F > ----------COOH>----------CN>--------NO2 C. -----F> ----------CN>--------NO2 > COOH D. -------CN > ----------COOH > ----------NO2 >----------F
957	During reaction of copper with aqueous solution of silver nitrate	A. Silver atoms are reduced B. Cu2+ ions are reduced C. Silver ions are reduced D. No³ ions are reduced
958	When of the following steps is involved in structure determination of an organic compound.	A. Purification of compund. B. Qualitative and quantitative analysis of elements present C. Determination of molar mass D. All above steps
959	Chlorination of toluene in the presence of light and heat followed by treatment with aqueous NaOH gives.	A. o - creaol B. p - creaol C. 2,4 -dihydroxy toluene D. Benzoic acid
960	Which of the following is not a ligand or complexing agent.	A. NH3 B. CH3COOH C. EDTA D. CN-
961	The electronic configuration of chromium (Z =24) in the ground state is.	A. [Ar] 4s² , 3d⁴ B. [Ar] 3d⁶ C. [Ar]4s¹, 3d⁵ D. [Ar]

962	What cast iron has modular or spheroidal graphite?	A. Ductile iron<o:p></o:p> B. Gray iron<o:p></o:p> C. White iron<o:p></o:p> D. Raw iron<o:p></o:p>
963	The condensation between formaldehyde and acetaldehyde in the presence of conc. NaOH and heat gives.	A. Acrolein B. Mixture of CH3OH and CH3COO Na. C. Mixture of CH3CH2OH and HCOO - Na+ D. None of these
964	A combination of atomic orbitals produces a large number of closely special energy states brown as.	A. Packet of energy B. Band of energy C. Botha a and b D. None of the above
965	In propagation step the reaction intermediate of radical polymerization is	A. Carbocation B. Carbonion C. Free radical D. Carbene
966	Which of the following a -amino acid is not capable of exhibiting optical isomerism.	A. Glycine B. Leucine C. Arginine D. Alanine
967	Vet days are generally applied to the fabric in the form of.	A. Mordants B. Leuco base C. Oxidised base D. Dispersed dyes.
968	The size of iso electronic species - F- , Ne, and Na+ is affected by	A. Nuclear charge (Z) B. Valence principal quantum number (n) C. Electron electron interaction in the outer orbital D. None of the factors because their size to the same.
969	Which of the following does not represent Lewis acid.	A. ZnCl2 B. FeCl2 C. BF3 D. BuI4
970	The azimuth or angular quantum number (i) determines the number of sob shells in a given shall. the allowed values of l for a given value ffor n are.	A. 1.2.3..... B. 1,2,3 .....(n-1) C. 0.1.2.3.....(n-1) D. 2,4,6,.....(n-2)
971	While compacting the concrete by a mechanical vibrator, the slump should not exceed.	A. 2.5 cm B. 10 cm C. 3.1 cm D. 5.0 cm
972	The percentage of nitrogen in ammonium sulphate is_____%	A. 27 B. 21 C. 23 D. 19
973	According to Henry's Law. the mole fraction of a gas (x) dissolved in a solvent is related to the pressure of the gas.	A. x = k/p B. x = p/k C. x = k D. p = k/x
974	HClO2 gives the structure of a.	A. Linear B. Angular C. trigonal pyramidal D. Tetra hddral
975	Helium is used in weather balloons and airships instead of H2 becuse it is.	A. Lighter than hydrogen B. Incombustible C. More abundant than hydrogen D. Radiactive
976	Which of the following species is determined by complex metric titrations	A. K+ B. Na+

	Which of the following species is determined by complexometric titrations.	C. Ca+ D. Cl-
977	Phenol on reaction with ethanoic anhydrides in the presence of sodium ethanoate gives.	A. Phenyl benzoate B. Ethyl benzoate C. Phenyl ethanoate D. Phenyl methyl ether
978	The unequal sharing of bonded pair of electrons between the two atoms in a molecule causes.	A. Dipole B. Radical formation C. Decomposition of found D. Covalent found
979	Which of the following methods is the most common method for separation of liquid components from a mixture.	A. Dialysis B. Solvent extraction C. Precipitation D. Distillation
980	The most common oxidation state of alkaline earth metals is.	A. +1 B. +2 C. -2 D. -1
981	Which of the following device is used to measure the surface tension.	A. Polarimeter B. Viscometer C. Refractometer D. Stalagnameter
982	Which of the following elements is most electropositive.	A. C B. N C. O D. Be
983	Al Cl3 acts as a strong Lewis acid, because it is.	A. A covalent compound B. Readily hydrolyzed C. Electron deficient D. An ionic compound
984	Arrange the hydrides of group 15 in the correct order of reducing nature.	A. NH3 < PH3 < AsH3 < Sb H3 < BiH3 B. NH3 > PH3 >AsH3 >Sb H3 > BiH3 C. PH3 < AsH3 < SbH3 < BiH3 < NH3 D. PH3 > AsH3 > SbH3 > BiH3 > NH3
985	Which of the following statements is not correct with the concept of Bronsted concept of acids and bases.	A. An acid can donate a proton B. A base can accept a proton C. This concept has many bases that have OH- ions D. This concept is more general
986	The equilibrium constant value for a chemical reaction is 5 x 10^{20}which of the following statement is true with respect to this value.	A. Reaction will be reversible B. Reaction will proceed in backward direction C. Reaction is at equilibrium D. Reaction will proceed in the forward direction
987	D(+) glyceraldebydes has the absolute configurtion.	A. E- B. S- C. E- D. Z-
988	Which of the following type of polymerization is used for the preparation of synthetic rubber.	A. Free radical B. Zingler natta C. Cationic D. Anionic
989	Sodium Tetra borate is used	A. As alkaline buffer in dying & bleaching process B. In manufacture of opticl glass C. in enameling and making glaze D. All above
990	The alkaline hydrolysis of fat is know as	A. Condensation B. Esterification C. Saponification D. Emulsification
991	Photochemical smog is caused primarily by	A. CO B. CO2 C. NO2 D. O3
992	Berllium has diagonal relationship with	A. Li B. Al C. B D. N

		D. Na
993	The range of sound pressure for uncomfortable level is.	A. 80 - 90 dB B. 100 - 120 dB C. 130-140 dB D. All above
994	[Ti(OH2)6]3+ gives colour	A. Green B. Red C. Purple D. Blue
995	The equation which relates the reaction rates and equilibrium constants of many reactions is known as.	A. Taft equation B. Hammett equation C. Differential equation D. Linear equation
996	Which of the following statement is not related to collision theory.	A. Molecules must collide with each other to do a chemical reaction B. Molecules must posses a minimum amount of energy C. Molecules must have proper orientation D. Collision theory is applicable to liquid only.
997	In the metallurgy of iron, when limestone is added to the blast furnace, the calcium ion ends up in.	A. Slag B. Gangue C. Metallic calcium D. Calcium carbonate
998	Which of the following solids is a better conductor of electricity.	A. Pore NaCl cyrstal B. Diamond C. Graphite D. Marble pieces
999	The process of determining amounts of each of the components in a sample of matter is termed as.	A. Gravimetric analysis B. Coulometric analysis C. Quantitative analysis D. Qualitative analysis
1000	The contact process is mainly used when acid is required for the manufactures of.	A. Explosives B. Fine chemicals C. Lead accumulators D. All above
1001	In bi sulphate ion, the formal charge on sulphru atom is.	A. +1 B. +2 C. +4 D. +6
1002	Who coined the word nanotechnology.	A. Eric Drexler B. Richard Feynamann C. Sumio tijma D. Richard smalley
1003	Soap is soluble in grease because it	A. Is non polar B. Has a hydrophobic head C. Has a hydrophobic tail D. Has an ionic head and a hydrocarbon tail
1004	Stainless steel contains.	A. Fe + Cr+ Ni B. Fe + Ni + Cu C. Fe + Cr+ Cu D. Cu + C + Ni
1005	The following statements are true except one which one.	A. Carburizing does not harden a steel<o:p></o:p> B. Flame and induction hardening require the use of hard enable steels.<o:p></o:p> C. Quench –hardened steel does not require tempering to present brittleness<o:p></o:p> D. None of these
1006	The correct order of second ionization potential of carbon nitrogen, oxygen and fluorine is.	A. C > N > O > F B. O > F > N > C C. O > N > F > C D. F > O > N > C

1007	Which of the following sulphide is yellow in colour.	A. HgS B. PbS C. CdS D. SnS
1008	The number of formula weight of the solute dissolved per dm3 of the solution is called.	A. Mole fraction B. Normality C. Formality D. Molaiity
1009	The unit of nucleic acid having base sugar combination is called.	A. Nucliec acid B. Nucleoside C. Nucleotide D. None of these
1010	Carbohydrates are characterized by the presence of.	A. Hydroxyl group B. Carbony group C. Asymmetric carbon D. All of these
1011	The physical methods of nano roads syntheses involves.	A. Top down approach B. Bottom up approach C. Left right approach D. Right left approach
1012	Zero group elements are called as	A. Inert gases B. Rare gases C. Noble gases D. All of above
1013	Which of the following elements would have the lowest first ionization energy	A. Mg B. Rb C. Li D. Ca
1014	Fluorine is.	A. Powerful oxidizing agent B. Most reactive element C. Used as refrigerants D. All of above
1015	For an average exposure of 8 hours per day, the maximum permissible concentration limit of CO in the atmosphere is.	A. 50 ppm B. 500 ppm C. 10³ ppm D. 20 ppm
1016	HClO4, HNO3 and HCL are all strong acids in aqueous solution inglacial acetic acid medium, their acid strength is such that.	A. HClO4 > HCL > HNO3 B. HNO3 > HClO4 > HCl C. HCl > HClO4 > HNO3 D. HCl > HClO4 > HNO3
1017	Pick out the incorrect statement for transition metals.	A. Cu+ is not a transition metal ion B. Transition metals do not exhibit variable oxidation states C. Transition metal ions are coloured D. Transition metals and majority of their compounds are paramagnetic
1018	Amorphous boron on burning in air form	A. B(OH)3 B. Only B2O3 C. Only BN D. Mixture of B2O3 and BN
1019	In which polymerization branching of chain cannot be possible.	A. Free radical B. Cationic C. Anionic D. Anionic and Zieglar Natta
1020	The blue colour of CuSO4 disappears on adding Zn granules to it . it is because of .	A. Oxidation of Cu atom B. Oxidation of Zn²⁺ C. Oxidation Cu²⁺ D. Oxidation of Zn²⁺
1021	Equilibrium constant Kp and Kc are related as	A. Kc = Kp (RT)delta n B. Kp = Kc (RT)an C. Kp = (Kc/RT)delta n D. Kp -Kc = (RT)delta n
1022	Are used as water repellents	A. Carbides B. Silicon C. Silicones D. Silicates
1023	What is the equilibrium temperature of transformation of austenite to pearlite	A. 1000 F B. 1333 F C. 166 6 F D. 1222 F
		A. Compounds which have completely

		filled orbitals B. Compounds which have incompletely filled orbitals C. Compounds in which the central atom can expand its octel D. All simple metal ions like Ag+, Al3+ etc.
1024	Which of the following statements do not represent Lewis idea of acids and base?	
1025	Photochemical among is generally formed	A. In early hours of winters B. Around mid day in summer months C. When intensity of solar radiation sis very low D. When concentration of particulate matter is very low.
1026	Which of the following adsorption indicator is used for any of the halides at pH.	A. Fluorescein B. Eosin C. Thorin D. Rhodamine 6 G
1027	Suppose the activatin energy of a certain reaction is 250 kj/mol, If the rate constant at T1 =300 K is k1 and the rate constant at T2= 320 K is ks, then the reaction is _____ times faster at 320 K than at 300 K	A. 3 x 10⁻²⁹ B. 0.067 C. 525 D. 15.0
1028	The greater stability of bonzyl carbonium ion as compared to t-butyl carbonium ion is due to.	A. Inductive effect B. Resonance effect C. Electrometric effect D. All above
1029	Fluorine does not show variable oxidation state because of.	A. its high electronegativity B. Its small sixe C. low dissociation energy of F-F bond D. Non availability of d-orbitals
1030	Which of the following basic process is involved in the separation of the complex mixture by chromatographic techique.	A. Partition B. Adsorptions C. Ion exchange D. All of the above processes
1031	Which of the following techniques are used for minimizing water pollution.	A. Stabilization of ecosystem B. Recharge of the waste C. Waste treatment D. All above
1032	Which of the following cast iron is heat treated for ductility.	A. Gray iron B. Malleable iron C. White iron D. None of these
1033	Molten iron withdrawn from the blast furnace is called.	A. Wrought iron B. Pig iron C. Bessemer iron D. Stainless steel
1034	Sea water is converted into fresh water bases upon the phenomenon of.	A. Plasmolysis B. Sedimentation C. Diffusion D. Osmosis E. Reverse osmosis
1035	Metal are generally elements	A. Electronegative B. Electropositive C. Neutral D. None of the above
1036	What % if nickel is present in the major ore Pentlandite.	A. 22% B. 18% C. 14% D. 10%
1037	The noble gases are found in the atmosphere to the extent of about some percent by volume.	A. 0.5% B. 1.0% C. 1.5% D. 2.0%
1038	Reaction in which molecules absorbing light do not themselves react but induce other moleculaes to react are called.	A. Chain reactions B. Photosenaitized reactions C. Reversible reactions D. Free radical reactions
1039	The device that convert the chemical energy of fuel directly into electrical energy is called.	A. Galvanic cell B. Electrolytic cell C. Fuel cell D. Concentration cell
1040	The most convenient and has nearest approach to a universal pH measurement	A. pH strips B. pH indicator

		C. The emf method D. The colorimetric
1041	Which of the following statement is true.	A. Ferromagnetic separation is used to remove rion impurities from bauxite. B. Aluminium is an amphoteric element which means that it can act as an oxidizing agent and as a reducing agent C. Aluminium has a strong attinity for oxygen D. Aluminothermic reactions are endothermic
1042	A well packed column may hve	A. 100 plates /m B. 1000 plates /m C. 10 plates /m D. 10,000 plates/m
1043	Which of the following devoice is used to measure potential difference between celctrodes.	A. Polarimetre B. Conductometer C. Voltmeter D. Photometer
1044	Which one of the following set of raw material is most suitable for manufacture of urea.	A. CH4N2 and CO2<o:p></o:p> B. H2CO2 and H2O<o:p></o:p> C. H2O N2 and H2<o:p></o:p> D. H2O N2 AND KCl<o:p></o:p>
1045	The substance added to the soil in very small amounts are called.	A. Macronutrients<o:p></o:p> B. Micronutrients<o:p></o:p> C. Fertilizers<o:p></o:p> D. None of these<o:p></o:p>
1046	After assimilation urea leaves behind in the soil	A. NH3 B. CO2 C. Both A and B D. None of above
1047	Which of the following is most soluble in water	A. CaSO4 B. Sr SO4 C. MgSO4 D. BaSO4
1048	Which one of the following has a linear structure.	A. H2O B. CO2 C. NO2 D. SO2
1049	Granulated sugar also known as.	A. Brown sugar B. Refined sugar C. White sugar D. None of these
1050	Halogens are coloured because.	A. They are strong oxidant B. Their molecules are held together by weak van der Waals forces C. Their atoms absorb radiations form visible range causing the excitation of valence electrons to higher energy of levels D. Their molecules absorb light radiation forming the oxcited state.

1051	The chrome vanadium steels contain how many percent of vanadium.	A. 0.15 to 0.30 B. 0.05 to 0.15 C. 0.30 to 0.45 D. 0.45 to 0.60
1052	The hydrogen bond is strongest in.	A. O - H .....S B. S - H.....O C. F- H.....F D. F - H.....O
1053	Complete hydrolysis of nucleotide result in the formation of.	A. Heterocyclic bases B. A pentose C. A phosphate ion D. All of these
1054	Which one of the following noble gas is obtained by radioactive disintegrastion	A. Kr B. Br C. Rn D. Xe
1055	Of the following the commonly used n the laboratory desiccator is.	A. Anhyd. Na2Co3 B. Anhyd Ca Cl2 C. Dry NaCl D. None of the above
1056	An sp3 hybrid orbital contains	A. 1/4 a character B. 1/2 a character C. 2/3 a character D. 3/4 a character
1057	The element Uuu has atomic numebr	A. 102 B. 111 C. 101 D. 110
1058	Most effective pesticide is	A. Carbonates<o:p></o:p> B. Organophosphates<o:p></o:p> C. Organ chlorines<o:p></o:p> D. All of these<o:p></o:p>
1059	Which among the following is least soluble in water.	A. NaF B. LiF C. KF D. CsF
1060	If the absorbed light is green the transmitted light will be	A. Purple B. Orange C. Violet D. Black
1061	Increased asthmatic attacks in certain seasons are related to.	A. Inhalation of seasonal pollens B. Eating of seasonal vegetables C. Low temperature D. Wet and dry environment
1062	The type of bonding in HCl is	A. Pure covalent B. Polar covalent C. Highly polar D. Hydrogen bonding
1063	In the fourth flotation process for the purification of ores, the ore particles floats because.	A. They are light B. Their surface is not easily wetted by water C. They bear electrostatic charge D. They are insoluble
1064	Inert pair effect is that	A. When an element shows incertness in chemical combination B. When higher oxidation state is more stable than lower oxidation state C. When an elecrron pair is present on the atom of an element D. When two s -electrons or outermost shell remain paired and do not participate in bonding.
		A. To speed up the reaction

1065	What is use of the addition of brine solution in the production of soap from castor oil and sodium hydroxide.	B. To lower the solubility of soap C. To remove unreacted castor oil and sodium hydroxide D. To increase the purity of the soap obtained.
1066	A chemical reaction resulting in a change in the electric charge on the reacting particles may be called as.	A. Add ion reaction B. Redox reaction C. Elimination reaction D. Chain reaction
1067	Which of the following makes the motion of perpetual motion machine a physical impossibility.	A. First law of thermodynamics B. Second law of thermodynamics C. Third law of thermodynamics D. The Boltzmann law
1068	Which of the following statement is not correct with respect to harmful effects of ground water pollution.	A. It causes lungs cancer B. It causes jaundice C. It damages crops D. It helps to prevent epidermises
1069	The maximum covalence of an element equal to.	A. The number of unpaired d electrons B. The number of paired p electrons C. The number of unpaired a and P electors D. The actual number of a and P electrons in the outermost shell
1070	The variation of enthalpy of reaction with temperature is given by.	A. Hesse's law B. Clasisus Clapayron equation C. Kirchoffs equation D. Arrhenious equation.
1071	The large increase in the rate of a reaction on rise in temperature is due to.	A. The lowering of activation energy B. The decreases in mean free path C. The increase in collision frequency D. The increase in the number of molecules having more than the threshold energy
1072	Select the major product obtained from the addition of HBr to I -Methyl cyclohexene	A. 1-bromo -2- methyl cyclohexane B. 6- bromo-i- methyl cyclohex -i- ene C. 3- bromo -1- methyl cyclohex - 1- ene D. I-bromo -I- methyl cyclohexane
1073	According to SHAH concept the Lewis bases were classified on the basis os.	A. Charge ion size B. Polarization consideration C. Electron and co coordinating ability D. All of above
1074	According to Arrhenius theory an acid is defined as substance which	A. Accepts and electron pair B. Donatees H+ ion in ammonia C. Contains Cl- ions D. Furnishes H3O + ion in water
1075	Hydrolysis of protein gives	A. a -amino acid only B. b-amino acids only C. gama amino acid only D. A mixture of all of these
1076	Among group IA elements, melting point	A. Increases down the group B. Decreases down the group C. Do not show any regular trend D. Remains constant
1077	In which of the following compound valency of carbon in 4 but its oxidation number is zero	A. Methane B. Carbon dioxide C. Carbon monoxide D. Formaldeyde
1078	Considering the element B,C, N, G and Si, the correct order of their non- metallic character is.	A. B > C > Si > N > F B. Si > C > B > N > F C. F > N > C > B > Si D. F > N c > > SI > B
1079	Fluorine finds considerble use of DDFT which is used as.	A. herbicide B. Fungacide C. Insecticide D. Nomatocides
1080	Which of the following technique is used to separate substance based on their charge to mass ratio.	A. HPLC B. HPTLC C. GC D. Electrophoresis
1081	The alpha iron will become paramagnetic at temperature above	A. 770 C B. 550 C C. 660 C D. 440 C

		D. 440 C
1082	The width of a typical DNA molecule is _____nm	A. 1 B. 2 C. 5 D. 10
1083	The phenomenon of x-ray diffraction was studied by	A. Huygen B. Bragg C. Max Planck D. None of above
1084	The decomposition of dimethyl ether at 504 oC is first order with a half -life of 1570 second. What fraction of an initial amount of dimethyl ether remain after 47-10 seconds.	A. 1/3 B. 1/6 C. 1/8 D. 1/16
1085	The number of bonds formed by the central atom is called its.	A. Valence number B. Complex number C. Coordination number D. Avogadro's number
1086	Essential oils are purified by which of the following methods.	A. Steam distillation B. Sublimation C. Crystallization D. Fractional crystallization
1087	XeF4 is obtained, when a mixture of Xenon and fluorine in the ratio is heated in a nickle vessel at 400 ^{O}C	A. 1 : 3 B. 5 :1 C. 1 :20 D. 1 :5
1088	Noble gases are used in discharge tubes to give different colours. Raddish orange glow is due to.	A. Ar B. Ne C. Xe D. Kr
1089	Electron affinities of halogens are in the order.	A. F > Cl > Br > I B. Cl > F > Br > I C. Cl > Br > I > F D. Cl > Br > F > I
1090	The hybridization of sulphur in sulphur dioxide is.	A. sp B. sp2 C. sp3 D. dsp2
1091	Hemimorphite is an example of.	A. Orthosilicate B. Pyrosilicate C. Cyclic silicate D. Meta silicate
1092	AlCl3 fumes in air because of.	A. Hydrolysis B. Dehydration C. Hydration D. Oxidation
1093	Which of the following gas is lightest.	A. Dihydrogen B. Helium C. Dinitrogen D. Dioxygen
1094	Which of the following is a triphenylmethane dye.	A. Auramine G B. Crystal violes C. Fluorescein D. Fast green O
1095	The overall energy change during the Cannot cycle to.	A. Equal to zero B. Equal to Q C. Equal to W D. Maximum
1096	The Hall process involves the reduction of Al2O3 to aluminium by	A. Carbon B. Carbon monoxide C. Molecular hydrogen D. Electrolysis
1097	Which metal burns in air at high temperature with the evolution of much heat.	A. Cu B. Hg C. Pb D. Al
1098	The process of heating to redness and then slow cooling in known as	A. Tempering B. Annealing C. <blockquote style="margin: 0 0 0 40px; border: none; padding: 0px;">Quenching</blockquote> D. Hardening

1099	Which of the following extract is used for wet tests of acid radicals.	A. Calcium carbonate extract B. Sodium iodide extract C. Sodium carbonate extract D. Ammonium carbonate extract
1100	1 nanometre =_____ cm	A. 10⁻⁹ B. 10⁻⁸ C. 10⁻⁷ D. 10⁻⁶
1101	Pick out the incorrect statement regarding ozone.	A. O3 is an unstbale dark blue diamagnetic gas B. The central oxygen in O3 is sp3 hybridized C. It cause the tailing of mercury D. It does not react with KOH
1102	The property measured in DTA is	A. Heat effects B. Weight loss C. Rate of change in weight D. Change in temperature
1103	Solar energy mainly light originates from sun due to.	A. Addition relations B. Displacement reactions C. Thermonuclear reactions D. Substitution reactions
1104	Excluding H-atom , Hydrogen bond never involves more than atoms.	A. One B. Two C. Three D. Four
1105	Copper is resistant to	A. Air B. Water C. Acid and Alkali D. All of the above
1106	Which of the following metal ion cannot be catimated by gravimetric analysis.	A. K+ B. Ca²⁺ C. Al3+ D. Zn2+
1107	Most commercial glasses consist of	A. Lime B. Soda C. Silica D. All
1108	Ozone filters out radiation below.	A. o 1000 A B. o 2000 A C. o 3000 A D. o 4000 A
1109	Which of the following property is not related to aluminum.	A. it is silvery white metal with brilliant lusture B. It is a very light metal with specific gravity as 2.7 C. It is good conductor of heat D. It is the least reactive element of III Group.
1110	Which of the following properties does not depend upon the numeb rof solute particles.	A. Elevation in B.P. B. Osmotic pressure C. Depression in F.P. D. Boiling point of the solvent
1111	The formula of Bauxite is.	A. Al2O3 B. Al2 O3. 2H2O C. AL2O3, H2O D. Na3AlF6
1112	Conductometry is based on	A. Electric current B. Electrical potential C. Absorbance D. Electrical conductance
1113	Which of the following statements is not correct about noble gases.	A. Their ionization energies are very high B. Their electron affinities are nearly zero C. They do not form any chemical compounds D. They are not easily liquefied
1114	Washing soap can be prepared by saponification with alkali of _____ of the following oil.	A. Rose oil B. Paraffin oil C. Groundnut oil D. Coconut oil
		A. CaO

1115	Drying agent which react with CO2 and removes water vapours is.	B. CaCl2 C. CaCO3 D. Ca(NO3)2
1116	Which of the following give higher fibre strength.	A. Eucalyptus B. Pine C. Bagnasse D. Sugar cane
1117	Which of the following source is commonly used as excitation source in fluorimeter.	A. Tungsten lamp B. Mercury vapour lamp C. Nernst vapur lamp D. Radio souse
1118	Glass industry requires soda ash with	A. Solids density 1.91 and bulk density 1.0 B. Solids density 1.86 and bulk density 0.6 C. Solid density 1.80 and bulk density 0.58 D. All of above
1119	The absorbance is directly proportional to the path length in the flame and to the concentration of atomic vapor in flame is a statement of.	A. Lambert's law B. Beer's law C. Honery's law D. Starke law
1120	Chlorine is used in	A. Sterilizatin of water B. Extractionof gold C. Bleaching of cotton D. All above
1121	Dry ice is	A. Solid CO B. Solid CO2 C. Solid NH3 D. Solid SO2
1122	The smallest cluster of carbon atoms in Bucky balls known till today consists of _____ carbon atoms.	A. 75 B. 20 C. 60 D. 15
1123	The concept is also known as electron pair donor acceptor system.	A. Bronsted Lowery B. Lewis C. Lux -Flood D. Usanovich
1124	In which polymer the strength of inter molecular forces is maximum	A. Elastomers B. Thermoplastic C. Fibre D. Cross linked polymer
1125	The formula of Borax is.	A. Na2B4O7 6H2O B. Na2B4O7 8H2O C. Na2B4O7 10H2O D. Na2B4O7 12H2O
1126	The pH of 0.001 N HCl is	A. 1 B. 2 C. 3 D. 4
1127	Which type of elements form ionic hydrides.	A. Transitionelements B. Metalloids C. Elements with high electronegativity D. Elements with high electropositivity.
1128	According to Usanovich concept a base is defined as any species.	A. Capable of giving up anions B. Combining with cations C. Neutralizing an acid to give a salt D. All of above
1129	What group of steels are molybdenum high sped steels.	A. Group A B. Group D C. Group M D. Group H
1130	Alkyl cyanide and alkyl isocyanides are	A. Tautomers B. Metamers C. Functional isomers D. None of the above
1131	Which of the following reacts with excess oxygen to form a normal oxide.	A. Li B. Na C. K D. Rb
		A. 0

1132	Alpha hematite nano tubes show dimensional magnetic ordering at temperature laser than 300 K.	B. 1 C. 2 D. 3
1133	Which of the following is a planar molecule.	A. Acetone B. Formic acid C. Acetic acid D. All above
1134	O2 molecule is.	A. Fermagnetic B. Forromagnetic C. Paramagnetic D. Diamagnetic
1135	Which of the following salt is soluble in water.	A. BaCO3 B. SrCO3 C. CaCO3 D. K2CO3
1136	The cooling of molten urea by air in the tower is called.	A. Prilling<o:p></o:p> B. Evaporation<o:p></o:p> C. Condensation<o:p></o:p> D. Distillation<o:p></o:p>
1137	The number used in cancer therapy is.	A. Fe B. Co C. Ni D. Rn
1138	Which of the following sets of quantum number is possible.	A. n = 4, l = 3, m = -3 ,s = 0 B. n = 4, l = 0, m = 0, s =+1/2 C. n = 4, l = 4, m = -4, s = -1/2 D. None of these
1139	In biological ecosystem which of the following substance is used by organisms.	A. Water B. Sunlight C. Minerals D. All above
1140	Covalent compound are soluble in	A. Polar solvents B. Non polar solvent C. Concentrated acids D. All solvent
1141	The element with atomic numebr greater than 100 are known as	A. Trans uranium elements B. Trans fermium elements C. Actinides D. Lanthanides
1142	Which one of the following is not formed when an electric discharge passes through helium.	A. HeH+ B. HeH2+ C. He2+ D. He2-
1143	Molecule of oxygen is	A. Diamagnetic B. Paramagnetic C. Both A and B D. None of above
1144	The colour of Ni2+ ion is.	A. Blue B. Green C. deep green D. Orange
1145	The ionization potential of K would be numerically equal to.	A. Electron affinity of Ar B. Electromagnetically of K C. Electron affinity of K+ D. ionization energy of Ca
1146	Domestic waste mostly constitutes	A. Non biodegradable pollution B. Biodegradable pollution C. Effluents D. Air pollution
1147	The equivalent conductance (^) and molar conductance (^ m) of BaSO4 are related as.	A. ^ = ^m/2 B. ^/2 = ^m C. ^ = ^m

		D. ^ = ^m/4
1148	The interactions in HF are.	A. dipole dipole interasctions B. Hydrogen bonds C. dipole -dipole and dispersion forces D. Hydrogen bond and diapersin forces
1149	Which of the following specie is stronger acid than formic acid, HCOOH, in aqueous solution.	A. CH3COOH B. NH+4 C. H2SO-3 D. H4P2O7
1150	When the concentration of reactant molecules is increased the rate of reaction increases. The best explanation is As the reactant concentration increases.	A. The average kinetic energy of molecules increases. B. The frequency of molecular collisions increases C. The rate constant increase D. The activation energy increases
1151	The branch of chemistry which deals with the analysis of chemical products is known as.	A. Physical chemistry B. Organic chemistry C. Inorganic chemistry D. Analytical chemistry
1152	An explosive	A. Nitroglycerine B. Trinitrotoluene C. Fluorine perchlorate D. All above
1153	Aluminum is usually extracted from	A. Bauxite B. Corundum C. Feldepar D. Alumite
1154	A covalent bond which is formed between two atoms by the overlap of atomic orbitals along their axis is called.	A. Pi bond B. Sigma bond C. Polar bond D. Non polar bond
1155	Which is major component of Bordeaux mixture.	A. Copper sulphate<o:p></o:p> B. Sodium chloride<o:p></o:p> C. Calcium chloride<o:p></o:p> D. Magnesium sulphate<o:p></o:p>
1156	Catenation is a process of.	A. Formaton of cations B. Deposition of cations C. Formation of long chain of identical atoms D. Formation of covalent bond
1157	Which of the following anionic species is not separated by gravimetric analysis.	A. Cl- B. SO4 C. CH3COO- D. PO4
1158	Which of the following techniques is involved in purification of organic compound.	A. Distillation B. Sublimation C. Solvent extraction D. All above
1159	Each of the following compound is an aromatic except.	A. Benzene B. Naphthalene C. Cyclopentadienyl cation D. Cyclopentadienyl anion
1160	Four elements A, B,C,D have atomic numbers Z , 1 ,Z, Z +1 and Z +2 Respectively If Z is 9, then bond between which pair of elements will be ionic.	A. A and C B. D and C C. D and B D. B and C
1161	The electronegativity of the following elements increases in the order.	A. C,N, Si, P B. N, Si, C,P C. Si, P, C, N D. P, Si, N, C
	During the titration of weak acid against NaOH the conductance of the solution after the	A. Is constant B. Decreases

1162	During the titration of weak acid against NaOH the conductance of the solution after the neutralization point.	B. Decreases C. Varies irregularly D. Increase
1163	The relative error is usually expressed as	A. Parts per ten B. Parts per one C. Parts per hundred D. Botha C and D
1164	In the Friedel-Craft acylation, the amount of AlCl3 tha tmust be taken is	A. In catalytic amount B. One equivalent C. More then one equivalent D. Amount does not matter
1165	The pH of the 0.0032 M H2SO4 is.	A. 3.2 B. 4.0 C. 2.198 D. 1.0
1166	Which of the following interaction is the strong.	A. Dipole -dipole B. Ion induced dipole C. Ion -dipole D. Dipole induced diple
1167	Group VII A of periodic table consist of elements.	A. 4 B. 5 C. 6 D. 7
1168	The strongest acid is.	A. HNO2 B. HNO3 C. H2N2O2 D. HNOS
1169	Inert pair effect is best shown by	A. Si B. Z C. Sn D. Pb
1170	The number of significance figures in the number 80.7 is.	A. 1 B. 2 C. 3 D. 4
1171	Graphite is a good conductor of electricity because is.	A. Has sp2 hybridized carbon stoms B. Has free electrons C. Is crystalline D. Has free atoms
1172	Which of the following statements is not correct with respect to second law of thermodynamics.	A. It helps in know the position of chemical equilibrium B. It helps to know the position of chemical equilibrium C. It determines the conversion of heat into work D. It is based on Nerst heat theorem
1173	The bond angle between hybrid orbitals in methane is	A. 115.5^o B. 109.5^o C. 105,7^o D. 120^o
1174	Which of the following is not a component of HPLC system.	A. Pumps B. Columns C. Particle collector D. Injection system.
1175	Which of the following quantity is correct for micro analysis.	A. 1 -10 mg or < 50 ml B. 10-20 mg or > 50 mL C. 50-100 mg or < 100 mL D. None of above
1176	Which of the following is not correct criteria for an idea solution.	A. Enthalpyh of mixing = 0 B. Volume of mixing = 0 C. Free energy of mixing = 0 D. Obeys Reoult's law
1177	Which of the following will be most effective int he coagulntion of Fe (OH)3 sol.	A. NaCl B. MgSO4 C. AlCl3 D. Mg3 (PO4)2
1178	The maximum number of electrons in s,p,d and f sub shells are.	A. 2 in each B. 2, 6, 10, 18 C. 2,6 ,10,14 D. 5 in each
1179	Which of the following pollutant results from combustion of fossil fuels.	A. SO2 B. NO2

	Which of the following pollutant results from combustion of fossil fuels.	C. CO D. All above
1180	Which of the following oxide formed in appreciable quantity in the atmosphere.	A. NO B. NO2 C. N2O D. All above
1181	The dye obtained from madder root	A. Indogotin B. Indanthrene C. Alizarin D. Acriflavin
1182	Albumin is classified as	A. Simple protein B. Conjugated protein C. Lipoprotein D. Derived protein
1183	A catalyst	A. Actually participates in the reaction B. Changes the equilibrium concentration of the products C. Does not affect a reaction energy path D. Always decreases the rate for a reaction
1184	Which of the following statement is not correct regarding Lewis acids and bases.	A. NH3 and H2O both behaves as Lewis bases B. Substances which donate a pair of electrons are called Lewis bases C. All Lewis bases are also Bronsted bases D. Lewis base must contain an atom having less than an octet of electron.
1185	Of all the noble gaes, easily available gases are	A. He & Ar B. He & Ne C. Ne & Ar D. Xe & Kr
1186	Which of the following is atmospheric pollutant.	A. CO2 B. CO C. O2 D. N2
1187	A trace constituent is one whose amount in the sample is.	A. < 10% B. < 010% C. < 1.0% D. < 0.01 %
1188	An example of cyclic polyterpenoid is	A. Myrcene B. Alcoholic C. Synthetic rubber D. Natural rubber
1189	Which of the following parameter is not involved in calculations based on Born Haber Cycle.	A. Ionization enthalpy B. Electron gain enthalpy C. Electronegativity D. Bond dissociation energy
1190	Who proved that all the six hydrogen atoms in benzen are equivalent.	A. Kekule B. Ladenburg C. Faraday D. Wohler
1191	Al2Cl6 is an example of	A. Ionic bond B. Covalent bond C. Co ordinate bond D. Metallic bond
1192	Which of the following process involves the use fo organic compound as an electron acceptor.	A. Aerobic respiration B. Anaerobic respiration C. Fermentation D. Glycolsis
1193	Hydrometallurgy of copper involves extraction of copper from poor ores by which process.	A. Dry process B. Wet process C. Both dry and wet process D. None of these
1194	Which of the following alloys contains Cu and Zn	A. Bronze B. Brass C. Gun metal D. Type metal
1195	_____ is used for Annealing	A. Klin B. Batch C. Converter D. Oven

1196	What is the scaling off of a surface in flakes or layers as the result of corrosion?	A. Expoliation<o:p></o:p> B. Corrosion fatigue<o:p></o:p> C. Scaping<o:p></o:p> D. Fretting<o:p></o:p>
1197	Principal constituents of noble gases is	A. Argon B. Neon C. Xenon D. Helium
1198	If Principal quantum number n = 4 the quantum number l can have calue.	A. 1,2,3 and 4 B. 0,1,2 and 3 C. 1,2 and 3 only D. None of the abvoe
1199	A steel cannot qualify for stainless prefix until it has at least how many percent of chromium.	A. 10 % B. 20 % C. 5 % D. 30 %
1200	Colour in transition metal compounds in attributed to	A. Small sized metal ions B. Absorption of light in UV region C. Complete ns sub shell D. incomplete (n-1) sub shell
1201	The change in the concentration of the reactant of product per units time is called.	A. Order of the reaction B. Melecularity of the reaction C. Rate of reaction D. None of the above
1202	Cement is a mixture of	A. Clay and clinker B. Clay limestone and gypsum C. Limestone and gypsum D. Binder
1203	When a concentrated solute of an electrolyte is diluted.	A. Its specific conductance increases B. Its equivalent conductance decreases C. The specific conductance decreases and equivalent conductance increases D. Both specific and equivalent conductance increase
1204	Which of the following factor is involved in band boarding that occur in column chromatography.	A. Number of theoretical plates B. Eddy diffusion C. In phase mass transfer D. All above
1205	The action of all the relations of all the organism to their environment is called	A. Biology B. Botany C. Ecology D. Archiology
1206	The minimum amount of energy that the reacting molecules must posses at the time of collations in under to produce effective collisions is called.	A. Free energy B. Threshold energy C. Activation energy D. External energy
1207	Pyrolysis gasoline is obtained from.	A. Catalytic cracking B. Gasification C. Steam cracking D. Reforming
1208	Toluene is o/p -orienting with respect to an electrophilic substitution reaction due to.	A. +1 effect of the methyl group. B. +1 as wellas +H effect of the methyl group C. Hyper conjugatin between the methyl group and phenyl ring. D. + R effect of the methyl group
1209	The Lewis structure of which of the following does not have coordinate bond.	A. SO2 B. HNO3 C. H2SO4 D. HNO2
1210	Identify an oxygenated cyclic terpenoid	A. a- pinene B. Camphor C. Citral D. Geranial

1211	The principal ores of copper are	A. Copper sulphides B. Copper oxides C. Both sulphides and oxides D. Copper carbonate
1212	Which of the following will exhibit variable electro Valency due to intert pair effect.	A. Fe B. Sn C. K D. Both Fe and Sn
1213	Which of the following has the highest lattice energy	A. LiCl B. NaCl C. KCl D. CaCl
1214	Oil of turpentine contains	A. a-pinene B. b- pinene C. Both A and B D. Name of these
1215	Fluorine form Fluorides reacting with	A. Metals B. Non metals C. Metalloide D. Any of above
1216	Which of the following disposal method is used or municipal wastes.	A. Compaction B. Composting C. Recycling D. Chemical processing E. All above
1217	In terms of number of phases (p) components (C) and degree of freedom (F) the phase rule is expressed as.	A. P + C = F + 2 B. F = P+ C - 2 C. P + F= C + 2 D. P - F = C = 2
1218	Which of the following has cubic structure.	A. Sodium chloride B. Potassium Chloride C. Diamond D. All of above
1219	The study of coiled long peptide chains of protein to give a 3 dimensional structure is the study of.	A. Primary structure B. Secondary structure. C. Tertiary structure D. Quaternary structure.
1220	Fish die in water bodies polluted by sewage due to.	A. Pathogens B. Clogging of gills by silt C. Reduction in dissolved oxygen D. Foul smell
1221	Explosive trioxide XeO3 is produced when	A. XeOF4 reacts with water B. XeOF4 reacts with silica C. XeF4 reacts with water D. Any of above statements
1222	The migration of positively charged colloidal particles, under an electrical field , towards the cathode is called.	A. Cataphoresis B. Electroamosis C. Sedimentation D. Electrodialysis
1223	Refining is	A. Extracting petroleum gas<o:p></o:p> B. Separation of various fraction<o:p></o:p> C. Heating of coal<o:p></o:p> D. All of above<o:p></o:p>
1224	Ferrochrum contains Cr up to	A. 60-70% B. 70-80% C. 80-90% D. 40-50%
1225	Yellow green flame is observed with	A. Calcium salt B. Barium salt C. Strontium salt D. Sodium salt

1226	The molarity of a 500 mL solution containing 4 g NaOH	A. 0.1 B. 0.2 C. 0.3 D. 0.4
1227	The bromine produced on commercial scale may contain impurities of.	A. Water B. Chloride C. iodine D. All above
1228	When steam is passed over red bot coke The product formed is	A. Hydrogen and carbon dioxide B. Mixture of hydrogen and carbon monoxide C. Mixture of hydrogen and oxygen D. Heavy hydrogen
1229	Which of the following substance is colloidal in nature.	A. Clay B. Al2O3 C. Fe2O3 D. All above
1230	Which of the following technique is most sanative one.	A. Photomerty B. AAS C. Flame photometry D. Flourimetry
1231	The following oxo acids have been arranged in the order decreasir acid strength identify the correct order.	A. III > IV > II > I B. III > II > I >IV C. I > II >III > IV D. IV > III > II > I
1232	Which of the following is soluble in water.	A. AgF B. AgCl C. AgBr D. Ag I
1233	Indicate the false statement about corrosion.	A. Plastics and ceramics are immune to many forms of corrosion because they are not good conduction of electricity.<o:p></o:p> B. The corroded member in a corrosion cell is the cathode<o:p></o:p> C. Passivity is a prerequisite for the corrosion protect on many metals<o:p></o:p> D. None of these
1234	Among the elements of third period, the element with lowest boiling point belongs to group.	A. 1 B. 14 C. 16 D. 18
1235	The by -product of the process of saponification is.	A. Methanol B. Glycol C. Glycerol D. Absolute alcohol
1236	Stainless steel contains	A. Fe+Cr+Ni B. Fe+Ni+Cu C. Fe + Cr+ Cu D. Cu + C + Ni
1237	The colour imparted by lithium to the flame is.	A. Golden yellow B. Grasay green C. Violet D. Red
1238	The electrical resistance of stainless steels can be as much as_____ time that of carbon steel.	A. 5 B. 6 C. 10- D. 15
1239	A diameter of human hair is approximately _____ m	A. 75000 B. 75 C. 7.5 x 10⁻⁵ D. 7.5 x 10⁻⁹
1240	Which of the following statement is not relat4ed wiht SO2	A. It is a colourless gas B. It has sharp and pungent odour C. It is moderately soluble in water D. It is reduced slowly in clear air to H2S

1241	The following alloys are the chief alloys that are die cast except.	A. Zinc alloys B. Magnesium alloys C. Manganese alloys D. Nickel alloys
1242	The rusting of iron is catalysed by which of the following.	A. Fe B. O2 C. Zn D. H+
1243	a-pinene hydrochloride on warming rearrangements to form bornyl chloride	A. Pinacol pinacolone B. hofmann C. Wagner Meerwein D. Wolf
1244	Monomer of natural rubber is	A. 1,3-Butadiene B. 2-Methyl -1,3-butadiene C. 1,2 -Butadiene D. 1,3 - Pentadiene
1245	Which halide of cesium will be highly ionic in nature.	A. K+ B. Ag+ C. Rb+ D. Ca+
1246	The pH of 0.01 N NaOH is.	A. 12 B. 13 C. 14 D. 11
1247	CCl4 has zero dipole moment because of.	A. Planar structure B. Tetrahedral structure C. Similar size of C and Cl atoms D. Similar electrons affinity of C and Cl
1248	What ASTM test for compression is designated for plastics.	A. D 638 B. D 695 C. D 790 D. D 732
1249	Which of the following compounds is must acdic.	A. H2O B. H2S C. H2Se D. H2Te
1250	Which of the following statements are correct for Linear polymers.	A. Linear polymers may be condensation as well as addition polymers B. Structure is well packed in nature C. Linear polymers have higher density higher melting point and higher tensile strength D. All are correct
1251	Which of the following elements has the highest value of IE.	A. Na B. K C. Mg D. Ca
1252	Which is the correct configuration of Fe3+ (Z= 26)?	A. [Ar] 4s² , 3d⁶ B. [Ar] 4s² , 4d⁵ C. [Ar] 3d⁵ D. None of these
1253	Sodium react more vigorously than lithium because.	A. It is a metal B. It has higher atomic mass C. It is more electronegative D. It is more electropositive
1254	Long diseases are about four times more in urban areas as compared to rural areas. This is due to the presence of which of the following. in atmosphere.	A. CO2 B. NO2 C. O2 D. N2
1255	Final paper wound in the form of a real having final moisture of about.	A. 6-8% B. 9 - 12 % C. 13-15 % D. 4 - 10%
1256	Ingold's isoprence rule states that in terpenoids isopren units are joined.	A. Head to tail B. Head to head C. Tail to tail D. In a random order
1257	If for a solution of an electrolyte. It is the transport number of the cation, then the transport number of the anion I. is equal to	A. t/2 B. 1 - t+ C. 1 + t+

		D. (i -t) /2
1258	Air pollution is not caused by	A. Pollen grains B. Hydroelectric power C. Industries D. automobiles
1259	The product obtained on heating n-heptane with Cr2O3 ____Al2O3 at 600 ^{O}C is.	A. Cycloheptane B. Methyl cyclohexane C. Benzene D. Teluene
1260	Potentiometry is based on the measurement of which physical property.	A. Electrical conductance B. Electrical potential C. Thermal conductance D. Current
1261	Environmental pollution effects.	A. Biotic component B. Plants only C. Humans only D. Both biotic and abiotic components of environment
1262	When SI is dipped with As, it becomes	A. Superconductor B. p-type conductor C. N-type conductor D. None of these
1263	What is a process of producing a hard surface in a steel having a sufficiently high carbon content to respond to hardening by a rapid cooling of the surface?	A. Cyaniding<o:p></o:p> B. Nitriding<o:p></o:p> C. Flame hardening<o:p></o:p> D. Stability<o:p></o:p>
1264	Which one of the following sets of elements has the strongest tendency to form negative ions in gaseous state.	A. NA, Mg, Al B. Ca, V, Cr C. N , O, F D. Ga, In, tI
1265	Which of the following does not form stable diatomic molecule.	A. Nitrogen B. Phosphorus C. Hydrogen D. Oxygen
1266	The spectral line obtained when an electron jumps from n = 6 to n= 3 belongs to.	A. Balmer series B. Layman series C. Paschen series D. Bracket series
1267	The correct order of reactivity among I , Ii, and Ill IS.	A. i > ii >iii B. i > iii > ii C. Il > Ill > I D. Ill > Il > I
1268	Commercial incinerators produce.	A. Smoke B. CO C. NOx D. All above
1269	The main active contaminants of uranium processing are.	A. U - 235 B. U-238 C. Pu -234 D. All above
1270	Acid rain effects	A. Human being B. Crops C. Aquatic life D. All above
1271	Stereotsomers not related to each other as object and minor image are called.	A. Enantiomers B. Diastereolsomers C. Conformations D. Antipodes
1272	Which of the following analytical method is used for the separation of dissolved components from solutions.	A. Chromatography B. Dialysis C. Solvent extraction D. Distillation
		A. O2

1273	Which of the following substance is most abundant of all components of atmospheric air.	B. N2 C. CO2 D. A2
1274	Which of the following is the major process when neopentyl bromide is dehydrogenate with alcoholic potash.	A. 2- methyl -1- butene B. 2- methyl- 1- butene C. 2,3 -dimethyl butene D. 2- butene
1275	Which of the following elements does not impart any characteristic colour to the flame.	A. Ca B. Mg C. Ba D. Sr
1276	All cycle engines working reversibly between same temperature of source and sink have the same efficiency This is the statement for the.	A. Carnot cycle B. Carnot theorem C. Narnst theorem D. Second law of thermodynamics
1277	The prefiex 'nano' comes from a	A. French word meaning billion B. Greek word meaning dwarf C. Latin word meaning invisible D. Spanish word meaning particle
1278	For covalent bond to form between two atoms A and B	A. Transference of electrons must take place from A to B B. A pair of electrons of A is shared by both A and B C. A and B contribute equal no. of electrons for mutual sharing by A and B D. One of the atom A or B must already have octet of electrons.
1279	Carbon and Hydrogen are estimated by	A. Liebig's method B. Kjeldhal's method C. Carries method D. None of the above
1280	Which of the following gas does not exist free on earth.	A. N2 B. H2 C. O2 D. CH4
1281	The unit of specific conductance will be	A. S cm-1 B. Ohm cm C. Ohm cm-1 D. Mho cm
1282	Which of the following is not a correct postulate of the kinetic theory of gases.	A. The molecules are in random motion B. The gaseous collisions are perfectly elastic C. The average kinetic energies of different gases are equal at a particular temperature. D. The pressure exerted on the walls of the container is due to inter molecular forces.
1283	The hybridization of S in SO2 is.	A. sp B. sp2 C. sp3 D. dsp2
1284	Which element among the following cannot exhibit variable electronvalency	A. ₂₉Cu B. ₅₀Sn C. ₂₅ Mn D. ₃₈ Sr
1285	The maximum noise level at which a man can work for 8 hours is.	A. 80 dB B. 70 dB C. 90 dB D. 60 dB
1286	Which of the following pollutants does not a leave a residue.	A. Air pollutant B. Chemical pollutant C. Soil pollutant D. Noise pollutant
1287	The silicate chains are present in	A. Silica B. asbestos C. Beryl D. Clays
1288	The correct order of second ionization potential of carbon , nitrogen, oxygen and fluorine is.	A. C > N > O > F B. O > N > F > C C. O > F > N > C D. F > O > N > C

1289	Which isotope of hydrogen is radioactive in nature.	A. Protium and deuterium B. Tritium only C. Tritium and deuterium D. Only deuterium
1290	A molecule the cannot be susperimposed on its mirror image is said to exhibit which of the following.	A. Geometrical isomerism B. Optical isomerism C. Linkage isomerism D. Reactive isomerism
1291	The simplest formula of a compound containing 50% of element X	A. XY2 B. XY C. X2Y D. None of the abvoe
1292	The exchange equilibrium in gas chromatography depends on.	A. Solubility or absorbability of he sample B. The polarity of he stationary phase and analyte C. The degree of H bonding D. All above factors
1293	Which of the following process always involve the decrease in oxidation number.	A. Hydrolysis B. Elecomposition C. Oxidation D. Reduction
1294	Which of the following statements in not correct with respect to the important characteristics of aromatic compounds.	A. They are usually cyclic compounds B. They are resistant to usual addition reactions C. They usually undergo substitution reactions D. They are less stable
1295	The current voltage characteristics forms the basis of.	A. Thermal analysis B. Potentiometry C. Polarography D. Colorimetry
1296	The maximum absorption in [Ti(OH)2)6 3+ take place at wavelength of.	A. 4000 A^o B. 5000 A^o C. 6000 A^o D. 10000 A^o
1297	When two H atoms approach each other then forces operates.	A. Attractive forces B. Repulaive forces C. Attractive and repulsive D. None of above
1298	At the some temperature 0.1 M solution of urea is isotonic with.	A. 0.1 M glucose solution B. 0.1 M NaCl solution C. 0.1 M urea solution D. 0.1 M BaCl2 solution
1299	Among the following a good solvent for a Grignard reagent formation would be.	A. t- butanol B. dimethyl ether C. difiuoro ethane D. tetrahyudroform
1300	Silicon bronze contains how many percent of silicon.	A. 96% B. 3% C. 1 % D. 69 %
1301	All the strong acids have very close pKas value and they appear to have nearly equal strengths in aqueous solutions. The phenomenon is called as.	A. Levelling effect B. Differnetiating effect C. Levelling solvent D. Differnetiating solvent
1302	The aluminium salt commonly used to stop bleeding is	A. Aluminium sulphate B. Potash Alum C. Aluminium chloride D. Aluminium fluroide
1303	The most important problem regarding nano chemistry	A. Elucidation of relationship between also and chemical reactivity of particle B. Determination of size of particle C. Determination of reactivity of particle D. Determination of physical properties of nano particles.
1304	Cryolite is used in the electrolytic extraction of aluminium to.	A. Obtain more aluminium B. Reduce alumina C. Protective electrodes D. Dissolve bauxite and increase the electrical conductivity
		A. Protein

1305	H-Bonding also ox in ling system like	B. DNA C. Botha A and B D. None of above
1306	Beillstein test is used for.	A. Cl B. N2 C. CO2 D. Na
1307	Ammonia is utilized for	A. Manufacture of urea B. Oxidation to nitric acid C. Manufacture of ammonium sulphate D. All above
1308	Which of the following statements is not related with chemical equilirbium.	A. The properties of the system become constant B. The equilibrium can be approached from either direction C. The chemical equilibrium is static is nature D. A catalyst can hasten the approach towards equilibrium
1309	Soft drinks and baby feeding bottles are generally made up	A. Polyeater B. Polyurethens C. Polyamide D. Polyetyrene
1310	Which of the following statements is incorrect.	A. The elements of group 18 are known as aerogens. B. Group 2 elements are all metals C. Metallic character increase on going down a group D. All the elements belonging to a particular period have same valence shell configuration.
1311	What is the minimum tensile strength of gray Cast Iron class 50	A. 25000 ibf /in² B. 50000 ibf/in² C. 100000 ibf/in² D. 900000 ib/in²
1312	Which of the following test to used to find out whether the observed data differ significantly from the one obtained from theoretical distribution.	A. Chi square test B. F -Test C. Student's test D. Coefficient of variance
1313	Which of the following is capable of shown g optical isomersm.	A. CH3COCOOH B. CH3CHOHCOOH C. Botha a and b D. All of these
1314	A half cell reaction is one that	A. Occurs at one electrode B. Goes only half way to completion C. Involves a half mole of the concentration of the solution D. Always oxidizes
1315	Which of the following statement in not correct with respect to inductive effect.	A. Bond length decrease with increase in inductive effect. B. Inductive effect generates polar character in bonds C. Variation in strength of aliphatic acids can be explained D. It alone cna explain the basically of triphenylamine
1316	Who was the first scientist to describe that substance having Nano dimensions possess altogether different and unique properties.	A. Richard Feynamann B. Erick Drexler C. Archimedes D. Michael Faraday
1317	Which of the following molecules have centre of symmetry.	A. H2O B. HCl C. CO2 D. H2SO4
1318	Maximum desirable concentration of fluorides according to international standard is.	A. 10-100 ppm B. 1 ppm C. 100-200 ppm D. 10-20 ppm
1319	The number 7.65 is rounded to.	A. 7.6 B. 7.7 C. 7.5 D. 7.8
		A. 6:6 B. 7:7

1320	In sodium chloride type lattice, the ratio of coordination number of cation to anion is.	B. 7:7 C. 4:8 D. 4:4
1321	The intensity of magnetization produced per unit strength of the applied magnetic field is called magnetic susceptibility., which of the following statements is not related with this phenomenon.	A. Confirmation of structure of given compound B. Complex storeochemistry C. Diamagnetic nature of molecules D. Paramagnetic nature of molecules.
1322	Which of the following is not a characteristic of dye.	A. It must have suitable colour B. It must be able to fix to fibre C. It must be fast to wash and lights D. It must be highly soluble in water
1323	Which is not an ore of aluminium.	A. Baxuite B. Cryolite C. Monazite D. Corundum
1324	Which of the following dye is used an antiseptic .	A. Methyl orange B. Mercurochrome C. Alizarin D. Bismarck brown
1325	Which of the following is biodegradable pollutant.	A. Domestic waste B. DDT C. Mercury salta D. Aluminum foil
1326	Xenan hexaflouride at 47.7 ^{o}C is	A. Colorless solid B. yellow solid C. Yellow liquid D. Colorless liquid
1327	According to Fajns rules, which one of following results in increased ionic nature of the covalent bond.	A. Larger cation and smaller charges on anion B. Larger cation and larger charge on anion C. Smaller cation and smaller charge on anion D. Smaller cation and larger charge on anion
1328	Co ordinate covalent bond found is formed by the	A. Transference of electrons B. Sharing of electrons C. Donation of electrons D. None of these
1329	What do you call earth and stone missed with the iron oxide	A. Hematite<o:p></o:p> B. Gangue<o:p></o:p> C. Ore<o:p></o:p> D. Residue<o:p></o:p>
1330	pKa value of hyponitrous acid is.	A. -7.0 B. 8.9 C. 4.1 D. 6.6
1331	For a single -component system, the maximum degree of freedom in	A. 1 B. 2 C. 3 D. Between 3 and 6
1332	Metallic bond is treated essentially as in character	A. Ionic B. Covalent C. Polar D. Non polar
1333	Which of the following statement is not correct with respect to group theory.	A. Two elements of a group combine to form a third element of a group B. An element combines with itself to form another element of the group. C. Each element of the group obey associative law of combination D. Each group element has no reciprocal
		A. Increases oxygen content

1334	Water is often treated with chlorine to	B. Kill germs C. Cause sedimentation D. Remove insoluble impurities.
1335	Which of the following instruments is used to measure the optical activity.	A. Refractometer B. Conductivity meter C. Polarimeter D. Torsion meter
1336	The capacity of normal human eye to see the smallest object is _____ micro meter	A. 10000 B. 1000 C. 100 D. 10
1337	Which of the following statement is not related to MOT	A. Atomic orbitals lose their identities B. MOTgives as idea of denationalization C. MOT uses all the orbitals and elections D. It treated bond as purely covalent
1338	Arrange the hydrides group 15 in the order of increasing boiling point.	A. PH3 < AsH3 <SbH3 < BiH3 <NH3 B. PH3 <AsH3< SbH3< NH3 < BiH3 C. PH3 < AsH3<NH3 <SbH3<BiH3 D. NH3 < PH3 < AsH3 < Sb H3 < BiH3
1339	The total number of bond pairs around sulphur and total number of lone pairs around oxygen atoms in the Lewis structure of sulphate ion are respectively.	A. 4, 12 B. 8,12 C. 12,4 D. 6 ,12
1340	According to SHAB, Lewis acid are divided into.	A. Two classes B. Three classes C. Four classes D. None of above
1341	Strong field ligands such as CN	A. Usually produce high spin complexes and small crystal field splitting B. Usually produce low spin complexes and small crystal field splitting C. Usually produce low spin complexes and high crystal field splitting D. Cannot form low spin complexes
1342	A colloidal system in which both the dispersion phase and dispersed phase are liquid is.	A. Smoke B. Emulsion C. Whipped cream D. Mist
1343	Which of the following is an example of super octet molecules.	A. C1F3 B. IF7 C. PCl5 D. All the three
1344	Classical smog occurs in place of.	A. Excess concentration of SO2 B. Low temperature C. High temperature D. Excess concentration of ammonia
1345	An example of acyclic monotterpenoid is	A. a -pinene B. Camphor C. Geranial D. Citral
1346	Pick out incorrect statemtn about K2r2O7	A. It oxidizes acidified solution of H2S to S B. It oxidizes Ki TO i2 C. It oxidizes HCl to Cl2 D. It gives oxygen, when treated with cold conc. H2SO4
1347	Relative order of acidity of oxy acid	A. HClO > HClO2 > HClO3 > HClO4 B. HClO4 > HClO3 >HClO2 > HClO C. HClO3 > HClO2 > HClO > HClO4 D. HClO2 > HClO4 > HClO3 > HClO
1348	The number of mole of the solute dissolved per dm3 of the solution is called.	A. Molality B. Formality C. Normality D. Molarity
		A. Joule Thomson is 0 isenthalpic in nature

1349	Which of the following statements is not related with joule Thomson effect.	B. H2 and He show heating effect C. All gases show change in temperature D. The change in temperature depends on initial temperature and nature of the gas. E. Joule Thomson coefficient is defined as meo= (op/oT)H
1350	The chrome molybdenum steels contain how many percent of molybdenum	A. 0.10 B. 0.20 C. 0.30 D. 0.40
1351	In the Aluminothermite process, aluminium acts as.	A. An oxidizing agent B. A reducing agent C. A flux D. A Solder
1352	Form electron deficient compounds	A. B B. Al C. Both B and Al D. None of above
1353	Water pollution is due to	A. Agricultural discharges B. Swages and other wastes C. Industrial effects D. All the above
1354	Ozone layer of upper atmosphere is being destroyed by	A. chlorofluorocarbons B. SO2 C. Photochemical oxidants O2 and CO2 D. Smog
1355	CoCl3 ,6NH3 has six NH3 molecules that satisfy the valency of the Cu3+ metal ion	A. Primary B. Secondary C. Both A and B D. None of above
1356	"Acids are substance whose aqueous solutions turned blue litmus red and tasted sour" stated by	A. Davy B. Liebig C. Boyle D. Rouelle
1357	Which of the following statements correct regarding copper.	A. It is used in electroplating B. Its salts are used as insecticides C. Its salts are used as coloring materials D. All are correct
1358	The different layers in graphite are held together by	A. Ionic bonding B. Metallic bonding C. Covalent bonding D. Van der Waals forces
1359	In the purification of bauxite , the ore is fused with sodium carbonate in the process	A. Baeyer's process B. Hall's process C. Serpeck's process D. Any of above
1360	Al Cl3 is used in	A. Manufacturing of petrol B. In borax bead test C. Prezervation of food D. All above
1361	What prefix in steel identification means composition varies from normal limits.	A. E B. B C. X D. F
1362	Which of the following hydroxide is getatinous in nature.	A. Fe(OH)3 B. Al(OH)3 C. Ca(OH)3 D. Cr (OH)3
1363	Which ionization Potential in the following equations involves the greatest amount of energy.	A. Na = Na+ + e B. K = K+ +e C. C2+ = C3+ +e D. Ca+ = Ca2+ + e
1364	In confining and growing nano roade CNTs will act as.	A. Template B. Support C. Source of oxidant D. Sieve
1365	The pH of water 7 at 25 ^{o}C if water is heated to 70 ^{o}C . Which of the following should be true.	A. pH will decrees B. pH will increase C. pH will remain constant D. None of these

1366	At high temperature nitrogen combines with calcium carbide to give	A. Calcium cyanide B. Calcium cyanamide C. Calcium nitride D. Calcium cabonate
1367	The reagent which can be used to distinguish acetophenone from benzophenone is.	A. 2,4 -dinito phenyl hydrazine B. Li AlH4 C. Benedict reagetn D. I2 and Na2CO3
1368	Which of the following is domain of industrial ecology.	A. The materials extractor B. The materials processor C. The consumer D. All of above
1369	When two bodies have equality of temperature with a 3rd body they in turn have equality of temperature with each other. This is a statement of.	A. First law of thermodynamics B. Zeroth law of thermodynamics C. Second law of thermodynamics D. Third law of thermodynamics
1370	Which of the following statement is not correct.	A. The element with highest IE belongs to group 18 B. In each period the element with lowest IE belongs to group I C. In each period the element with highest IE is a noble gas D. In the second period as we move from left to right, ionization energy increases requlary.
1371	Which of the following analytical technique is not concerned with atomic spectroscopy.	A. Flame photometry B. Flame emission spectrometry C. Atomic absorption spectrometry D. I-R spectrophotometry
1372	Which of the following statements is not correct. with respect to resonance.	A. The position of atomic nuclei mus be same B. The limiting structures must have same number of paired and unpaired electrons. C. The energy of the various limiting structures must contribute equally D. All above
1373	Which can be purified by sublimation	A. F2 B. Cl2 C. Be2 D. I2
1374	Bromination of n-butane produces.	A. I-bromobutane as the major product B. 2- bromobutane as the major product C. Both I - bromo and 2- bromobutane with equal percentage D. Both i-bromo and 2-bromo products whose percentage depends upon temperature.
1375	In coordination chemistry the donor atom of a ligand is.	A. A Lewis acid B. The counter ion C. The central metal atom D. The atom in the legend that shares an electron pair with the metal
1376	H-Bond has more energy than the van der Waals forces i.e.	A. 1.0 kcal/mole B. 2.0 k cal/mole C. 10.0 kcal/mole D. 20. 0 kcal mole
1377	Which of the following expression is correct.	A. C = n/RT B. C = RT/n C. RT = Cn D. Cn = 1/RT
1378	a-terpioneol is obtained on hydration of which of the following with dilute H2SO4.	A. Citral B. Myrcene C. Linalool D. Limonene
1379	Which of the following statement is not true regarding Open Hearth process.	A. No iron is lost B. The process is economical and simple C. Steel obtained is of high quality D. Scrap iron cannot be used in this process.
1380	The ion that is isoelectornic with CO is	A. CN- B. O2+ C. CO2- D. N2+

1381	Which of the following technique is useful to remove metal ions from an interfering matrix.	A. Solvent extraction B. Electrophorests C. Cataphorests D. Gel permeation
1382	Ca2+ is isolelectronic with.	A. Mg2+ B. Kr C. Ar D. Na+
1383	Formula of orthophosphoric acid.	A. H2PO4 B. H3PO3 C. H3PO2 D. H4P2O5
1384	Which of the following process is involved in getting back nitrogen into atomosphere.	A. Nitrification B. Denitricication C. Ammonification D. All above
1385	Which of the following is raw material not present on the cement.	A. Lime stone B. Gypsum C. Red lead D. Blast furnace slag
1386	Primary structure of protein refers to	A. Amino acid sequence B. Arrangement of peptide chains C. Orientation of amino acids D. Whether is has a or b helix in space structure.
1387	A gas obeying the van Waals equation will closely resemble and ideal gas if	A. The parameters 'a' and 'b' are small B. 'a' is small but 'b' is large C. 'a' is large but 'b' is mall D. None of the above
1388	LPG is use this	A. Vehicles<o:p></o:p> B. Aviation Fuel<o:p></o:p> C. Home D. All above
1389	Rutherford proposed the nuclear model of the atom to account for the result of experiments in which the alpha particles are scattered from metal foils.Which of the following statements in not related to Rutherford observation.	A. An atom consists of central core or nucleus around which the protons exist. B. The nucleus has most of the mass of the atom C. the nucleus consists of protons and neutrons. D. Each distinct atom has a specific number of protons.
1390	The brown colour of the pulp obtained from chemical pulping is due to the present of	A. Chlorine B. Residual lignin<o:p></o:p> C. Sodium hydochlorite<o:p></o:p> D. All above
1391	The property measured in TGA is	A. Change in weight B. Rate of change in weight C. Heat envolved and absorbed D. Change of temperature.
1392	In Nano synthesis new unsual chemical reactions are due to.	A. Non equilibrium system B. Equilibrium system C. Isothermal system D. Adiabatic process
1393	The sum of pH and pOH is aqueous solution is equal to.	A. 14 B. 7 C. zero D. pKw
1394	in monel metal copper is alloyed wiht which metal.	A. Fe B. Mn C. Ni D. All
		A. Be reflected B. Be scattered

1395	When a strong beam of light is passed through a colloidal solution, the light will	B. Be scattered C. Pass unchanged D. Be dispersed
1396	Ground water is threatened with pollution from which of the following source.	A. Domestic wastes B. Industrial wastes C. Agricultural wastes D. All above
1397	Which of the following element has six electrons in the valance shell but cannot exhibit a maximum co valency of six.	A. Sulpher B. Oxygen C. Salenium D. Both A and B
1398	If reaction A has an activation energy of 250 kj and reaction activation energy of 100 kj, which of the following statements must be correct.	A. If reaction A is exothermic and reaction B is endothermic then reaction A is favored kinetically B. At the same temperature the rate of reaction B is greater than the rate of reaction A C. The energy of reaction A must be greater than the energy of reaction B. D. The energy of reaction B must be greater than the energy of reaction A
1399	Which of the following cells is used to produce electricity from chemical reaction	A. Electroytic cell B. Galvanic cell C. Voltaic cell D. Fuel cell E. Both C and D
1400	The concept is also known as proton donor acceptor system.	A. Bronsted Lowery B. Lewis C. Lux Flood D. Usanovich
1401	Valence bond theory is also called as	A. Electron pair theory B. Band theory C. Electron gas theory D. Electron pool theory
1402	Helium contents in the atmosphere by volume.	A. 0.0005% B. 0.0015% C. 0.0001% D. 0.00001%
1403	Hydrolith is the common name of	A. NaH B. CaH2 C. NaF D. CaF2
1404	The substance added to the soil to provide one or more nutrient elements essential for plants growth are called.	A. Growth hormones<o:p></o:p> B. Fertilizers<o:p></o:p> C. Salts<o:p></o:p> D. Minerals
1405	Which of the following statements is not true with respect to atomic spectroscopy.	A. Atoms are simplest form of matter B. Atoms cannot rotate or vibrate as molecules do C. Only electronic transitions within atoms take place D. Band spectra are observed
1406	The rising world temperature will have serious effect on.	A. Agriculture B. Animal production C. Human being D. All above
1407	Which of the following is a component of soap.	A. Sodium sulphate B. Sodium stearate C. Sodium chloride D. Sodium bromide
1408	Which of the following steps in involved in the metallurgy of aluminium.	A. Purification of bauxite B. Electrolytic reduction of alumina C. Refining of aluminum D. All above
1409	Which of the following is not an ore of Cr.	A. Chrome iron B. Nicollite C. Crocisite

		D. Chrome ochre
1410	Indigotin is a dye obtained from indigo plant which belongs to the group of.	A. Substantive dyes B. Mordant dyes C. Vat dyes D. Disperse dyes
1411	Which substances is not used as an additive in paper industry.	A. Glucose B. Starch C. Alum D. None of these
1412	Electron gas theory is able to explain	A. Metallic lusture and optical properties B. Malleability and ductility C. High electrical and thermal conductivity D. All of the above
1413	Which of the following technique is used for separation of volatile components.	A. GC B. HPLC C. FPLC D. TLC
1414	Which of the following are anionic detergents.	A. Sodium salts of sulfonated long chain alcohol B. Ester of stearic acid and polythlene glycol C. Quaternary ammonium salt of amine with acetate ion D. Sodium salts of sulfonated long chain hydrocarbons
1415	In manufacturing of cement crystallization of amorphous dehydration products of clay	A. 500 ^oC to 800 ^oC B. 900 ^oC to 1200^oC C. 1250 ^oC ti 1400 ^oC D. 1000 to 1100 ^oC
1416	Which of the following analytical techniques can be used to extract metal ion chelates.	A. Solvent extractions B. Evaporation C. GC D. Distillation
1417	Monomer of neoprene rubber to	A. 1-chloro 1,3- butadiene B. 2- chlro, 1,3-butadiene C. 2-Bromo -1,3- butadiene D. 2-Methyl 1,3-butadiene
1418	VBT is unable to explain the nature of some of the complexes of.	A. Cobalt B. Copper C. Nickle D. Manganese
1419	The name hydrogen was proposed by.	A. Lavoisier B. Rutherford C. Henry Cavandish D. Scheele
1420	Rectified spirit obtained by formentation contains 5% of water .So in order to remove it, rectified spirit is mixed with suitable quantity of benzene and heated Benzene helps because.	A. It is dehydreating agent and so removes water B. It forms the loweer layer which retains all the water so that alcohol can be distilled off C. It form an azeotropic mixture having high boiling point and thus allows the alcohol to distall over D. It forms low boiling azeotropic mixture which distille over leaving behind pure alcohol which can than be distilled.
1421	Enzymatic action is heat at a fixed	A. Temparature B. pH C. Both of these D. None of these
1422	What refers to the deterioration of material by oscillatory relative motion of small amplitude between two solid surfaces in a corrosive environment?	A. Stray current corrosion<o:p></o:p> B. Microbiologicla corrosion<o:p></o:p> C. Fretting corrosion<o:p></o:p>

		D. None of these<o:p></o:p>
1423	Enfleurage process is ued to extract the essential oils from	A. Bark of plant B. Seeds of plant C. Leaves of plant D. Flowers of plant
1424	Borax exist in the form	A. Ordinary borax B. Octahdral borax C. Borax glass D. All above
1425	The possible sub levels in the n = 4 energy level are.	A. s,p,d B. s,p,d,f C. s D. s,p
1426	In order to understand the nature of H , bond the theory has been suggested.	A. Electrostatic approach B. Molecular orbital approach C. Valance bond approach D. All the above approaches
1427	Retarded reaction are those	A. In which the rate of the reaction is independent of pressure<o:p></o:p> B. In which products are strongly adsorbed on the surface of the solid catalyst C. Which are reversible under all conditions<o:p></o:p> D. For which G is positive<o:p></o:p>
1428	Fullerene or bucky ball is made up of _____ carbon atoms.	A. 100 B. 20 C. 75 D. 60
1429	Which of the following is not an ore of nickel.	A. Pentalandite B. Siderite C. Garnierite D. Nicollite
1430	The hardness of water i s due to the presence of dissolved soluble salts of.	A. Calcium B. Megnesium C. Iron D. All above
1431	Which of the following substance is not present in acid rain.	A. Sulphuric acid B. Nitric acid C. Acetic acid D. Sulphurous acid
1432	Which of the following does not have an a,b, unsaturated carbonyl group.	A. Androsterone B. Oestrone C. Testosterone D. Progesterone
		A. Fine

1433	What does 'F' stand for in AFM.	B. Front C. Force D. Flux
1434	In normal mode of operations of liquid liquid partition, a polar stationary phase is used with a non polar mobile phase Which of the following solvent is used as mobile phase.	A. Ethanol B. Propanol C. Butanol D. Hexane
1435	Which of the following statements is not correct with respect to limitations of flame photometry.	A. Low energy of the exciting source B. Liquid samples are generally used C. Can be employed for direct detection halides or inert gases D. It does not provide informatin about the molecular forms of metals.
1436	A 10% solution of sucrose contains 10 g of sucrose in how much volume of the solution.	A. 10 mL B. 100 mL C. 1000 mL D. 1 mL
1437	The three isotopes of hydrogen differ from one another in	A. Atomic number B. Number of protons C. Nuclear charge D. Nuclear mass
1438	The expected specific waste of paper and allied products industry is.	A. Chemicals B. Paper and fibre residues C. Links D. All above
1439	CFSE for d^7 ion is.	A. 0.8 B. -0.8 C. -1.8 D. 1.8
1440	Petroleum is formed from	A. Domestic animal B. Organisms in sea<o:p></o:p> C. Wild animals<o:p></o:p> D. All above
1441	One of the best fluorinating agent is	A. XeF2 B. XeF4 C. XeF6 D. None of above
1442	The angle of rotation in a polarimeter depends on.	A. Nature of the compound B. Nature of the solvent C. Wavelength of the light used D. All above factors.
1443	The _____ sphere is enclosed in brackets in formulas for complex species, and it includes the central metal ion plus the coordinated group	A. Ligand B. Donor C. Coordination D. Oxiation
1444	All naturally occurring processes spontaneously in a direction leads to.	A. Decrease of entropy B. Increase of entropy C. Decrease in free energy D. Increase in free energy
1445	Which of the following pairs shows diagonal relationship	A. Li and Mg B. Na and K C. Zn and Cd D. Li and BE
1446	For a chemical reaction A _____ produce, the rat of the reaction doubles when the concentration of A is increased by 4 times the order of the reaction is.	A. 0 B. 1 C. 1/2 D. 4
1447	When borax is strongly hented, it gives	A. B2O4 B. Na2B4O7 C. NaBO2 D. NaBO2 + B2O3
1448	The electrolytic method super passes all other methods due to.	A. Furity B. Cheapness C. Easy available D. All above
		A. LiCl < Becl2< Bcl3 < CCl4

1449	Among LiCl, BeCl2, BCl3, and CCl4 the covalent bond character follows the order.	B. LiCl > BeCl2 < BCl3<CCl4 C. LiCl< Becl2 < BCl3 < CCl4 D. LiCl > Becl2 > BCl3 < CCl4
1450	Nitric acid has the property	A. Nitrating B. Reducing C. Redoxing D. None of above
1451	The terpenoid present in oil of lemon grass is	A. Citral B. Geranial C. Nerol D. a- terpineol
1452	In the presence of dilute alkali monosaccharides undergo reversible isomerisation . The reaction known as.	A. Kiliani reaction B. Weermann rearrrangement C. Lobry do Bruyn Van Ekenstein rearrangement D. Mutarotation
1453	An auxochrome is a group which	A. Absorbs in UV region B. Absorbs in visible region C. Absorbs in IR region D. Increase absorption wavelength of chromophore
1454	Which of the following is not an androgen i.e. male sex hormones.	A. Androsterone B. Testosterone C. Oestrone D. All of these are make hormone
1455	The speed of a chemical reaction	A. Is constant no matter what the temperature is. B. Is independent of the amount of contact surface of a solid involved C. Between gases should is all cases be extremely repid because the average kinetic energy of the molecules is great D. Between ions in aqueous solution is extremely rapid because there are no bonds that need to be broken
1456	Which ratio decides the efficiency nano substance.	A. Weight /volume B. Surface area/volume C. Volume/weight D. Pressure/volume
1457	In each period the most electro negative element belongs to.	A. ^{Group -1} B. Group -17 C. Group -2 D. Group -18
1458	The most common beta brase with a composition of 60 % copper and 40% zinc is called.	A. Yellow brase B. Red brase C. Muntz metal D. None of above
1459	Which of the following class of compounds follow the criteria of aromatically.	A. The compounds must have high degree of unsaturation B. they must have the property to undergo addition reactions C. They must have the property to undergo substitution reactions D. They must have the ability to sustain an induced current in NMR
1460	Which of the following steps is involved in quantitative analysis.	A. Sampling B. Conversion of the desired constituent into a suitable form per analysis. C. Measurement of some physical or chemicals property, on which the determination is based. D. All above steps
1461	The main active contaminants of nuclear reactors are.	A. Co- 60 B. Mn -54 C. Sr-60 D. All above
1462	Dry distillation of amino acids with barium hydroxide yields.	A. Acids B. Amines C. Alcohols D. Hydroxy acids
1463	Which of the following is a mode of controlling pollution in big cities.	A. Cleanliness and less use of insecticides B. Proper disposal of organic wastes, sewage and industrial effluents C. Broader roads and shifting of

		factories out of the residential areas D. All of above
1464	Who prepared and explained nano tubes for the first time.	A. Sumio Tijima B. Richard Smaley C. Erick Drexler D. Richard Feynamann
1465	What field of study encompasses procurement and production of metals.	A. Metallurgy<o:p></o:p> B. Geology<o:p></o:p> C. Material science<o:p></o:p> D. Metalgraphy<o:p></o:p>
1466	In the long form of periodic table, elements are arranged according to.	A. Increasing atomic number B. Decreasing atomic number C. Increasing atomic mass D. Decreasing atomic mass
1467	Which of the following statements is not related with entropy.	A. It is a measure of disorder B. It is a measure of unavailable energy C. It is a function of thermodynamics probability D. It is a path function
1468	In the process of electrosmosis	A. Colloidial particles move towards the electrodes B. Both colloidal particles and dis persons medium move C. Only dispersion medium moves to carry the current D. Positively charged colloidal particles move, but negatively charged particles remain stationary
1469	Which of the following elements display maximum tnedency to form P Pi - p PI multiple bonds with itself and with carbon and oxygen.	A. N B. p C. Bi D. As
1470	The formula of Tetraboric acid is.	A. H2BO3 B. HBO2 C. H2B4O7 D. H6B4O9
1471	Among sodium phosphate, sodium sulphate and sodium chloride the solubility in water increases as.	A. Chloride > Phosphate > Sulphate B. Sulphate > Pohosphate> Chloride C. Chloride > Sulphate > Phosphate D. Phosphate > Chloride > Sulphate
1472	The technique which involves the equivalence relation between the quality of electric current passed and quantity of chemical change taking place in the electrochemical cell is called.	A. Voltametry B. Coulometry C. Polarography D. Potentiometry
1473	Arrangement of peptide chains of protein in spec to form helix stucture is referred to as.	A. Primary structure B. Secondary structure C. Tertiary structure D. Quaternary structure
1474	In the reaction RCO2Na + Na OH (CaO) _____ RH, we eliminate carboxylate group as.	A. CO2 B. Na2CO3 C. -CO D. CaCO3
1475	Which of the following statement represent advantages of sanitary Landfill	A. Economical method B. Low initial investment C. Flexible daily capacity D. All above
1476	Bond angle is minimum in	A. H2O B. CO2 C. NH3

		D. CH4
1477	Which of the following is not an alum.	A. KAl (SO4)3 12 H2O B. NaAl (SO4)2 12 H2O C. NH4Fe (SO4)2 12H2O D. FeAl (SO4)2 . 12 H2O
1478	In average composition of a good sample of cement the percentage of silica is.	A. 18.5% B. 20.5% C. 22.5% D. 24.5%
1479	Which of the following cast irons is a high carbon silicon alloy.	A. Gray iron B. White iron C. Malleable iron D. Alloy iron
1480	The second order rate constant can have units.	A. dm-6 mol 2 s-1 B. dm3 mol s-1 C. dm³ mol⁻¹ s⁻¹ D. dm6 mol-1 s-1
1481	Increasing oxygen contents in oxyacids leads to.	A. An increase in thermal stability B. An increase in acid strength C. A decrease in oxidizing power D. All above
1482	The addition of Br2 to cis 2-butene produces.	A. (+) 2,3 - dibromobutane only B. (-) 2,3 -dibromobutane only C. (+) 2,3, dibromobutane D. meso-2,3, -dibromobutane
1483	Acute toxicity is expressed by the term	A. LD50 B. IC50 C. I 1/2 D. Mean life
1484	The melting of nearly all glass is done in a continuous tank furnace. which operates steadily over periods of up to.	A. a day B. a month C. a year D. None of these
1485	Which of the following compounds liberates CO2 on heating.	A. Li2CO3 B. Na2CO3 C. K2CO3 D. All liberate CO2 on heating.
1486	The one in which the acceptor atom is of low positive charge, Large size and has several outer electrons which can be easily excited is a.	A. Soft base B. Hard Base C. Soft acid D. Hard acid
1487	The suffix "ate" at the end of the name of the compiled signifies that it is.	A. Cation B. Anion C. Neutral D. None of above
1488	Which of the following ahs non zero dipole moment.	A. NH3 B. SF6 C. BF3 D. CO2
1489	Which of the following is not a polysaccharide	A. Cellobiose B. Cellulose C. Insulin D. Amylase
1490	An optically active compound	A. _{Must contain at least favour carbons} B. When in solution rotate the plane of polarized light C. Most always contain an asymmetric carbon atom D. In solution always give negative reading in polarimetre
1491	Anything that influence the valence electrons will affect the chemistry of the element Which of the following factors does not affect the valency shell.	A. Valence principle quantum number in B. Nuclear charge (Z) C. Nuclear mass D. Number of core electrons
1492	In proper rotation (Cn) an object is rotated through an angle of.	A. a/n radians B. 2n/n radians C. 3n/n radians D. 4n/n radians
		A. Li B. Na

1493	Among alkali metals, the least metallic element is.	C. Rb D. Cs
1494	The binding site on ribosome t-RNA and m-RNA is provided by	A. Polysome B. Ribosomal RNA C. Codone D. DNA
1495	The function of boiling the sodium extract with conc. HNO3 before testing the halogens is	A. To make solution clear B. To make the solution acidic C. To bring common ion effect D. To destroy CN- and S2- ion
1496	The denationalization involving C - H sigma bond electrons is known as .	A. Conjugation B. Hyperconjugation C. Mesomerism D. Resonance
1497	Which one of the following woul dmake an S_N2 mechanism more likely	A. Bulky substituents near the halogen B. A polar solvent C. A tertiary carbocation intermediate D. A reactive nucleophile
1498	One ppm solution of NaOH Contain 1000 mg of the solute per how much of the volume of the solution.	A. 1000 mL B. 100 mL C. 10 mL D. 1 mL
1499	Which idea of envisioned the construction of nano robots	A. Building nano materials atom by atom B. Destruction of macromolecules to nano ones C. Bothe of the above D. None of the above
1500	Thermocouples have been constructed from	A. Chromel ve elumel B. Copper vs platinum C. Both D. None
1501	Acid rain is caused due to increase in the concentration of _____ in the atmosphere	A. Ozone and dust B. CO2 and CO C. SO3 and CO D. SO2 and NO2
1502	The substance that can form the glassy non-crystalline structure is called.	A. Stabilizers B. Fluxes or modifiers C. Formers D. None of these
1503	A molecule returns from the excited singlet state to the ground singled state with emission of light , This process is known as.	A. Fluorescene B. Scattering C. Phosphorescence D. Chemiluminescence
1504	An example of acrylic monoterpenoid is	A. Dipentene B. Myocene C. a- terpineol D. Limonene
1505	Proteins have characteristics	A. Melting poirn t B. Iso electric point C. Boiling point D. All of these
1506	Inductive effect can be used to explain	A. Dipole moment of chemical bonds B. Strength of acids C. Strength of bases D. All above
1507	In German Silver copper is alloyed with which metal.	A. Zn B. Ni C. Ai D. Zn and Ni
1508	1-Butyne on oxymereuration -demercuration would give.	A. Butanone B. Butanal C. Propanol and methanol D. Propanoic acid and formic acid
1509	Which of the following configuration is associated with biggest jump between second and third IE.	A. 1s2, 2s2, 2p2 B. 1s2, 2s2, 2p6, 3s1 C. 1s2,2s2,2p6, 3s2 D. 1s2, 2s2,2p6
1510	Which of the following hydrocarbon cannot be obtained on reacting chloomethane with sodium metal in the presence of dry ether.	A. C4 H10 B. C2H6 C. C2H4 D. C3H8

1511	SO2 acts as	A. Lewis base B. Lewis acid C. Botha A and B D. None of above
1512	The unit cell having dimensions, a = b=c, alpha = beta= gama not equal 90 ^{o} is known.	A. Cubic B. Trigonal C. Tetragonal D. Monoclinic
1513	Which of the following statements is not relevant to the Plank's quantum Theory.	A. Radiant energy is not absorbed or emitted continuously B. Radiant energy is emitted or absorbed in the form of small packets of energy. C. The quantum oflight energy is called photon D. The energy associated with photon of radiation is directly proportional to the wavelength.
1514	Which of the following technique has flame as a source of excitation energy.	A. UV spectroscopy B. I-R spectrocscopy C. Flame photometry D. Raman spectroscopy
1515	The reverse of photo chemical reaction is called.	A. Phosphorescence B. Chemiluminescence C. Fluorescence D. Photscnaitization
1516	Electronegativity of oxygen is.	A. 2,5 B. 3,5 C. 2,4 D. 2.1
1517	The most harmful components of incomplete combination are generally groped as particulate polyclic matter organic (PPOM) These materials are derivatives of .	A. Benzene B. Naphthalene C. Benz a pyrene D. None of the above
1518	The isoelectric point of a protein or amino acid to.	A. pH at which it does not have any charge B. pH at which it does not have not charge and does not migrate in electric field C. pH at which the concentration of cation is greater than amino D. pH at which the concentration of anion is greater than cation
1519	Group IV A consist elements.	A. 3 B. 4 C. 5 D. 6
1520	In whihc period, the element with least ionization enthalpy belong to	A. Group I B. Group 2 C. Group 17 D. Group 18
1521	Which of the following is not an alkali metal.	A. Potassium B. Francium C. Sodium D. Strontium
1522	On hybridization of one s and one p orbitals we get.	A. Two mutualy perpendicular orbitals B. Two orbitals at 180^o C. Four orbitals directed tetrahedrally D. Three orbitals in a plane
1523	In each period the element with lest electron affinity belongs to.	A. Group 1 B. Group 14 C. Group 17 D. Group 18
1524	The number of Glass products now manufactured is.	A. 25,000 B. 75,000 C. 50,000 D. All of these
1525	Which of the following elements forms maximum number of compounds.	A. Carbon B. Silicon C. Hydrogen D. Fluorine
1526	The stabilization of the dispersed phase in a lyophobic sol is due to	A. Liking for the dispersion medium B. The surface tension of the medium C. The formation of an electrical layer

1526	The stabilization of the dispersed phase in a lyophobic sol is due to	C. The formation of an electrical layer between the two phases D. The viscosity of the medium
1527	Consider the coordination compound Na2[Pt(CN)4] the Lewis and is	A. [Pr(CN)4]2 B. Na+ C. Pt D. Pt2+
1528	Which of the following technique involves the bonding of hydrophobic functional group to solid particle, surface and acts as extracting phase	A. Liquid phase extraction B. Solid phase extraction C. Electrophoresis D. Gel electrophoresis
1529	What is the activation energy of a reaction whose rate constant increases by a factor of 100 upon increasing the temperature from 300 K to 360 K.	A. 27 B. 35 C. 42 D. 69
1530	In diborane (B2H6)	A. The structure is similar to that of C2H6 B. All the atoms are in one plane C. The born atoms are linked through hydrogen bridges D. There is a direct boron boron bond
1531	BCl3 is an example of hybridization	A. sp B. sp2 C. sp3 D. None of above
1532	Which of the following statement is not related with direct use of solar energy.	A. It is used for space heating of buildings B. It can be used to produce electrical power using photovoltaic cells C. It can be used to produce hydrogen gas D. It can be used start motor vehicle
1533	In the Lewis structure of H2SO4 molecule the total number of unshared electrons in valence shell of various atoms is.	A. 8 B. 16 C. 12 D. 20
1534	The noble gases are used due to having property	A. Chomical inertness B. Low boiling point C. Any of a or b D. Both a and b
1535	The stationary and mobile phases in paper chromatography are.	A. ^{Liquid/Liquid} B. Solid /Liquid C. Liquid/Solid D. Gas/solid
1536	The IUPAC name of ethylene oxide is.	A. Epoxy methane B. Oxcethene C. Methoxymethane D. All of the above
1537	The dye which is a constituent of Skiffs reagent used for detection formaldehyde group is.	A. Gentain violet B. Megneta C. Phenolphthalein D. Rosolic acid
1538	Metals are	A. Transparent B. Tranalucant C. Opaque D. None of above
1539	Strongest inter molecular hydrogen bond is formed in	A. H2O B. NH3 C. HF D. H2S
1540	The concentration of OH- ions in a certain household ammonia solution is 0.0025. This ammonia solution is.	A. Basic B. Acidic C. Neutral D. None of above
1541	A drop of a liquid acquires spherical shape because of.	A. Its viscous nature B. Capillary action C. The tendency to acquire minimum surface are D. Its shape
1542	Which of the following radical is not a member of III group	A. Al³⁺ B. Fe²⁺ C. Ca²⁺ D. Fe³⁺

1543	Both the elements are typical non metals.	A. B & Ai B. B & Si C. Al & Si D. Any of above
1544	Zinc oxide is.	A. A basic oxide B. An amphoteric oxide C. An acidic oxide D. A neutral oxide
1545	Which of the following technique is based on the absorption of light radiation.	A. Spectrophotomerty B. Colorimetry C. NMR D. All the above technique
1546	For each value of l. the number of m velocity are.	A. n² B. 2l C. (2l+1) D. (n+1)
1547	The first ionization energies of the elements of the first transition series. (Ti _____ Cu)	A. Increases as the atomic number increases B. decreases as the atomic number increases C. Do not show any change as the addition of electrons takes place in the inner (n-1) d -orbitals. D. Increases from Ti to Mn and then decreases from Mn to Cu
1548	The number of optically active compounds in the isomers of C3H5Br3 is.	A. 1 B. 2 C. 3 D. 4
1549	Coagulation of protein on treatment with heavy motal salts or heating is called.	A. Decolorisation B. Denaturation C. ^{Sedimentation process} D. Reversible precipitation
1550	A terpenoid which as an alcoholic group in the molecule is	A. Citral B. Camphor C. Menthol D. Carvone
1551	Tetra halides do not undergo hydrolysis	A. C B. Si C. Sn D. Pb
1552	The boiling point of water is unexpectedly high because.	A. H2O molecule in linear B. Sp3 hydrogen bonding is involved in the formation of water C. There is hydrogen bonding and consequent association of H2O molecules. D. Oxygen is the first member of the VI group
1553	Which of the following salt is not used in salt bridge to minimize liquids junction potential.	A. KCl B. NH4Cl C. KNO3 D. CaCl2
1554	The electronic configuration of chromium is 4s1, 3d5, The elements tungsten (W) belongs to the same group and has atomic number 74.The configuration of its valence shell is.	A. 5s1, 4d5 B. 6s1, 5d5 C. 6s1, 5d6 D. 6s1, 5d4
1555	The reason why phenylamine is a much weaker base tahn ammonia when each is in aqueous solution to that.	A. Teh ion pair of electron on two nitrogen atom of phenylamine is delocalised over the benzene ring. B. The phenylamine molecule is too large to capture hydrogen ion easily C. Phenylamine is much less soluble is water than is ammonia D. The benzene ring has a tendency to increase the acidity of its substituents.
1556	Which of the following is capable of forming zwitter ion.	A. Amino acids B. Halo acids C. Hydroxy acids D. All of these
1557	Recrystallization is the most common technique of purification of solid organic substances Which of the following statements is not related with characteristics of a suitable solvent.	A. It dissolves the substance on heating B. It readily allows it to separate out in the form of crystal on cooling C. It does not react chemically with

		substance D. It does dissolve the impurities.
1558	The one which is not a purine base	A. Cytosine B. Guanine C. None of these D. Adenine
1559	Which of the following species has highest bond energy.	A. H2 B. T2 C. D D. Cl
1560	Which of the following bonds between carbon -carbon is teh strongest.	A. Sigma bond B. Pi bond C. Double bond D. Triple bond
1561	What refer by the ability of steel to be hardened through to its centre in large section?	A. Malleability<o:p></o:p> B. Hardenability<o:p></o:p> C. Ductility<o:p></o:p> D. Rigidity<o:p></o:p>
1562	A colorless gas with pleasant odour and sweet taste.	A. N2O B. N2O3 C. NO D. N2O4
1563	Ammonium nitrate is sold as a mixture with	A. Soda Ash B. Lime stone C. Zinc D. None of above
1564	How many unpaired electron are there in a strong field iron (II) octahederal compled.	A. 0 B. 1 C. 2 D. 4
1565	The noble gas used or treatment of cancer is	A. Helium B. Argon C. Radon D. Krypton
1566	In statistical mechanics, there exists a function which contains all the information about a macroscopic system. This function is known as.	A. Eigen function B. Wave function C. Partition function D. Distribution function
1567	The important condition for the formation of chemical bond is that.	A. Their electron clouds should not diffuse B. Both atoms should have high electron affinites. C. Both atoms should have same electronegativities D. The process should be accompanied by the lowering in potential energy.
1568	The law which relates the solubility of a gas to its pressure is called.	A. Raoult's law B. Nernst law C. Ostwald's law D. Hennery's law
1569	A system which can exchange energy as well as natter with its surrounding is said to be a/an	A. Closed system B. Inert system C. Open system D. All of above
1570	Estimation of nitrogen in proteins is generally arrived out by the method.	A. Duma's method B. Van Slyke method C. Kjeldahl's method D. Carius method
1571	Carbon dioxide content in atmosphere is	A. 0.0034% B. 0.034 % C. 0.34 %

		C. 0.34 % D. 3.4 %
1572	For a compound to act as a dye it must have	A. A suitable colour B. Ability to fix to fibre C. Both A and B D. None of these
1573	The atomic orbitals are progressively filled in order of increasing energy. This statement is called as	A. Hund's rule B. Aufbau's rule C. (n+1) rule D. Planck's rule
1574	Which of the following statements is false about enantiomers.	A. Rotate plane of polarized light B. Are superimposable mirror images C. Nbonsuperimposable mirror images D. All of the above
1575	In reverse phase chromatography which of the analyte will be retained more on the stationary phase.	A. Semi polar B. Non polar C. Polar D. None of the above
1576	Amino acids are are important in biochemistry which of the following statements is not correct regarding amino acids.	A. These are amphoteric substances tend to undergo internal protein transfer B. In aqueous solutions these substances tend to undergo internal proton transfer C. These for zwitter ion in aqueous medium D. These always contain two amino groups.
1577	Which of the following compounds has highest dipole moment.	A. Dichloromethane B. Chloroform C. Chloromathane D. All above
1578	Which of the following reactions have small enthalpy change.	A. NaOH with HCl B. NaOH with CH3 COOH C. HCl with NH4 OH D. None of these
1579	Disease caused by eating fish found in water contaminated with industrial waste having mercury is.	A. Minamata disease B. Bright's disease C. Hashimoto's disease D. Osteoaclerosis
1580	Glycerol on dehyeration gives	A. Allyl alcohol B. Aerolein C. CHOH = C= CHOH D. -CHO -CHOH -CH2OH
1581	What is a process for making glass reinforced shapes that can be general by polling resin impregnated glass stands though a die.	A. Continuous pultrusion B. Bulk molding C. Vacuum bag forming D. Computational analysis
1582	What element is the most abundant by mass in the Earth's crust.	A. Fe B. H C. O D. K
1583	Perdisulphuric acid is.	A. Marshal acid B. Caro acid C. None of above D. Any of above
1584	The bond length of C = C is	A. 1.20 A^o B. 1.34 A^o C. 1.54 A^o D. 1.68 A^o
1585	Which of the following trace elements may be present in the particulate materials.	A. Cadmium B. Nickel C. Mercury D. Lead E. All of the above
1586	The constant temperature and pressure,the rates of effusion of various gases vary inversely as square root of their denature. This is a statement of.	A. Boyle's law B. Charles's law C. Graham's law D. Daltons's law
		A. Dezincification<o:p></o:p> B. <p class="MsoNormal" style="margin-

1587	What refers to the removal of zinc from brasses?	bottom:0in;margin-bottom:.0001pt;line-height: normal">Graphitization<o:p></o:p> C. Stabilization<o:p></o:p> D. Denitration<o:p></o:p>
1588	Beer's law is followed in	A. Flame photometry B. Atomic absorption spectrophotometry C. Mass spectrometry D. Potentiometry
1589	An indicator for an acid base titration is a	A. Weak acid B. Weak base C. Strong acid D. Strong base E. Both A and B
1590	Which group contains elements that exist as monoatomic molecules.	A. 1 B. 2 C. 14 D. 18
1591	According to the Grothus -Draper law	A. Only absorbed light is effective in producing photo chemical changes B. Only light between certain wavelengths C. Light is effective only for photo chemical reactions is solution D. The light absorbed in proportional to its intensity
1592	The inert gases Ar, Kr and Ke form compounds with water at low temperature and high pressure. These compounds are called.	A. Halides B. Hydrates C. Clathrates D. All of above
1593	CFT can very well explain	A. Color B. Magnetic properties C. Spectra of transition metal D. All
1594	Which of the following carbides reacts with H2O to form propane.	A. Al4C3 B. CaC2 C. SiC2 D. Sic
1595	At constant temperature , the decrease in Halmholts free energy is equal to.	A. Decrease in entropy B. Increase in entropy C. Reversible work done by the system D. All types of work done
1596	The forces which holds the atoms together in a molecule is called	A. Ionic bond B. Covalent bond C. Co ordinate bond D. Chemical bond
1597	The instrument used for measuring fluorescence is known as.	A. Fluorimeter B. Potentiometer C. Flame photometer D. Mass spectrometer
1598	The particle would be stationary in a lattice only at.	A. 273 K B. 0 K C. 298 K D. 373 K
1599	VBT does not edplain	A. Absorption spectra B. Color of transition metal ion C. Heat of formation D. All above
1600	Pick out incorrect statement.	A. NF3 molecule has trigonal pyramidal structure. B. It is practically incoluble in water and is only hydrolyzed, an electric spark is passed through a mixture with water vapour. C. Dipole moment of NF3 is more than that of NH3 D. Nitrogn (III) oxide (N2O3) is an acidic oxide.

1601	The reduction in ozone layer would lead to	A. Temperature chages B. Rainfall failure C. Increase uv radiation on earth D. All above
1602	Which of the following compounds is electrovalent in nature.	A. SO2 B. ICl C. KBr D. CHI3
1603	The bond order for BO molecule is.	A. 2.5 B. 3.0 C. 2.0 D. 3.5
1604	The layer containing petroleum oil and gas is.	A. Above that of water<o:p></o:p> B. Below water<o:p></o:p> C. Between water and sand<o:p></o:p> D. All of above<o:p></o:p>
1605	Which of the following regions of the spectrum would be used to determine the structure of the crystalline solids.	A. Microwave B. X-rays C. Visible D. Infrared
1606	The expression of specific conductance is given by	A. Ls= l/R , l/A B. Ls = L l/A C. Ls = l/L , A/l D. LS = r l/A
1607	Sanger's reagent is	A. Carbobenzyloxy chlride B. Dimethyl amino sulphonyl chloride C. l-Fluoro -2,4-dinitrobnzene D. 2,4- Dinitrophenyl hydrazine
1608	With which one of the following configurations, the lowest value of first IE is associated.	A. ls2, 2s2, 2p6, 3s1 B. 1s2, 2s2, 2p5 C. 1s2, 2s2, 2p6 D. 1s2, 2s2, 2p6, 3s2, 3p2
1609	Stablization of particles and their reactivity is affected by.	A. Surface properties B. Bulk properties C. Regardless to the surface properties D. No of particles
1610	According to the VSEPR theory, the shape of the SO3 molecule is.	A. Pyramidal B. Tetrahedral C. Trigonal planar D. Distorted totrahedron
1611	Elements in the same vertical group of the periodical have same	A. Number of electron B. Atomic number C. Number of valence elections D. Electronic configuration
1612	Which of the following process is involved in the purification of crude metals.	A. Liquation process B. Oxidation process C. Distillation process D. Electro refining
1613	Which of the following statement is false about resonance.	A. It increase the stability of a molecule B. It leads to similar type of bonds C. It increase the reactivity of the molecule D. It decrease the reactivity of the molecule.
1614	The pKa of an acid having ionization constant 1 x 10^{-5} is	A. -5 B. 5 C. 9 D. -9
1615	Which of the following substances act as pollutant.	A. Oils B. Greases C. Toxins D. All above

1616	The common ligands can be arranged in order of their increasing splitting power to cause d-orbitals splitting. This series is called as.	A. Electro-chemical B. Spectro -chemical C. Physico-chemical D. Spectro -electrical
1617	H_2SO_4 is manufactured by	A. The lead chamber process B. The contact process C. Both A and B D. The Ostwald's process
1618	Which of the following is not a component of AAS.	A. Hollow cathode lamp B. Burner C. Detector D. Tungsten lamp
1619	Which of the following reactions is employed to produce ozone in the laboratory.	A. Exposure of air to UV light B. Reaction of F_2 with H_2O at low temperature C. Reaction SO_2 with H_2O_2 D. Passage of silent electric discharge through oxygen
1620	Treatment of phenol with cold dilute nitric acid gives.	A. Only o-nitro phenol B. Only p-nitro phenol C. 2,4,6 -Teinitro phenol D. Mixture of o-and p-nitro phenol
1621	How much amount of NaOH is required to prepare 100 mL of 1 N solution.	A. 80 g B. 4 g C. 40 g D. zero
1622	The correct increasing order of bond dissociation energy for N_2, O_2, F_2 and Cl_2 is	A. N_2 < O_2 < F_2 < Cl_2 B. F_2 < Cl_2 < O_2 < N_2 C. F_2 < Cl_2 < N_2 < O_2 D. N_2 < Cl_2 < F_2 < O_2
1623	Which of the following proportion is associated with the covalent nature of the compound.	A. It conducts electricity in molten stater or aqueous state B. It is a non electrolyte C. It has high m.p. D. It is a compound of a metal and non metal.
1624	Citral when heated with $KHSO_4$ forms.	A. Isoprene B. p-cymene C. p-menthane D. Dipentene
1625	The width of a carbon nano tube is._____ nm	A. 1 B. 1.3 C. 2.5 D. 10
1626	Trimethylamine is a weaker base than dimethylamine is explained by	A. Steric effct B. Resonance effect C. Inductive effect D. All above
1627	Which of the following chemical strong oxidizing agent is used in COD test.	A. $KMnO_4$ B. H_2SO_4 C. CH_3COOH D. $K_2Cr_2O_7$
1628	Allotropic form of tin	A. White tin B. Grey tin C. Rhomic tin D. All above
1629	Which of the following acid radical gives chromyl chorate test.	A. F^- B. I^- C. Cl^- D. Br^-
1630	The number of coordinates required to specify the position of all the atoms in a molecule is called number of degree of freedom. The vibration degrees of freedom of a linear molecule containing N atoms are	A. 2N-5 B. 2N -6 C. 3N -5 D. N-6
1631	Group IV A consist of elements	A. 3 B. 4 C. 5 D. 6
1632	Which of the following elements has the highest melting point.	A. Magnesium B. Calcium C. Strontium D. Berylliium

1633	Dibornae is used	A. Fro high energy fuel B. For welding torches C. as reducing agent D. All above
1634	A process in which no heat enters leaves the system is called.	A. Isochoric B. Isobaric C. Adiabatic D. Reveraible
1635	Which of the following technique describes titrations in which a standard iodine solution is need.	A. Iodometry B. Iodimetry C. potentiometry D. Argentometry
1636	Which of the following is the second anciently known metal.	A. Nickel B. Copper C. Gold D. Silver
1637	At higher altitudes, the boiling point of water is lowered because.	A. Atmospheric pressure is low B. Temperature is low at high altitude C. Atmospherics pressure increase D. None of the above
1638	The commonly used catalyst in the manufacture of H2SO4	A. Fe2O3 with a little CuO B. v2O5 C. Platinized asbestos and MgSO4 D. All above
1639	The glow of the yellow phosphorous as a result of slow oxidation in air is called.	A. Chemiluminescene B. Luminescence C. Biolumineacence D. Photolysis
1640	Which of the following disposal method is used for agriculture wastes.	A. Dump B. Landfill C. Incineration D. Open burning E. All above
1641	The energy gap between tag and eg sets in denoted by	A. A- B. 10 Dq C. Both A and B D. None of above
1642	The formula of bleaching powder is.	A. Ca OCl2 B. CaClO3 C. Ca(ClO)3)2 D. CaOCl
1643	The correct order of ionic radii for the following ions is.	A. S²- < P³⁻ < Cl- < K+ B. Cl- > S2+ > P3- > k+ C. K+ > Cr > S2+ > P3- D. P3+ > S2 > Cl - > K+
1644	The variable valency is generally observed in case of.	A. Transition elements B. Inert gases C. Normal elements D. Non- metallic elements
1645	Manganese steel usually contains how many percent of manganese.	A. 1 to 5 B. 3 to 10 C. 11 to 14 D. 14 to 18
1646	The bond length is measured by	A. X-ray diffraction B. Neutron diffraction C. Microwave spectroscopy D. All of above
1647	Oxidation state of the chromium [Cr(NH3)6]3+ complex ion is	A. +2 B. +3 C. +4 D. +5
1648	The branch of chemistry dealing with the study of reactions in the Uv visible region of the spectrum in known as.	A. Kinetics B. Photo chemistry C. Surface chemistry D. Catalysis
1649	Ca H2 on reaction with water liberates	A. H2 B. O2 C. Botha of these D. None of these
	The configuration of valence shell of certain atom X is 3s2 3p5, which valences can it	A. 1,3 only B. 1,5 only

1650	exhibit.	C. 1,3,5,7 D. 1,3,4
1651	The diameter of a bucky ball is about _____	A. o 1 A B. 1 nm C. o 100 A D. 10 nm
1652	Naphthalene balls are obtained from	A. Carbon B. Coke C. Coal Tar D. All of above
1653	Which of the following is major sink for carbo monoxide.	A. Water B. Soil C. Animal respiration D. Salts dissolved in ocean water
1654	20 micron =_____ nm	A. 20 x10⁻⁹ B. 20000 C. 200 D. 20x10⁹
1655	Various compound corresponding to molecular formula C1H10 are.	A. Functional isomers B. Position isomers C. Chain isomers D. None of the abvoe
1656	Pick out the incorrect statement	A. The geometry around 'N' atom in trimethylamine is pyramidal B. The geometry around N atom in trisilylamine is planar C. The nitrogen atim is trimethylamine is sp2 hybridized whilst in trisilylamine it is sp2 hybridized D. Trisilylamine has donor properties whilst trimethylamine has no donor properties.
1657	The force responsible for dissolution of ionic compounds in water are	A. Hydrogen bonds B. Ion dipole forces C. Ionic bonds D. Van Der Waal forces
1658	Which substance is used as filler or additive in paper making.	A. Starch B. Glucose C. Cellulose D. Maltose
1659	Which of the following equations represent linear free energy relationship.	A. Hammett equation B. Taft equation C. Helmholtz equation D. Differential equation
1660	Glucose and fructose react with which of the following reagent to give same product.	A. Tollen's reagent B. Phenyl hydrazine C. Hydroxyl amine D. All of these
1661	Chlorine gas acts as a bleaching agent only in presence of.	A. dry air B. Moisture C. Sunlight D. Pure oxygen
1662	Which of the following enthalpies is always negative.	A. Enthalpy of melting B. Enthalpy of combustion C. Enthalpy of solution D. Enthalpy of formation
1663	Which of the following statement is not true for carbon.	A. Its forms compounds with multiple bonds B. Its ionization energy is very high C. It undergoes catanation D. It shows inert pair effect
1664	Which of the following techniques is used to separate a mixture of cations.	A. GC B. FPLC C. Ion exchange chromatography D. Size exchange chromatography
1665	Greenish yellow gas with pungent irritating odour	A. Chlorine B. Fluorine C. Iodine D. Bromine
		A. The colloidal particle has a charge distribution at its surface. B. In the immediate vicinity of the

1666	Which of the following statement is not correct regarding the stern theory of charge on colloidal particles.	colloidal particles there is an excess of counter ions C. The greater the concentration and charge of ions in the diffused electrical double layer. the larger is the thickness of the layer D. At large distance from the colloidal particles, the concentration of co-ions and counter ions are almost equal
1667	Which of the following is a natural polymer	A. Nylon B. Leucite C. Cellulose D. Polystyrene
1668	The state of hybridization of carbon in CO2 is	A. sp2 B. sp C. sp3 D. dsp2
1669	It has been observed that if one goes on adding KNO3 solution to a precipitate of AgCl the solubility of these precipitates goes on increasing with increasing concentration of K+ and NO3= ions which are not common to AgCl This is due to which effect.	A. Divers ion effect B. Uncommon ion effect C. Activity effect D. All above
1670	Of the molecules, SF4, XeF4, and CF which has square planar geometry.	A. SF4, XeF4 and CF4 B. Sf4 only C. CF4 only D. XeF4
1671	Which of the following is most acidic.	A. Phenol B. p-nitrophenol C. o-Nitrophenol D. m-Nitrophenol
1672	Ionic reactions mainly take place in.	A. Aqueous solutions and organic solvents of high polarity B. Non aqueous solvents of low polarity C. Gaseous state D. Solid state
1673	Fertilizers are classified into	A. Two major categories<o:p></o:p> B. Three major categories<o:p></o:p> C. Four major categories<o:p></o:p> D. <span style="font-size:11.0pt;line-height:107%; font-family:"Calibri","sans-serif";mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-theme-font:minor-latin; mso-bidi-font-family:Arial;mso-bidi-theme-font:minor-bidi;mso-ansi-language: EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">None of above
1674	The process of removing disolved impurities from a colloidal system, by means of diffusion through a suitable membrane under the influence of an electric field , is called.	A. Electrosmosis B. Electrodialysis C. Electrophoresis D. Peptization
1675	Which of the following is a buffer solution.	A. CH3COOH + NH4OH B. CH3 COOH + HCl C. CH3COOH + NaOH D. CH3COOH + CH3COONa
1676	Atomicity of which of the following pair of elements is not same as hydrogen.	A. Phosphorus, Nitrogen B. Nitrogen, Argon C. Nitrogen, iodine D. Iodine, sulphur
1677	Not a major contributor of engineering ceramics	A. SiC B. SiO2 C. Si3N4 D. BH3
1678	Transition elements, in general exhibit the following properties, except one Name that property	A. Variable oxidation state B. Natural radioactivity C. Tendency to form complexes

	property.	D. Formation of alloys
1679	Which of the following has maximum number of unpaired electrons.	A. Fe3+ B. Fe2+ C. Co2+ D. CO3+
1680	Which of the following is not true of ozone.	A. It is a strong electilizing agent B. It attacks organic compounds containing carbon carbon double bond C. Its molecular is linear and has two different O-O bond lengths D. It is more powerful oxidising agent at molecular oxygen
1681	The use of acids to remove oxides and acids on hot worked steels is known as	A. Tempering B. Picking C. Machining D. Sizing
1682	Polyethylene Glycols are used in the preparation of which tye of detergetns.	A. Cationic detergents B. Anionic detergents C. Non ionic detergent soaps D. None of above
1683	The experimental relationship between rate of the reaction and concentration of the reactants is called.	A. Rate law B. Law of mass action C. Le-Chatelier's principle D. Rate constant
1684	The unit of sodium chloride structure is.	A. Linear B. Cubic C. Tetrahedral D. Square planner
1685	The most electronegative and the most electromotive elements of the first period is	A. H and He B. Na and Cl C. Li and F D. H and He
1686	Variable electrovalency is due to the following reasons.	A. Unstable configuration of core B. Inset electron pair effect C. All of above D. None of above
1687	PCRA stand for	A. Pollution control research association B. Petroleum conversation Research association C. Petroleum control research association D. All of above
1688	Branch of chemistry that deals with the basic principles governing energy changes during various processes is called.	A. Wave mechanics B. Chemical kinetics C. Chemical thermodynamics D. Electro chemistry
1689	Which of the following is the third most abundant element in the nature.	A. Oxygen B. Sulphur C. Aluminum D. Hydrogen
1690	The atomic number of potassium is 19 and that of mangness is 25 Although the colour of MnO4 is dark violet yet the K+ is colourless this is due to the fact that.	A. Mn is a transition element while K+ is not B. [MnO4]- is negatively charged while K+ has positive charge C. The effective atomic number of Mn is [MnO4]- is 26: while for K+ the atomic number is 18 D. The Mn is a high positive oxidation state allows charge transfer transitions.
1691	Which of the following ions does not have the electronic configuration same as that of neon.	A. F- B. O2- C. Na+ D. Ca2+
1692	Chlorination of benzene with excess chlorine in the presence of FeCl3 as Lewis acid gives.	A. Chlorobenzene as a major product B. o-dichlorobenzene as major product C. p-dichloro benzene as an only product D. A mixture of 0- and p- dichloro benzene
1693	Which of the following phenomena is not explained by the classical mechanics.	A. Black body radiation B. Photoelectric effect C. Atomic and molecular spectra D. Heat capacities of solids E. All of the above

1694	The green color of water in a lake is due to	A. Excessive growth of sea weeds B. Algae C. Pollution D. Grass
1695	Which of the following statements is worng.	A. Covalent compounds are generally soluble is polar solvents B. Covalent compounds have low melting and boiling point. C. Ionic solids do not conduct electricity is solid state D. Ionic compounds conduct electricity in the fused state.
1696	CO belong to which group.	A. C_{2v} B. D_{2h} C. C_{av} D. D_{ah}
1697	The Lambert beer law states that	A. Transmission is directly proportional to path length B. Transmission is directly proportional to concentration C. Absorbance is inversely proportional to transmission D. Absorbance is directly proportional to concentration.
1698	Which among the following is insoluble in water.	A. LiOH B. KOH C. NaOH D. RbOH
1699	Commercial detergents contain mainly _____	A. RCOON B. RONa C. RSNa D. All above
1700	Monomers are Teflon is	A. Monochloroethene B. 1,2- Difluoroethene C. 1,1,2- Trifluoroethene D. Tetrafluoroethene
1701	Which of the following iso -electronic ion would require least energy for the removal of electron.	A. Ca2+ B. Cl- C. Ar- D. K+
1702	Alumina is not used as	A. Refractory material B. A medium in chromatography C. An abrasive D. A White pigment
1703	Bases and reducing agents are electron giving agents and also called as.	A. Electrodotic B. Electrophile C. Nucleophile D. None of above
1704	Radon is obtained only in the radioactive decay of	A. Radium B. Thorium C. Actinium D. Any of above
1705	Which one of the following ionsis colourless.	A. Cu+ B. Ni2+ C. Co2+ D. Fe3+
1706	What is defined as an intimate mechanical mixture of two or more phases having a definite composition and a definite temperature of transformation within the solid state.	A. Pearlite<o:p></o:p> B. Eutechtoid<o:p></o:p> C. <span style="font-size:11.0pt;line-height:107%; font-family:"Calibri","sans-serif";mso-ascii-theme-font:minor-latin;mso-fareast-font-family: Calibri;mso-fareast-theme-font:minor-latin;mso-hansi-theme-font:minor-latin; mso-bidi-font-family:Arial;mso-bidi-theme-font:minor-bidi;mso-ansi-language: EN-US;mso-fareast-language:EN-US;mso-bidi-language:AR-SA">Delta solid solution D. None of these

		D. None of these
1707	The process in which ore is heated generally in the presence of air, at temperature below their melting points is called.	A. Calcination B. Roasting C. Fourth floatation D. besemerization
1708	Atomic volume of C, N, O and F are in the order	A. C > N > F > O B. C > N > O > F C. F > O > N >C D. N > C > O >F
1709	In group theory the triple degenerate set is denoted by	A. eg B. t2g C. e2g D. tg
1710	Which of the following fuel is used in flame photometry.	A. Hydrogen gas B. Acetylene gas C. Methane D. Propane E. All above
1711	Two solids A and B have appreciable different solubility in water but their m.p. are very close. The mixture A and B can be separated by.	A. Sublimation B. Distillation C. Fractional crystallization D. Specific rotation
1712	If diesel has cetane number of 50 then the diesel index will be.	A. 36 B. 46 C. 56 D. 66
1713	Which of the following techniques is used to reduce the need for large volumes of organic solvents.	A. Solid phase extraction B. Gel permeation C. Electrophoresis D. TLC
1714	The formula of borax glass is.	A. Na2B4O7 10H2O B. Na2B4O7 5H2O C. Na B4 O7 D. None of above
1715	Which of the following pair on aldol condensation followed by dehydration gives methyl vinyl ketone.	A. HCHO and CH3COCH3 B. HCHO and CH3CHO C. CH3CHO and CH3CHO D. CH3COCH3 and CH3COCH3
1716	Which of the following has the highest melting poing.	A. NaCl B. Li Cl C. KCl D. Rb Cl
1717	Volta metric technique using a dropping mercury electrode is called.	A. Amperometry B. Coulometry C. Polarography D. Potentiometry
1718	Which statement is true.	A. Resonance hybride are inherently unstable. B. Resonance hybride are more static than any individual resonance form C. Resonance hybride are average of all resoance forms resembling the more stabel forms D. None of the above
1719	Attention should be focused on qualitative changes in particle properties as a function of.	A. Particle numebrs B. Particle mass C. Particle size D. Particle density
1720	An electron has types of motion	A. Spin motion B. Orbital motion C. Both A and B D. None of above
1721	Which of the following solution would have the largest depression in freezing point.	A. 1% glucose B. 1 % KCl C. 1 % AlCl3 D. 1 % BaCl2
1722	The rays emitted by the cathode in a gas discharge tube under low pressure and high voltage of electricity are called cathode rays. Which of the following properties are not related to cathode rays.	A. These travel in a straight lines. B. These are deflected by magnetic and electric field. C. Minerals Fluoreace with a characteristic color when placed in a beam of cathode rays. D. These are dependent of the material

		used for the electrode.
1723	Helium oxygen mixture is used by deep sea divers in preference to nitrogen oxygen mixture, because.	A. Helium is much less soluble in blood than nitrogen B. Nitrogen is much less soluble in blood than helium C. Due to high pressure deep under the sea, nitrogen and oxygen react to give poisonous nitric oxide. D. Nitrogen is highly soluble in wateer
1724	How pig iron is usually obtained from	A. iron pyrite B. Limonite C. Hematite D. Siderite
1725	Used in producing intense light in cinematography	A. Xenon B. Krypton C. Radon D. Helium
1726	The internal resistance to flow possessed by a liquid is called its.	A. Fluidity B. Viscosity C. Surface tension D. Turbidity
1727	Arrange the following in order of increasing boiling point.	A. CH3OH < CH3Cl < RbCl < CH4 B. CHOH < CH4 < CH3Cl < RbCl C. RbCl < CH3Cl < CH3OH < CH4 D. CH4 < CH3Cl < CH3OH < RbCl
1728	The designation of an orbital with n =4 and l = 1 in	A. 4 s B. 4 p C. 4 d D. 4 f
1729	Zeigler Natta catalyst is.	A. Pt/PtO B. TiCl4/Al(C2H5)3 C. Pt/Rh D. Pt
1730	TLC belongs to which of the following chromatographic techniques.	A. Ion exchange B. Partities chromatography C. Adsorption chromatography D. Gel permeation
1731	Pauling has suggested that the calculate of energy can be improved by considering.	A. Screening effect B. Polarization effect C. Both A and B D. None of abvoe
1732	Which of the following phenomenon are driven by solar energy.	A. Winds B. Water cycle C. Production of biomass D. All above
1733	Which of the following statement is not correct regarding galvanic cells.	A. Oxidation occurs at the anode B. Ions carry current inside the cell C. Electrons flow around the external circuit. form cathode to anode D. When the e.m.f. of the cell is positive cell reactionis spontaneous
1734	Which of the following liquids has lowest vapour pressure at 25 ^{o}C	A. Benzene B. Chloroform C. Ether D. H2O
1735	The expected specific waste of food industry is.	A. Meats B. Nuts C. Fats or Oils D. All above
1736	A man has to think of alternate sources of energy due to	A. Shortage of vehicles B. Shortage of fossil fuels C. Construction of house D. Running of power plant
1737	Cyclic polymers of ethylene glycol formed by condensation are called.	A. Crown ether B. Brown ether C. Cryptates D. Both A and C
1738	A mixture of ethyl iodide and n-propyl iodide is subjected to Wurts reaction. The hydrocarbon that will nto be formed is	A. n-butane B. n-propane C. n-pentane D. n-hexane
		A. E = E

1739	The process requirieng the absorption of energy of.	A. I – I B. Cl = Cl C. H = H D. O = O
1740	The colloidal solution of arsenic sulphide prefers to absorb	A. NO3 B. K+ C. S2- D. H+
1741	Lead pencil contain	A. Lead B. Lead sulphide C. a mixture of lead and silica D. graphite
1742	Chlorofluorocarbon are widely used as coolants in.	A. Air conditioners B. Clearing solvents C. Aerosol propellant's D. All above
1743	How many oxygen atoms lined up in a now would fit in a one nanometer speace.	A. None an oxygen atoms is bigger than 1 nm B. One C. Seven D. None of the above
1744	Potassium sulphate with 48% to 52% potash, is made from.	A. Potassium phosphate<o:p></o:p> B. Potassium Chloride C. Potassium Nitrate D. None of these
1745	Which of the following is not a biodegradable polymer.	A. Protein B. PVC C. Cellulose D. Nucleic acid
1746	Which of the following compounds combines with hemoglobin.	A. CO2 B. CO C. NO D. N2
1747	Which of the following statement is not relevant with nitrous oxide.	A. It is a colorless and odourless gas B. It is non toxic gas C. It is present in the atmosphere in higher concentration D. It has high reactivity in the lower atmosphere
1748	Solid phase micro extraction is a solvent less extraction technique This technique is used for preparation of samples for analysis by which of the following technique.	A. HPLC B. GC C. TLC D. Electrophoreals
1749	Which of the following gas is not used as carrier gas in GC.	A. Argon B. Nitrogen C. Helium D. CO2
1750	A group that causes deepning of the colour is known as	A. Bathchromic B. Hypsochromic C. Hypochromic D. Hyperchromic
1751	Alkaline hydrolysis of chloroform produces.	A. HCCO B. HCOO - + CO C. H3COH D. CHCL2 OH
1752	Which element out of the following can exhibit a maximum co valency of seven.	A. Chlorine B. Fluorine C. Sulphur D. Both Cl and F
1753	SAN is a polymer of	A. Styrene B. Acrylonitrile C. Both A and B D. Vinyl chloride
1754	Which of the following energy is trapped by the autotrophic organisms.	A. Mechanical energy B. Electrical energy C. Radiant energy D. Electronic energy
1755	Which of the following statements is not related with principal requisites of water for industrial purposes.	A. It should be pure and cool B. It should not contain iron C. It contains less quantity of line D. It must be soft

		D. It must be soft
1756	The particles of about 1 nm need _____ activation energy to enter either aggregation processes or reactions to give to new chemicals.	A. Higher B. Lesser C. N o D. All above
1757	Which of the following agrochemical acts as pollutant.	A. Fertilizers B. Weedicides C. Herbicides D. All above
1758	Proper proportioning of concrete, ensures	A. Resistance to water B. Desired durability C. Water tightens of the structure. D. All
1759	Stable metal ions strictures are.	A. Noble gas structure B. Is electron group structure C. Transition metal in structure D. All of the above
1760	Eosin dye belongs to the group of dyes known as.	A. Nitroso syes B. Triphenylmethane dyes C. Diphenylmethane dyes D. Phthalein dyes
1761	Most electronegative element is.	A. C B. Si C. Pb D. Sn
1762	Pick out the incorrect statement for SO2	A. It turns filter paper moistened with acidified K2Cr2O7 B. It turns starch iodate paper blue C. It does not react with chlorine in presence of charcoal D. It decolourises acidified KMnO4 solution.
1763	Which of the following is not a naturally occurring dye.	A. Indogo B. Indigotin C. Alizarin D. Malachite green
1764	A silver iodide and was prepared by mixing KI and AgNO2 solution with the AgNO2 in slight excess. Which of the following descriptions is correct regarding is not particles.	A. Negatively charged because of the excess of NO-3 ions B. Positively charged because of the excess of Ag+ ions in the AgI lattice C. Negatively charged because I ions are adsorbed from the KI solution D. Neutral
1765	The rate constant of a reaction depends on	A. Concentration of reactants B. Concentration of products C. Temperature D. Time
1766	Sodium reacts with excess of oxygen to form	A. Na2O B. NaO2 C. Na2O2 D. NaO
1767	For one mole a gas, the total kinetic energy is equal to.	A. 2/3 Rt B. 3/2 RT C. 2/3 kT D. 3/2 kT
1768	The ease of hydrohalogenation of alkyl halide with alcoholic KOH is.	A. 3^o > 2^o > 1^o B. 3^o < 2_o <1^o C. 3^o > 2^o < 1^o D. 3^o < 2 ^o > 1^o
1769	Which is not a pollutant from the exhaust of motor.	A. Hydrocarbons B. Carbon monoxide C. NOx D. Fly ash
1770	What type of inter molecular force present in nylon-66^{o}	A. Vander wall B. Hydrogen bond C. Dipole -dipole interactions D. Sulphide linkage
1771	The yellow colour of chromates changes to orange red on acidification, due to the formation of.	A. Cr3+ B. Cr2O3 C. Cr2O7²⁻

		D. Cro3
1772	Which of the following products is obtained when but 2-ene is treated with perchloric acid.	A. CH3CHO only B. CH3COOH only C. CH3CHO and CH3COOH D. CH3CH2COOH + HCOOH
1773	They hydrolysis of methly acetate is a reaction of.	A. First order B. Second order C. Third oirder D. Fourth order
1774	Keeping in view the periodic law and periodic table, suggest which of the following elements should have maximum electronegative character.	A. Oxygen B. Nitrogen C. Fluorine D. Astatine
1775	Which of the following statement is not related to BVT	A. individual orbitals lose their indention B. VBT uses the concept of resonance C. VBT does not explain the paramanhetic nature of molecule D. it uses only valence electron
1776	What is the ratio of stress to strain in a material loaded within its elastic ranger.	A. Poisson’s ratio<o:p></o:p> B. Refractive index<o:p></o:p> C. Modulus of elasticity<o:p></o:p> D. None of above<o:p></o:p>
1777	Turpentine is obtained from._____	A. Oak tree B. Pine tree C. Birch tree D. Lemon tree
1778	Which of the following effects best explains that o-nitro phenol is insoluble in water.	A. Inductive effect B. Resonance effect C. Intramolecular H -bonding D. Isomeric effect
1779	The molar mass of an organic acids is determined by	A. Depression of freezing point B. Elevation of boiling point C. Volumetric method D. Victor Myer's method
1780	The gap between occupied and the unoccupied orbitals is not very large and the conduction of electricity is negligible at lower temperature and appreciable at high temperatures then it will be.	A. Good conductor B. Non conductor C. Semi conductor D. None of the above
1781	A theoretical link between quantum mechanics and thermodynamic is.	A. Electrochemistry B. Kinetic theory of gases C. Spectroscopic analysis D. Statistical thermodynamics
1782	Equivalent conductance is expressed in the units.	A. S cm-1 eq -1 B. S cm eq-1 C. S cm2 eq-1 D. S cm2 eq
1783	The halide which is inert to water is	A. PCl5 B. SiCl4 C. BCl3 D. SF3
1784	NH3 has a not dipole moment while BF3 has zero dipole moment Thsi is because.	A. NH3 is not a planar molecule while BF3 is a planar molecule. B. NH3 is a planar molecule, while BF3 is a planner molecule. C. Fluorine is more electronetative than nitrogen D. Born is more electronegative than nitrogen
1785	Petrol can be saved by	A. Driving at a constant and moderate speed B. Ensuring correct type pressure C. Switching off the engine at traffic

		lights D. All of these
1786	Hydrogen gas will not redue	A. Heated cupric oxide B. Headed ferric oxide C. Heated stannic oxide D. Heated aluminium oxide
1787	Pick out the incorrect statements for transition metals.	A. They have low melting and boiling points B. 5d-element have higher energies than 3d or 4 d elements C. Zr and Hf have almost identical atomic and ionic radii D. They form interstitial compounds.
1788	The IUPAC name of HCOOCH3 is.	A. Methoxy methanol B. Ethanoic acid C. Methyl methanoate D. Methoxy methane
1789	The formula of sulphur sesquioxide	A. SO4 B. S2O7 C. S2O3 D. SO3
1790	The expected specific wastes of textile industry is	A. Cloth residue B. Fibre residue C. Dyes D. All above
1791	CNG is stored under	A. Power genertion B. Electric Generators C. Solvent D. All of above
1792	Which type of polymer the Nylon -06 is	A. Polyamide B. Polyester C. Addition D. Homopolymer
1793	Which of the following method is used for the coventrating of ores.	A. Gravity separation B. Magnetic concentration C. Fourth floatation D. Electrostatic concentration E. All
1794	The nitrogen present in some fertilizers helps plants.	A. To fight against diseases<o:p></o:p> B. To fight against diseases<o:p></o:p> C. To undergo photosynthesis<o:p></o:p> D. To produce protein<o:p></o:p>
1795	The correct order of increasing polar character is.	A. H2O < NHE < H2S < HF B. H2S < NH3 < H2O < HF C. NHE < H2O < HF < H2O D. HF < H2O < NH3 < H2S
1796	An acid base titration involves a neutralization reaction in which an acid is reacted with an equivalent amount of base The titrant is always a strong acid or base The analyte may be	A. Strong acid B. Strong base C. Weak acid and Weak base D. All above
1797	Which of the following statement is not related to applications and limitations of first law of thermodynamics.	A. This law explains why chemical reactions proceed to completion B. It is silent about the source of heat C. It is silent about the direction of heat D. It does not tell us about the reversible process.
1798	The rate of a chemical reaction is proportional to the product of the active mean of the reactants, This is a statement of.	A. Law of dynamic equilibrium B. Le Chatlier's principle C. Law of mass action D. Solubility product principle
1799	iodine is used as a	A. Photography B. Manufacture of dyes C. Analgesic

		C. Analgesic D. All above
1800	_____ remove the remaining color producing a water white sugar syrup	A. Carbon filters<o:p></o:p> B. Centrifuge<o:p></o:p> C. Annealing<o:p></o:p> D. Refining<o:p></o:p>
1801	Which of the following play significant role in depletion of ozone layer.	A. Oxides of nitrogen B. Oxides of carbon C. Oxides of sulphur D. None of above
1802	Which of the following method of analysis is based on diffraction of radiation.	A. Mass spectrometry B. Polarography C. Potentiometry D. Raman scattering
1803	Which of following is used as make up chemical in Kraft process.	A. Na2CO3 B. KCl C. Na2SO4 D. NaOH
1804	Which parameter of a chemical reaction will change with the use of a catalyst.	A. Delta F, change in free energy B. Delta S, change in entropy C. Delta E , change in internal energy D. K, the rate constant
1805	The vapour pressure of a liquid	A. Always increase's with temperature B. Always decreases with temperature C. Is independent of temperature D. Increase up to the boiling point
1806	An stereospecific enzyme in one which catalyses	A. Formation of one stercolsomer B. Reaction of one stereoisomer only C. Both of these D. None of these
1807	Which of the following techniques is used for cleanup of samples prior to introduction into chromatographic column.	A. Paper chromatography B. TLC C. Solvnent extraction D. Solid phase extraction E. Both C and D
1808	A red color gas, on condensing ti gives a dark blue liquid.	A. NO B. N2O C. N2O3 D. N2O4
1809	Casionic polymerization is initiated by	A. BF3 B. NaNH2 C. Bul D. Both b and c
1810	In extraction of iron, the furnace charge consists of iron ore, coke and limestone. The function of limestone is to act as.	A. An oxidation agent B. A reducing agent C. Flux D. Slag
1811	The concept of telluric helisx was developed by	A. Lother meyer B. A.E. de Chancourtois C. New lands D. Doberieiner
1812	Aluminum occurs in nature as.	A. Native B. Combined form C. Both native and combined D. Free
1813	Which of the following is an acceptable value fo the molecularity.	A. 0 B. 2 C. 6 D. 3/2
1814	Which of the following substance is released into environment in the nuclear power plants	A. Iodine -131 B. Argon - 41 C. Sr-90

	plants.	D. Cs- 137 E. All above
1815	Suppose a sample is analyzed for a particular constituent by two different method One can tell whether the two average values are significantly different by applying which of the following test.	A. Student's test B. F test C. Chi square test D. Variance
1816	Compounds consisting of two or more interlocked rings are called.	A. Inclusion compounds B. Cage compounds C. Catenanes D. Crown other
1817	In Ostwald's process of manufacturing nitric acid a mixture of ammonia gas with air is mantained with ratio.	A. 1 : 4 B. 1 :3 C. 1: 8 D. 1 : 10
1818	Which of the following salt is green in colour	A. Mn salt B. Cr salt C. Co salt D. Ba salt
1819	Copper occurs in nature as.	A. Native B. Combined C. Both native and combined D. None of the above
1820	Which of the following sets of quantum number is possible for an electron in a 4f orbital.	A. n = 4,l = 3, m = 4, s = +1/2 B. n = 4, l= 4, m = +4 , s = +1/2 C. n = 4, l = 3, m = +1, s = -1/2 D. n = 4, l = 4, m = +1 , s = -1/2
1821	Which of the following statement is not correct n respect of Arrhenius concept.	A. The concept is applicable only for aqueous systems. B. Neutralization takes place in aqueous mediam only C. TH+ ion cannot remain as such in water D. This concept is applicable for non aqueous system only.
1822	Which of the following element is usually determined by flame photometry.	A. Li B. Na C. K D. All above elements
1823	The pH of the 1.3×10^{-4} NH_4Cl is	A. 1.3 B. 4.0 C. 2.886 D. 3.886
1824	Which type of polymers the Vulcanised rubbers is.	A. Linear B. Cross jinked C. Branch chain D. Any one of these
1825	The number 8.47 is rounded to	A. 8.5 B. 8.4 C. 8.7 D. 8.6
1826	Which of the following statements regarding covalent bond is false.	A. The electrons are shared between atoms. B. The bond in non -directional C. The strength of the bond depend upon the extent of overlapping D. The bond formed may be polar or non-polar
1827	Magnalium is alloy of Aluminium which is used in	A. Scientific apparatus B. Aircraft parts C. Rail road care D. Boat machinery
1828	Which of the following process is used for the conversion of matte is to nickel.	A. Orford process B. Mond's process C. Electrolytio process D. All
1829	Enzymes are	A. Complex non living compunds B. Laving organisms C. Complex protein molecules D. Bacterial colonies
1830	The alkali metal that react with nitrogen directly to form nitrides.	A. Na B. K C. Rb D. Li

		D. Li
1831	Xenon diflouride is obtained by irradiating a mixture of xenon and fluorine with light from a high pressure.	A. Mercury arc B. Tungeston arc C. Xenon arc D. None of above
1832	Noble gases are sparingly soluble in water owing to.	A. Dipole -dipole interactions B. Dipole -induced dipole interactions C. Hydrogen bonding D. Induced dipole -instantaneous dipole interactions
1833	Which of the following have +3 oxidation states.	A. B & Al B. In & Tl C. B & In D. Al & Tl
1834	When FeSO4 is added in the sodium extract the compound formed is.	A. Only Na4[Fe (CN)6] B. Only Fe (OH)2 C. Only Na2So4 D. Mixture of all these
1835	Lewis concept explain the formation of	A. Ionic bond B. Covalent bond C. Co-ordinate bond D. Chemical bond
1836	Which of the following statements is not true about potash alum.	A. Its empirical formula is KAI (SO4)2 12H2O B. Its aqueous solution is basic in nature C. It is used in dyeing industry D. On heating it melts in its water of crystallization
1837	The number of hydrogen bonds boding A _____ T pair is	A. 1 B. 2 C. 3 D. 4
1838	Which of the following is not an adsorption indicator.	A. Eosin B. Bromocrsol green C. Fluorescein D. Phenolphthalein
1839	The half life for a first order reactions 32 s, What was the original concertation if after 2.0 minutes, the reactant concentration is 0.062 M.	A. 0.84 M B. 0.069 M C. 0.091 M D. 0.075 M
1840	Drained sewage has B.O.D.	A. More than that of water B. Less than that of water C. Equal to that of water D. None of the above
1841	Which of the following factors does not effect the rate of the reaction.	A. Pressure B. Temperature C. Concentration D. Catalyst E. All of the above
1842	In graph of atomic volume versus atomic weight the elements corresponding to peaks in the curve belong to.	A. Group 1 B. Group 18 C. Group 4 D. Group 14
1843	A 2M solution of H2SO4 would have how many moles of H+ ion in one liter	A. 1.0 B. 2.0 C. 4.0 D. 5.0
1844	The word 'ceramic' meant for.	A. Soft material B. Hard material C. Burnt material D. Dry material
1845	Which of the following pairs does not represent Lowery acid base pair.	A. H2O+NH3 B. H2O +H2O C. HCL + H2O D. CH3NH2 + BF3
1846	The energy gap between two bands so large that it effectively prevents the promotion of electron from the lower to the higher band such energy gap all called.	A. Ionization zone B. Dissociation zone C. Distinction zone D. Forbidden zone
1847	Peppermint oil contains.	A. Menthol B. Thymol C. a-pinene

		D. Comphene
1848	Commercial or the phosphoric acid is pure.	A. 37.0% B. 82.98% C. 88.25% D. 90.12%
1849	When propyne is treated with equeous H2SO4 in the presence of HgSO4 the functional isomer of the major product obtained in.	A. Propanal B. Acetone C. Propane 2 -nl D. Propanol
1850	A mixture containing S2- and SO4 ions on trating with dil HCl will produce	A. H2S gas B. SO2 gas C. H2S and SO2 gas D. CO
1851	The size of quantum dot is _____m	A. 5 B. 5 x 10⁻⁹ C. 5 x10⁻¹⁰ D. 5 x10⁻¹¹
1852	The oxidation state of Pt in Xe+ [Pt F6] is	A. +4 B. +5 C. +6 D. None of these
1853	Potassium crystallizes in a body centered lattice. Hence, the coordination number of potassium in potassium metal is.	A. 4 B. 6 C. 8 D. 12
1854	The metallic character of group 14 elements	A. Decreases from top to bottom B. Increases from top to bottom C. Does not change gradully D. Has no significance
1855	The electrolysis of molten metal hydride will produce dihydrogen gas.	A. At cathode B. At anode C. At both the electrodes D. At none of the electrodes
1856	The structure of SO2	A. Linear B. Angular C. V-shaped D. Planner
1857	_____ is heat treatment cycle that prevents glass from harmful stress.	A. Forming B. Annealing C. Batching D. None of these
1858	Which of the following statement is not correct with respect to electrometric effect.	A. It is permanent effect B. It is brought into play instantaneously at the demand of attacking reagent C. It proceeds a polar addition reaction D. The original electronic condition is restored after the removal of tacking regent.
1859	The secondary valency of Conc. CoCl3. 6NH3.	A. 2 B. 4 C. 6 D. 8
1860	Which one of the following statement is incorrect in relation to ionization enthalpy.	A. Ionization enthalpy increase for each successive electron B. The greatest increase in ionization enthaly is experienced on removal of electron from core noble gas configuration C. End of the valence electron is marked by a big jump in ionization enthalpy D. Removal of electron from orbitals bearing lower value to easier than from orbital having highest n value.
1861	What is the ASTM tension testing designation for standard method for steel products.	A. A 370 B. E 345 C. E8 D. E 9
1862	Alnico is an alloy containing how many percent nickel.	A. 10% B. 14% C. 18% D. 22%
1863	The electron gain enthalpy of chlorine is -349 Kj mol-1 ionization energy of Cl would be	A. -349 kJ mol -1 B. 349 kJ mol-1

1863	The electron gain enthalpy of chlorine is -349 KJ mol-1 Ionization energy of Cl would be:	C. -698 kJ mol-1 D. 698 kJ mol-1
1864	Which of the following group reagent is used for III group of basic radical.	A. Dilute HCl B. H2S + HCl C. NH4OH + NH4Cl D. NH4OH + H2S
1865	What element constitutes the major component of most bronzes.	A. Tin B. Zinc C. Carbon D. Aluminum
1866	Electronegativity is given by	A. Average of first and second ionization energies. B. Average of first and second electron affinites C. Average of ionization energy and electron affinity D. None of the above
1867	The term accuracy refers to how near the observed value is to.	A. Mean value B. Low value C. True value D. Standard value E. Both C and D
1868	Which of the following detector is used in HPLC system.	A. Differential refractometer detector B. UV detector C. Diode array detector D. All above
1869	According to recent view which is the correct representation of hydrated proton in aqueous solutions.	A. H+ B. H9O3+ C. H9O4+ D. H2O+
1870	Isotopes are atoms whom nuclei have the same atomic number but different mass numbers. A specific isotope has an atomic number of 18 and a mass number of 35. How many electrons are there in the neutral atom.	A. 17 B. 18 C. 34 D. 35
1871	Lux -Flood concept is a dono-acceptor system of.	A. Proton B. Electron pair C. Neurtron D. Oxide ion
1872	The different types of glass are.	A. A- glass, C-Glass, E-Glass and S-Glass B. A-Glass, B-Glass, E-Glass, S-Glass C. AR -Glass, C-Glass, E-Glass and S -Glass D. A-B Glass
1873	For highly paraffine , crude oil, the characterization factor will be in range of	A. 11.5-12.5 B. 12.5-13.0 C. 13.5-14.0 D. 13.4-15.0
1874	Which of the following has hexagonal structure.	A. Sodium chloride B. Potassium choride C. Diamond D. Graphite
1875	In the metallurgy of iron, when limestone is added to the blast furnaced, the calcium ion ends up in	A. Slag B. Gangue C. Metallic calcium D. Calcium carbonate
1876	The Langmuir adsorption iso therrn shows that the amount of adsorbed gas per gram of the solid is equal to.	A. ap/1+bp B. ap+1/1-bp C. 1+ap/1-bp D. a(1+bp)
1877	Which of the following pollutants results from chemicals petroleum and paper industries.	A. SO2 B. CO C. Hydrocarbons D. All above
1878	A terpenoid which has as alcoholic group in the molecule is.	A. Citral B. Camphor C. Menthol D. Carvone
1879	pH of pure water at 25 ^{o}C. kw = 1 x 10^{-4}	A. 0 B. 7 C. 14 D. None of above

1880	Usually the rate of the reactions is expressed as.	A. mol dm-1 B. mol dm-3 s-1 C. mol dm-2 s-1 D. mol 2 dm-3 s-1
1881	Has maximum property of catenation.	A. C B. Si C. Sn D. Pb
1882	Example of linear geometry	A. XeF2 B. F2 and HgCl2 C. CdI2 AND Ag Cl3 D. All of the above
1883	The light source in AAS used is	A. UV light B. Visible light C. Radio waved D. Hollow cathode lamp
1884	Detergents are known to pollute revers and water ways. However, detergents can be made biodegradable and pollution free by taking.	A. cyclic hydrocarbon chain B. Shorter hydrocarbon chain C. Unbranched hydrocarbon chain D. Benzenoid hydrocarbons
1885	Which of the following pollutant is not primary pollutant.	A. Ash B. Smoke C. SO3 D. SO2
1886	The unit of sound pressure level is	A. Pascal B. Decibel C. Newton D. Ampere
1887	Gases and dust particles are removed from H2SO4 by	A. Tydal effect B. Drying tower C. Absorption tower D. Contact converter
1888	What combination of elements has high electrical resistance high corrosion resistance, and high strength at red hear temperatures, making it useful in resistance heating.	A. Aluminium bronze B. Nichrome C. Hastelloy D. None of above
1889	In group 17, the element with highest first ionization enthalpy belongs to.	A. Period 1 B. Period 2 C. Period 7 D. Period 6
1890	Which of the following is not a characteristics of terponoids.	A. They are pleasant smelling liquids B. They are steam volatile C. They are nitrogenous bases D. They are insoluble in water
1891	Carbon in wrought iron is present as	A. Silicon carbide B. Iron carbide cementite C. Graphite D. Partly as iron carbide and partly as graphite
1892	Chief source of water and soil pollution in	A. Mining of ores B. Thermal power plant C. Agro industry D. All the above
1893	The most promising technique for solar production of electricity is.	A. Dry cell B. Battery C. Solar cell D. None of above
1894	Which of the following test is not shown by proteins.	A. Xanthoproten test B. Ninhydrin test C. Hopkin cole test D. Muliken Barker test
1895	Which substance has the greatest lattice energy.	A. CuBr B. MgO C. KI D. NaF
1896	The IUPAC name of HOCCH2CH2CH2COOH is	A. 4- formylbutanoic acid B. 5- formylpentanoic acid C. 4- carboxybutanal D. 5- carboxypentanal
		A. SO2 B. SO3

1897	Which of the following gas form weakly acidic sulphurous acid	B. SO_3 C. NO_2 D. NO
1898	Ozone hole refers to.	A. Black hole B. Decrease to thickness of ozone layer in stratosphere C. Decrease of thickness of ozone in troposphere D. Increase concentration of ozone in the atmosphere
1899	The velocity possessed by maximum fraction of molecules at a given temperature is called.	A. Average velocity B. Root mean aquare velocity C. Most probable velocity D. None of the above
1900	The electrical conductivity of a nano tube is _____ times that of copper.	A. 10 B. 100 C. 1000 D. 1/100
1901	A compound with an congruent melting point decomposes on heating into.	A. A liquid of the same composition as the solid B. A new solid phase and a solution with a compositional from that of the solid phase C. A new solid phase and a solution with the same composition as that of the solid phase D. A solution of fixed composition
1902	1-Chlorobutane on reaction with alcohols potash gives.	A. 1- butane B. 1-butanol C. 2- butane D. 2- butanol
1903	The addition of HCl in the presence of poroxule does not follow anti Markovnikov's rule because.	A. HCl bond is too strong to be broken homolytically B. Cl atom is not reative enough to add on to a double bond C. Cl combines with H to give back HCl D. HCl is a reducing agent.
1904	Which of the halogens has lowest bond energy.	A. Cl_2 B. Br_2 C. F_2 D. I_2
1905	All halogens exist as covalent molecules.	A. Monoatomic B. Daitomic C. Triatonic D. Tetra atomic
1906	The percentage of nitrogen in Urea is _____%	A. 46 B. 37 C. 82 D. 50
1907	Which name is associated with the rules which help in predicting the portability of anion.	A. Soddy B. Slater C. Fajan D. Linus pauling
1908	Soap and detergent remove the direct form clothes due to.	A. Osmosis B. Gravity C. Lowering of interfacial tension D. Diffusion
1909	The multiplicity of the electronic state is equal to.	A. S + 1 B. 2S + 1 C. 2S - 2 D. 2S + 2
1910	The emission of light in a biological reaction in known as.	A. Fluorencence B. Phosphoreacence C. Biolumineacence D. Phtolysis
1911	The theoretical plate in chromatography is represented by how many equilibrium step	A. One B. Two C. Three D. Four
1912	Which of the following will have the largest pH?	A. O.1 N HCl B. 0.1 N CH_3COOH C. 0.1 N NaOH D. 0.01 N NaOH

1913	In Pakistan how many units are involved to the production of glass.	A. 20 B. 25 C. 30 D. None of these
1914	Carbides because of their hardness are	A. Ionic carbides B. Interstitial carbides C. covalent carbides D. Any of above
1915	Which of the following is not a true characteristics of a catalytic reaction.	A. The amount and chemical composition of the catalyst remains unchanged after the reaction B. The catalyst does not intiate a chemical reaction C. The reaction in which product also act as catalysis are called autocratically reactions. D. The catalyst shifts the equilibrium position of a reaction in a favorable direction
1916	Which of the following alkyl halide undergoes nucleophilic substitution reaction via the formation of a carboncation.	A. 1-chloro -2 methyl propane B. 2- chlro-2-methyl propane C. 2- chloro butane D. 1-Chloro, 3,3- dimethyl pentane
1917	Which of the following is renewable energy source.	A. Moon B. Wind C. Sun D. Ocean
1918	Which of the following is not a pyrimidine base.	A. Uracil B. Thymine C. Cytosine D. Guanine
1919	Which of the following salt is water insoluble.	A. K2SO4 B. Na2SO4 C. BaSO4 D. None of abvoe
1920	The compound insoluble in acetic acid is.	A. Calcium oxide B. Calcium carbonate C. Calcium oxalate D. Calcium hydroxide
1921	Pick out the incorrect statement.	A. Red phosphorus consists of a complied chain structure and black phosphorus has a layer structure. B. Nitrogen shows a little tendency for catenation, because N-N a single bond is very strong. C. The xamimum number of covalent bonds formed by nitrogen is four, since it has no d-orbitals in its valence shell D. The group 15 elements do not form M5+ ions, but +5 oxidatin state is realized only through covalent bonding.
1922	Each of the following compound react with Grignard's reagent to form alkane exxcept.	A. Ethanal B. Ethanoic acid C. Ethanol D. Ethync
1923	The ration of thermal conductivity of silver to that of a carbon nanotube is.	A. 100 : 1 B. 1 :100 C. 10:1 D. 1:10
1924	Among the elements A, B,C and D having atomic numbers 7,8,9 AND 12 Respectively, the element with smallest size and highest IE is.	A. A B. B C. C D. D
1925	Group IV A consist of elements.	A. 3 B. 4 C. 5 D. 6
1926	Transition metal possess	A. Definite color B. Catalytic power C. Both A and B D. None of above
1927	Oxidative enzymes are responsible for	A. Biological processes B. Biological oxidation C. Biological hydrolysis D. Biological isomerisation

1928	The point group of XeOF4 is.	A. C6v B. C4h C. D4h D. D2h
1929	LiAlH4 is most useful reducing agent It reduce to alcohol	A. Aldehydes B. Ketone C. Carboxylic acid D. Any of above
1930	The co ordination number of atoms in a hexagonal closed packed structure is	A. 2 B. 6 C. 12 D. 4
1931	Which of the following statement is not correct with respect to hydrolytic cycle.	A. It is the major constituent of the lithosphere B. Water covers about 83% of the earth's surface C. it is essential requirement of all the organisms D. Water covers about 73% of the ear5th's surface.
1932	All steroids on heating wish solenium give	A. phenanthrene B. Cholesterol C. Diels hydrocarbon D. Isoprene
1933	A mordants is substance which in	A. Coloured B. Leuco -base of a dye C. Fixes dye on the fabric D. All of these
1934	Nitrogen (N2)) is relatively unreactive because.	A. Its electronegativity is high B. Its dissociation energy is large C. Its atomic radius is small D. It is the first element of group 15
1935	Thermogravimetic analysis has application is which of the following fields	A. Gravimetric analysis B. Discovery of new methods ofseparation C. Determination of purity and thermal stability D. All above
1936	Which of the following statement is not correct with respect to limitations of Hammett equation.	A. It is only applicable to aromatic systems B. Only applicable to aliphatic systems C. It is not valid for m-substituent
1937	Which of the following concentration term is used in respect of standard solutions.	A. Normality B. Formality C. Molarity D. All of above
1938	Major principle underlying the sustainability of natural ecosystems is that they run on.	A. Electric energy B. Solar energy C. Wind energy D. None of the above
1939	The rate at which a substance reacts depends on its.	A. Molecular mass B. Active mass C. Equivalent mass D. Molar mass
1940	Which one of the following pairs are chemically dissimilar.	A. Na and K B. Ba and Sr C. Zr and HF D. Ca and Zn
1941	Which of the following statement is correct.	A. The wavelength of phosphorescence is less than the wavelength absorbed B. Teh transition from T₁ to S₀ without the emission of light is called phosphorescence C. The combination CO2 and water in plants, in the presence of chlorophyll, is an example of bioluminescence. D. Population inversion is a necessary condition for laser action
1942	The chemical method of separation in which the analytes to be separated are distributed between two phases, one of which is stationary phase while the other moves in a definite direction This technique is known as.	A. Electrophoreals B. Chromatography C. Solvent extraction D. Catachreals
	Which of the following compounds would you use in order to obtain a crystalline	A. 2,4 Dinitrophenyl hydrazine B. Nitrous acid

1943	Which of the following compounds would you use in order to obtain a crystalline derivative of an aromatic amine.	B. Nitrous acid C. Benzoyl chlride D. None of these
1944	Cytosine a pyrimidine base pairs with	A. Guanine B. Thymine C. Adenine D. Any of these
1945	Pig iron is also called.	A. Cast iron B. Steel C. Wrought iron D. Stainless steel
1946	In which of the following group, each member given a positive iodoform test.	A. Methanol, ethanol, propanone B. Ethanol, isopropyl alcohol, methanol C. Ethanol, ethanal, isopropyl alcohol D. Propanal 2-propanol, propanone
1947	The dyes which are produced on the fibre in suit by reactions are known as.	A. Mordant dyes B. Fast dyme C. Ingrain dyes D. Disperse dyes
1948	Which of the following has the highest melting point.	A. NaCl B. KCl C. MgO D. BaO
1949	'A line, a point or a plane about which a symmetry operation is performed, is known as.	A. Symmetry operation B. Symmetry element C. Reflection D. Inversion
1950	Which of the following health effect is caused by cadmium.	A. Hypertension B. Cardiovascular problem C. Kidney damage D. All above
1951	Consider the coordination compound K2[Cu(CN)4] A coordinate covalent bond exists between	A. K+ and CN- B. Cu2+ and CN- C. K_ and [Cu(CN)4]2+ D. C and N in Cn
1952	Which of the following element has six electrons in the valence shell but cannot exhibit a maximum co valency of six.	A. Sulphur B. Oxygen C. Selenium D. Both A and B
1953	The number of hydrogen bond present in G -C pair is	A. 1 B. 2 C. 4 D. 3
1954	Which of the following elements has the highest ionization energy.	A. Na B. Si C. Ar D. Cl
1955	Dolmite is a mineral whose formula is.	A. CaCO3 B. Mg CO3 C. CaCO3, MgCO3 D. CaSO4
1956	The acetylene molecule contain a	A. Single bond B. Double bond C. Triple bond D. Co ordinate bond
1957	Which two atoms of hydrogen combine to form a molecule of hydrogen gas. the energy of the hydrogen molecule is.	A. Higher than that of separate H atoms B. Equal to that of separate H atoms C. Lower than that of separate H atoms D. Sometimes lower and sometimes higher than that of separate H.
1958	Which of the following process is not related with cannot cycle.	A. Iso thermal expansion B. Adiabatic expansion C. Isothermal compression D. Isobaric compression
1959	Which of the following is the best indicator for titration of NH4OH with HCl.	A. Methyl red B. Methyl orange C. Eosin D. Phenolphthalein
1960	Which of the following cast irons is a high carbon, iron carbon silicon alloy.	A. Deorizers B. Deoxidizers C. Deoxifiers D. Deterrent

1961	The specific gravity of H2SO4 is	A. 1.37 B. 1.84 C. 1.17 D. 1.57
1962	What type of steel has 0.8 % carbon and 100% pearlite.	A. Austenite B. Eutectoid C. Hyper eutectoid D. Silver steel
1963	According to the Debye-Huckel theory of strong electrolytes, and ion moving in an atmosphere of oppositely charged ions experience a drag This effect is known as	A. Aaymmetric effect B. Electrophoretic effect C. Inter ionic effect D. Concentration effect
1964	Which of the following statement is not true in case of catalytic reforming.	A. High temperature results in loss of reformate yield B. High naphthenic stock require high space velocity C. Presence of water decrease the hydrocracking activity. D. None of above
1965	Elements of group 14 have the electronic configuration of their outer shell as	A. ns2 np3 B. ns2 np2 C. ns2 np6 D. ns2
1966	Which of the following is not strong electrolytes.	A. HCl B. H2SO4 C. HNO3 D. CH3COOH
1967	The soap and detergent are source of organic pollutants like.	A. Glycerol B. Polyphosphates C. Sulphonated hydrocarbons D. All of these
1968	The rate constant of a reaction has same units as the rate of the reaction The reaction is of.	A. Second order B. First order C. Three order D. Zero order
1969	In TGA, the width loss curve depends on the which instrumental factors.	A. Furance heating rate B. Recording or chart speed C. Furnace atmosphere D. All
1970	Combination of a -amino acid through which linkages results result in formation of protein	A. Ester linkage B. Glycosidic linkage C. Lactum linkage D. Peptide linkage
1971	The formula of sulphur sequioxide	A. SO4 B. S2O7 C. S2O3 D. SO3
1972	Eutrophication is process which involves	A. Depletion of ozone layer B. Increase in the concentration of ozone in water C. Decrease in the concentration of dissolved oxygen in water by algae D. Decrease in the level of SO2 in air
1973	Which of the group 13 element does not form M (III) idodie.	A. Al B. Ga C. Ti D. In
1974	The rusting of iron is catalyzed by which of the following.	A. Fe B. H+ C. O2 D. Zn
1975	Which is the following is not a buffer.	A. H2CO3/HCO3 B. NH4Cl/NH4OH C. CH3COOH/CH3COONa D. NH3OH/CH3COOH
1976	When HCl is titrated against NaOH , the pH at the equivalence point is.	A. zero B. > 7 C. < 7 D. 14
1977	C - O bond lengths in carboxylate anion are equal due to.	A. Resonance effect B. Inductive effect C. Resonance of identical contributing

		structures. D. Hyperconjugation
1978	Pi bond is formed	A. By the overlapping of atomic orbitals on internuclear axis B. By transference of electrons C. By sidewise overlapping to half filled p orbitals D. By overlapping of s-orbitals with p orbitals
1979	In a system of designating wrought aluminum alloys a sour digit number is used what does the first digit indicate.	A. The purity of aluminum B. The identity of the alloy C. The alloy group D. All of above
1980	Select a basic amino acid.	A. Glycine B. Cystine C. Alanine D. Lysine
1981	Concentration polarization arises because of the	A. Different concentrations of solutions in the two half cells B. Changes in the concentration of electrolyte around the electrode from bulk concentration C. Reversible nature of the cell D. Variation in temperature during measurements
1982	Which of the following is an azo dye.	A. Congo red B. Rhodamine B C. Ertythroein D. Paraosaniline
1983	Which of the following is a false statement.	A. Halogens are strong oxidizing agent B. Halogens show only (-I) Oxidation state C. Hf molecules from intermolecular H-Bonds D. Fluorine is highly reactive
1984	Is a chain silicate	A. Olivine B. Tremolite C. Beryl D. Zeolite
1985	When 0.01 moles of NaOH are added to a buffer solution, its pH changes from 4.745 to 4.832 WHAT IS ITS.	A. 0.115 B. 0.900 C. 0.015 D. 0.215
1986	In 1952 who popularized the use of CFT for inorganic chemist	A. Bethe B. Orge C. Van Vleck D. Werner
1987	Which of the following reaction cannot be used for the synthesis of a amino acids.	A. Gabriel phthalimide B. Streckers synthesis C. Sorensen synthesis D. Schmidt synthesis
1988	Codon for amino acid glycinc is not represented by base pair	A. GCA B. GGC C. GGA D. GGU
1989	Which is not true about polymers.	A. Polymers do not carry any charge B. Polymers have high viscosity C. Polymers scatter light D. Polymers have low molecular weight
1990	The alkali metal with highest melting point is	A. K B. Na C. Li D. Ca
1991	What letter suffix steel identification means that it is steel with boron as an alloying elements.	A. xxL xx B. xxBxx C. xxHxx D. xxKxx
1992	Arrhenius concept explained	A. Constant heat of neutralization B. Quantitative determination of acid base strength C. Catalytic property of acid D. All above
		A. Steam distillation

1993	The most suitable method of separation in mixture of o-and p- nitrophenol is.	A. Steam distillation B. Chromatography C. Ion-exchange D. Sublimation
1994	Monomer of Nylon -6 is	A. Adipic acid B. Hexamethylenediamine C. Caprolactam D. All of these
1995	Black and white photographic film contain small grains of.	A. Silver bromide B. Silver cholride C. Silver iodide D. Any of above
1996	Which of the following has the maximum ionic character.	A. HF B. HCl C. HI D. HBr
1997	Opticla tweezers	A. Are used to remove facial hair with miniaturized laser beams B. use light to manipulate particles as small as single atom C. Are a nanotechnology bases tool for stamp collectors D. Don't exist
1998	Which of the following statements is not correct regarding electromagnetic spectra?	A. The frequency of microwave is less than uv B. The velocity of X-rays is more than uv C. Cosmic rays have shorter wave length than radio waves. D. The frequency of uv is greater than visible rays.
1999	The gases that are responsible for green house effect are.	A. CO2 & CH4 B. CFC C. N2O D. All above
2000	A catalyst increases the rate of a reaction because.	A. It provides the necessary energy to the colliding molecules to cross energy barrier B. It decreases the heat of the reaction C. It decreases the order of the reaction D. It provides a different path of lower activation energy.
2001	The special chrome steels of the stainless variety contain how many percent of chromium.	A. 4 to 8<o:p></o:p> B. 11 to 17<o:p></o:p> C. 9 tp 10 D. 12 to 15
2002	Gravimetric method is based on which of the following property.	A. Volume of a liquid B. Volume of gas C. Mass of substance D. Viscosity
2003	On the basic of CFT the bonding between the metal and ligand is totally	A. Ionic B. Covalent C. Coordinate D. Metallic
2004	Which of the following physical property forms the basis of radio chemicals methods of analysis.	A. Absorption of light B. Emission of light C. Radioactivity D. Thermal conductivity
2005	Which of the following has the greatest metallic character.	A. Na B. Mg C. Al D. Si
2006	An element having low IE and low EA is likely to belong to.	A. Group IA B. Group IB C. Group VII A D. Group VIII
2007	In the forth floatation process for the purification of ores, the ore particles float because.	A. They are light B. Their surface is not easily vetted by water C. They bear electrostatic charge D. They are insoluble

2008	Presence of nitrogen in organic compound to tested as.	A. Nitrogen gas B. NH3 C. NO D. Amide
2009	Solid sodium chloride does not conduct electricity be cause.	A. In solid NaCl, no ions are present B. Solid NaCl is covalent in nature C. In solid NaCl, there is no mobility of ions D. In solid NaCl, there are no electrons.
2010	Which of the following statement is incorrect about rock salt type	A. It has for arrangement of Na+ B. Na+ and Cl- ions have coordination number of 6:6 C. A unit cell of NaCl metals have rock salt type structure. D. None of them
2011	Titanium dioxide shows the lattice strcuture.	A. Flluorite B. Rutile C. Wurtzite D. Zeolite
2012	Which of the following linear polymer.	A. Polypeptide B. Protein C. Starch D. Phenol formaldehyde resin
2013	Petroleum is mixture of	A. Petrol B. Diesal C. Petroleum D. All of these
2014	For quality control of Portland cement, the test essentially done is.	A. Setting time B. Soundness C. Tensile strength D. All
2015	Which of the following is not a characteristics of solids.	A. Definite shape B. Definite mass C. Definite volume D. Fluidity
2016	Which of the following gas protects us form harmful effect of uv radiation.	A. SO2 B. NO2 C. CO D. O3
2017	Which of the following methods is used in qualitativ eanalysis.	A. Physical method B. Chemical method C. Instrumental method D. All above
2018	The bond order gives the following valuable information.	A. Stability of the molecules of ions B. Bond dissociation energy and bond length C. Magnetic properties D. All of the above
2019	Variable oxidation states is shown by	A. Normal eleemnts B. Metallic elements C. Non metallic elements D. Transition elements
2020	The percentage of nitrogen in urea is.	A. 36% B. 46% C. 55% D. 65%
2021	Which of the following process is a source of nuclear pollution.	A. Uranium mining B. Uranium processing C. Reactor waste D. All above
2022	Which one of following is non polar	A. CH2Cl2 B. CCl4 C. CHCl3 D. CH3Cl
2023	Which of the following statement is not related with nitric oxide.	A. It is a colorless and odourless gas B. It is produced largely by fuel combustion C. It is a brown pungent gas D. It is oxidized to NO2
2024	Which of the following does not apply to metallic bond.	A. Overlapping valence orbitals B. Mobile valency electron C. Delocalized electrons

		C. Delocalized electrons D. Highly directed bonds
2025	Which of the following glass transmits the maximum light.	A. Serrated glass B. Clear glass C. Milk glass D. Opalescent glass
2026	Which of the following orbitals has maximum penetration effect.	A. s B. p C. d D. f
2027	Mangalium is an alloy of.	A. Al + Mg B. Mg + Ai + Mn C. Mg + Ai + Cu D. Mg + Ai + Cu + Mn
2028	Which of the following contains both covalent and ionic bond.	A. CCl4 B. NH4Cl C. CaCl2 D. H2O
2029	When some quantity of electricity is passed though two electrolytic cells. The ratio of the mass of the products obtained at the cathode is the same as the ratio of their	A. Densities B. Atomic masses C. Equivalent masses D. Atomic numbers
2030	Temporary hard water is softened on industrial scale by adding.	A. Mg(OH)2 B. Ca(OH)2 C. KOH D. NaOH
2031	The bond formed by complete transfer of electrons from electropositive to more electronegative atom is called.	A. Ionic bond B. Covalent bond C. Mettalic bond D. Co ordinates bond
2032	Which of the following solution has pH= 11?	A. 1 X 10⁻¹¹ m NaOH B. 1 x 10⁻¹¹ m HCl C. 1 x 10⁻³ M NaOH D. 1 X 10 ³ M NaOH
2033	What refers to the tin mill steel, without a coating.	A. White plate B. Black plate C. Tin steel free D. Dichromate tin
2034	_____ are the extensions of bucky balls.	A. Goodesic domes B. Hexagons C. Carbon nanotubes D. AFM and STM
2035	Formation of nano particles involves process lime	A. Foramtion of metal nuclei on different sizes. B. Interaction among the formed particles C. Both A and B D. No interaction among the nano particles synthesized
2036	Glycine reacts with nitrous acid to form	A. Methyl amino B. Acetic acid C. Zwitter ion D. Glycollic acid
2037	Oxides ores of Aluminium	A. Corundum B. Bauxite C. Diaspore D. All above
2038	Which of the following electrode is normally used as reference electrode for a potentiometer.	A. Platinum electrode B. Calomel electrrode C. Silver electrode D. Copper electrode
2039	All bond length in benzene are identical due to.	A. Resonance effect B. Inductomeric effect C. Electromeric effect D. Mesomeric effect
2040	The electromagevitiy of the following elements increase in the order	A. F > Cl > O > S B. S > Cl > O > F C. F > O > N > C D. C > O > N > F
2041	In urea the amount of nitrogen is	A. 82.0% B. 46.0% C. 33.0% D. 21.0%

2042	The main constituent of glass is.	A. Silica B. Silicon C. Magnesia D. Alumina
2043	Enantiomers have which of the following characteristics.	A. Rotate ordinary light B. Have the same melting point C. Are superimposable mirror images D. React with optically active molecule at the same rate
2044	Nitrobenzen can be prepared from benzene by using a mixture of conc. HNO3 and conc. H2SO4 In the nitrating mixture. HNO3 acts as a.	A. Base B. Acid C. Oxidizing agent D. Catalyst
2045	In Pakistan the total production of glass is over _____ tons per year.	A. 800 B. 8000 C. 80,000 D. None of these
2046	All the member of group III A are metals except.	A. B B. Ai C. Ga D. In
2047	Granulated sugar containing._____	A. Glucose<o:p></o:p> B. Fructose<o:p></o:p> C. Maltose D. Sucrose
2048	Which of the following technique is not related to instrumental analysis.	A. Optical method B. Colorimetry C. Polarography D. Gravimetric analysis
2049	iodine is used as	A. Tincture of iodine B. Iodex and antiseptic C. Treatment of goiter D. All above
2050	Which of the following techniques is used for the separation of macromolecules polymers.	A. Size exclusion chromatogrphy B. TLC C. GLC D. HPLC
2051	To obtain cement dry powder, lime stones and shales or their slurry, is burnt in a rotary kiln at a temeperature between	A. 1100 ^o and 1200 ^oC B. 1200 ^o and 1300 ^oC C. 1400 ^o and 1500 ^oC D. 1900^o and 2000 ^oC
2052	Equal volumes of all gases, under similar conditions of temperature and pressure, contain equal number of molecules. This is a statement of.	A. Graham's law B. Dalton's law C. Avogadro' law D. Boyle's law
2053	Which sequence of steps is correct in paper making machine	A. Pressing Dyring, Flow spreader Calender stock B. Flow spreader, Pressing, Prying Calender sock C. Drying ,Pressing , Flow spreader, Calender stock D. None of above
2054	Photochemical among is related to pollution of	A. Air B. Water C. Soil D. All of the above
2055	The diameter of hydrogen atom is._____nm	A. 10 B. 1 C. 0.1 D. 0.01
2056	The branch of chemistry which is concerned with the interrelation of electrical and chemical energy is called.	A. Reaction dynamics B. Electrochemisty C. Surface chemistry

		D. Kinetics
2057	Plane polarized light is affected by	A. Identical molecules B. All polymers C. Chiral molecules D. All biomolecules
2058	Which of the following is homopolymer.	A. Starch B. Plexiglas C. Orlon D. All of these
2059	In order to give strength and elasticity natural rubber is heated with.	A. Sulphur B. Oxygen C. Nitrogen D. Chlorine
2060	Which one of the following statements is not true.	A. Transition metals form alloys B. Transition metals form complexes C. Zn, Cd and Hg are transition metals D. K2[PtCl6] is a well known compound but corresponding nikel compound is not knonwn
2061	Group VA of the periodic table consist of elements.	A. 3 B. 4 C. 5 D. 6
2062	Which one of the following is not correct.	A. Ar is used in electric bulbs B. Kr is obtained during radioactive decay C. Boiling point of H2 is lowest among all noble gases. D. Xe forms Xe OF4
2063	Pick out the incorrect statement for XeF4	A. XeF4 disproportionate violently with water B. It is used as fluorinating agent C. It has octahedral structure for geometry D. It oxidizes I to I₂
2064	An induction of dipole or polarity in non polar bond, and consequent electron shifting along a chain of atoms is known as.	A. Inductive effect B. Resonance effect C. Hyper conjugation D. None of the above
2065	The carbonate of which of the following will have highest lattice energy.	A. Barium B. Magnesium C. Calcium D. Strontium
2066	Ozone is stratosphere is depleted by	A. CF2Cl2 B. C7F16 C. C6H6Cl6 D. C6F6
2067	The branch of physics that mathematically describes the wave properties of electron in atomic is called.	A. Statistical Mechanics B. Quantum Mechanics C. Chemical statistics D. Thermodynamics
2068	The correct order of acidic strength is.	A. HF < HCl< HI < HBr B. HI <HBr < HCl < HF C. HI < HBr < HF < HCl D. HF < HCl < HBr < HI
2069	Which element out of the following can ehibit a maximum con valency of seven.	A. Chlorine B. Sulphur C. Fluorine D. both Cl and F
2070	Permanent hard water is softened by addition of.	A. Na2CO3 B. CaCO3 C. MgCO3 D. ZnCO3
2071	Total pressure exerted by a mistress of two or more than two gases in a definite volume as any given temperature is equal to the sum of partial pressures which each gas would exert, if it occupied the same volume alone, at the same temperature This is a statement.	A. Boyle's law B. Charle's law C. Graham's law D. Dalton's law
2072	Which of the following is not adsorptive separation process.	A. Parex B. Olex C. Penex D. None of these
		A. O, H2

2073	Which of the following is an allotrops of hydrogen.	A. O- H2 B. P-H2 C. Both A and B D. None of these
2074	Which of the following is used to make non-stick material.	A. Vinyl cyanide B. Tetrafluoroethene C. Vinyl chloride D. Styrene
2075	Chromium is found in nature in the the form of.	A. Oxides B. Silicates C. Borates D. Sulphides
2076	Molecules have zero dipole moment	A. CO2 B. BCl3 C. CH4 & CCl4 D. All above
2077	Which of the following statement is not true with respect to the role of matter undergoing decomposition.	A. Decomposed matter increase soil fertility B. They provide a texture which is favorable for plant growth C. Organic compounds for complexes with mineral nutrients which enhance uptake by plants. D. In high concentration the decomposition product may increase the photosynthesis
2078	Permanent hardness of water is due to.	A. Sulphate of Ca B. Chloride of Ca C. Sulphate of Mg D. All above
2079	Which of the following exists as polymeric chains in solid state.	A. Sr Cl2 B. Ba Cl2 C. MgCl2 D. BeCl2
2080	Hydrogen bond is not electrostatic in nature is stated by	A. Electrostatic approach B. Valence bond approach C. Molecular orbital approach D. None of the abvoe
2081	The first step of formation of sugar is	A. Extraction B. Washing C. Cutting D. Clarifying
2082	The fertilizers which provide single nutrient from NPK are called _____ fertilizer	A. Straight<o:p></o:p> B. compound C. Both A and b D. None of above
2083	Which of the following groups exert -1 effect.	A. - NO2 B. - CN C. -COOH D. <C = 0
2084	In a bucky ball each carbon atom in bound in _____ adjacent carbon atoms.	A. 1 B. 2 C. 3 D. 4
2085	The thermal conductivity of an SWNT along length is _____ watt/(m.k)	A. 35 B. 330 C. 386 D. 3500
2086	The agricultural field that produces maximum methane gas into atmosphere is	A. Wheat field B. Paddy field C. Cotton field D. Groundnut field
2087	Which of the following dyes belongs to the group of acridine dyes.	A. Acriflavin B. Alizarin C. Indigotin D. Cyanine
2088	Which of the following statement is not correct with respect to hardness of water.	A. It is due to soluble salts of Na B. it is due to soluble salts of Ca C. It is due to soluble salts of Mg D. It is due to soluble salts of Fe

2089	Lother Meyer plotted a graph showing variation of.	A. Atomic volume with increase in atomic number B. Atomic volume with increase in atomic weight C. Atomic redii with increase in atomic weight. D. Atomic weight which increase in atomic number
2090	The Schrodinger equation when solved for any system gives.	A. The mean force path B. The Polarizability C. The energy function D. The wave function
2091	Which of the elements of group II A has the highest value of IE.	A. Mg B. Be C. Ca D. Sr
2092	What ASTM test for tension is designated for plastics.	A. A 370 B. D 638 C. E 292 D. None of these
2093	Which of the following is an alloy of copper	A. Brass B. Bronze C. Monel metal D. All
2094	Oxygen and sulphur exist in state	A. Free B. Combined C. _{Both free & combined} D. None of above
2095	1 meter = _____ nm	A. 10⁹ B. 10⁻⁹ C. 10¹⁰ D. 10⁻¹⁰
2096	In Serpekr's process the ore is treated with which of the following.	A. Carbon B. Nitrogen gas C. Both A and B D. None of these
2097	Vitamin D1 is chemically known as	A. Ergocalciferol B. Tocopherol C. Aserphthol D. Phylloquinone
2098	Aluminum is an active metal but does not corrode as iron does because.	A. Ai does not react with O2 B. A protective layer of Al2 O3 forms on the metal surface C. Al is harder to Oxidize than is Fe D. Aluminium has a high tensile strength
2099	The three dimensional silicate anion $(Si2O5^{2-})n$ is present in	A. Beryl B. Silica C. Asbestos D. Clays
2100	Which of the following compound does not following octet rule.	A. CS2 B. PBr3 C. IBr D. Br F3
2101	What typical penetrator is used in Brinell hardness test	A. 10 mm ball<o:p></o:p> B. 1.6 mm diameter ball<o:p></o:p> C. 20^o needle<o:p></o:p> D. None of these<o:p></o:p>
2102	Which of the following methods gives the number average molecular weight of a polymer.	A. Light scattering method B. Osmotic method C. Sedimentation equilibrium method D. Viscosity method
		A. Silica

2103	Which of the following impurities are present with the bauxite.	A. Silica B. Ferric oxide C. Alumina D. Both silica and ferric oxide
2104	Artificial nitrogen fixation may occur by the formation of.	A. Nitric acid B. Ammonia C. Nitrides D. Any of above
2105	The oxidation state of HCiO4	A. + 7 B. + 3 C. + 5 D. + 1
2106	Law of octaves was proposed by	A. Lother meyer B. D.I.Mendeleev C. J.A.R. Newlands D. J.W. Dobereiner
2107	Which of the following material is a constituent of crop residue.	A. Cull B. Fruit C. vines D. Bagasse E. All above
2108	Sulphate ores of aluminium	A. Alumite B. Cryolite C. Fekdsper D. Kaolin
2109	For an elementary reaction 2A + B ---------- C + D The molecularity of the reaction is.	A. 1 B. 2+ C. 3 D. 4
2110	What element is added to copper to increase its strength and fatigue propertioes.	A. Silicon B. Aluminium C. Beryllium D. Copper
2111	Aluminium reacts with boiling water to liberatedi hydrogen gas along with the formation of.	A. Aluminium oxide B. Aluminium hydroxide C. Aluminium suboxide D. Aluminium superoxide
2112	The penultimate shell of carbon contains electrons.	A. s2 B. s2p6 C. s2p6d10 D. s2p6d8
2113	If a chemical reaction in equilibrium is subjected to a change the reaction tends to more in such a direction that the effect of the change would be neutralized This is a statement of.	A. Law of mass action B. Le Chatlier's principle C. Henery's law D. Correspondence principle
2114	The deficiency of which vitamin leads to beri brainteaser	A. Thiamine B. Riboflavin C. Pyridoxine D. Asorbic acid
2115	When calcium is heated in the flame of a Bunsen burner, the colour imparted to the flame is.	A. Golden yellow B. Brick red C. Crimson red D. Grassy green
2116	Which of the following metals is the most abundant in the earth's crust.	A. Mg B. Ca C. K D. Na
2117	Which of the following is diamagnetic	A. O2 B. O2+ C. O2- D. O2 ²⁻
2118	Which of the following is branch chain polymer.	A. Glycogen B. Terylene C. PVC D. Orlen
2119	Select an acidic amino acid	A. Lysine B. Cystine C. Aspartic acid D. Aminoacetic acid
2120	An impure sample of camphor contaminated with sand, can be purified by	A. Distillation B. Sublimation C. Steam distillation

		D. None of the above
2121	The photoelectric effect is the ejection pf electrons from the surface of metal when light falls on it. Which of the following statements is not correct about the phenomenon.	A. The kinetic energy of photo electron depends upon the frequency of the incident radiation B. Electrons are ejected only when the frequency of light exceeds a certain threshold value C. The higher the energy of the photon greater the kinetic energy of the ejected electron. D. The threshold frequency of all the metals is same.
2122	Which of the following substance is not weak electrolyte.	A. CH3COOH B. NH4OH C. Oxalic Acid D. NaCl
2123	The tyndall effect was used by Zsigmondy to device.	A. The ultramicroscope B. The ultracentrifuge C. The osmometer D. Electrodialysis
2124	If Steel is heated to a temperature well below red heat and to then cooled slowly the process is called.	A. Annealing B. Quenching C. Tempering D. Nitriding
2125	Which librates H2 with NaOH	A. B B. Al C. Zn D. All
2126	Cobalt salt imparts which colour to the borax bead	A. Blue B. Green C. Red D. Yellow
2127	Which of the following is the weakest base.	A. KOH B. NaOH C. LiOH D. RbOH
2128	In a one -component system the maximum number of phase that can consist in equilibrium is.	A. 1 B. 2 C. 3 D. 4
2129	In which paper some additive is not added.	A. Carbon paper B. Filter paper C. Glazed paper D. Art paper
2130	Boron and aluminum halides are electron deficient compounds in this respect. they act as.	A. Lewis acid B. Lewis base C. Oxidizing agent D. Reducing agent
2131	For a given mass of a gas at constant temperature, if the value V becomes a times, the pressure will become.	A. 3P B. P/3 C. 9P D. 3P/T
2132	Which of the following techniques is capable of seperating minute quantities of the substances in a relatively short times with high resolutions.	A. Gel electrophoresis B. Capillary electrophoresis C. GC D. HPLC
2133	The noble gas which was discovered first in the sun and then on the earth is.	A. Helium B. Neon C. Argon D. Xenon
2134	Phosphorus is detected by fusing the organic compound with -------followed by extraction with H2O	A. HNO3 B. H2SO4 C. Sodium per oxide D. Ozone
2135	Which of the following statement is not related with high quantum yield reasons.	A. Formation of reactive intermediates which may act as catalyst B. The active molecules may collide with other molecules and activates these molecules. C. The reaction may be exothermic and heat evolve may activate other molecule D. The primary photo chemical process may be reversed

2136	In the process of preparation of detergents the organic acids produced are neutralized with.	A. Sodium hydroxide B. Sodium sulphate C. Sodium chloride D. Potassium hydroxide
2137	Process of separating the racemic mixture into optically active isomers is known as.	A. Resolution B. Racemisation C. Walden inversion D. Epimerization
2138	Which of these historical works of art contain nanotechnology.	A. Lycurgus cup B. Medieval stained glass windows in churches C. Damascus steel swords D. All of the above
2139	Amino acids have	A. Acidic group B. Basic group C. Both of these D. None of these
2140	Which of the following statements is NOT true .	A. About 10% of the earth's crust is iron B. Pure iron does not have significant industrial use because it is too weak and soft. C. Steel in an alloy of carbon and iron with limits on the amount of carbon D. None of above
2141	Which of the following is most basic.	A. Aniline B. Benzylamine C. Diphenylamine D. N-methylaniline
2142	Which of the following level is an indicator of hearing loss.	A. > 25 dB B. < 25 dB C. <20 dB D. None of these
2143	The process of identifying the component present in a sample is called.	A. Quantitative analysis B. Qualitative analysis C. Volumetric analysis D. Gravimetric analysis
2144	The criteria for aromatically is presence of	A. Uneaturations B. Cyclic structure C. Presence of 4nx electrons D. Presence of 4n + 2n electrons
2145	Result of ozone hole is.	A. Acid rain B. Global warming C. Increased amount of CO2 D. Greater exposure of earth to U.V. rays.
2146	Which of the following technique is based on deposition of the analyte at appropriate electrode by the passage of the electric current.	A. Chromatography B. Dialysis C. Electrodeposition D. Solvent extraction
2147	The element having highest ionization energy and least electron affinity belong to	A. Period 1 , group 18 B. Period 2, group 17 C. Period 2, group 1 D. Period 2, group 2
2148	Which of the following compounds does not show dipole moment.	A. CH3OH B. HBr C. CCl4 D. CHCl3
2149	Which of the following statement is not related with the advantages of TLC.	A. A variety of adsorbents can be used B. The thickness of adsorbent can be varied C. Fluorescence can be introduced D. Different detectors can be used
2150	Major achievement of CFT is	A. Interpreting the color B. Adsorption spectra C. Both A and B D. None of above
2151	Anhydrous AlCl3 cannot be obtained by heating hydrated AlOl3 ,6h2o Because.	A. It decomposes completely to give Al2O3 B. It does not lose water completely C. It undergoes hydrolysis to give Al(OH)3 D. AlCl3 .6H2O is very stable.
		A. To increase the strength

2152	Purpose of sizing is.	A. To increase the strength B. To improve formation C. To increase resistance toward water D. To remove wastes
2153	The composition of mixture of clay and lime stone in the raw for cement material is.	A. 75% lime stone and 25% clay B. 25% lime stone and 75% clay C. 15% lime stone and 55% clay D. 30% limes stone and 79% clay
2154	At constant temperature and pressure, the decrease in Gibbs free energy (F) in equal to	A. Increase in entropy B. Decrease in entropy C. Reversible work done by the system D. All types of work except the work of expansion
2155	Which of the following is a thermometric method.	A. TGA B. DTA C. DTG D. All
2156	Which of the following cause water pollution.	A. Smoke B. Automobile exhausts C. Aeroplanes D. Silt and posticides
2157	Which property is used in volumetric methods of analysis.	A. Density B. Viscosity C. Volume D. Molar volume
2158	Main constituent of all inorganic matter	A. Carbon B. Silicon C. Tin D. Lead
2159	Calcium cyanamide on treatment with steam under pressure gives NH3 and	A. Calcium carbonate B. Calcium hydroxide C. Calcium oxide D. Calcium bicarbonate
2160	Heisenberg's uncertainty principle precludes the exact simultaneous measurement of.	A. Velocity and energy B. Velocity and time C. Charge density and probability D. Position and momentum
2161	Which of the following compound will be optically active.	A. Suceinic acid B. Meso tartaric acid C. Acetic acid D. Lactic acid
2162	Which of the following does not belong in the group of herocyclic dyes.	A. Acridine B. Cyanine C. Methylene blue D. Amido black
2163	Both the elements shows allotropy	A. B & Ai B. B & Si C. Al & Si D. Any of above
2164	The phase rule was deduced by	A. Gibbs B. Thomson C. Troution D. Henry
2165	The polarity of bonds can lead to polarity of molecules and affect	A. Melting point B. Boiling point C. Solubility D. All of above
2166	The lowest K.E. for an electron is three dime national cubic box is given by	A. h²/ 8m^a B. 3h² / 8 ma² C. 9h²/ 8ma² D. 16h² / 8ma²
2167	Point out the incorrect statement.	A. Rate law is an experimental fact whereas law of mass action is a theoretical in nature. B. Rate law is always different from the expression of law of mass action C. Rate law is more informativeness than law of mass action D. Order of the reaction is equal to the sum of the exponents of concentration terms in the case law.
		A. They are pleasant smelling liquids B. They are steam volatile

2168	Which of the following is not a characteristics of terpenoids.	B. They are steam volatile C. They are nitrogenous bases D. they are insoluble in water
2169	Nitric acid is used in the manufacturing of.	A. Dyes B. Drugs C. Artificial silk D. All above