CHEMISTRY MCQ'S

1. **The soul of chemistry is dealing with_____?**
A. Internal structural changes in matter
B. Composition of matter
C. Properties of matter
D. Composition and properties of matter

2. **The radioactive isotope of hydrogen is called_____?**
A. **tritium**
B. deuterium
C. protium
D. ortho-hydrogen

3. **Electron was discovered by?**
A. Michael Faraday
B. James Maxwell
C. Yuri Gagarin
D. J.J Thomson

4. **Sodium carbonate is produced by_____?**
A. haber process
B. Amoniasolvay process
C. decons process
D. lead chamber process

5. **Which of the following is a substance?**
A. Sea water
B. Brass
C. Tape water
D. Graphite
E. Sand

6. **Some substances are good conductor of electricity in both the solid and liquid states. These substances are generally_____?**
A. ionic substances
B. metallic substances
C. molecular solids
D. covalent network solids

7. **All of the following substances are crystalline except_____?**
A. Ice
B. Diamond
C. Sucrose
D. Plastic

8. **Covalent network crystals have_____?**
A. **higher melting point then molecular crystals**
B. lower melting point then molecular crystals

C. discrete molecules linked by Van der waals forces
D. hydrogen bonding

9. **What is a mixture of Potassium Nitrate Powdered Charcoal and Sulphur called?**
A. Paint
B. Glass
C. Gun Powder
D. Cement

10. **Diameter of an atom is in the order of_____?**
A. 0.2m
B. 0.2mm
C. 0.2nm
D. 0.2pm

11. **Mass spectrometer is used to determine Mass number of isotopes and_____?**
A. Atomic number
B. Relative abundance
C. Electronic configuration
D. All of the above

12. **The number of peaks obtained in mass spectrometry shows_____?**
A. Relative abundance
B. Average mass of element
C. Number of isotopes
D. Relative isotopic mass

13. **Empirical formula of chloroform is_____?**
A. CH2 C12
B. CH3C1
C. CC14
D. CHCL3

Molecular mass of water (18g) means_____?
14. 1-mole molecules of water
B. 1-gram molecule of water
C. 3-gram atoms
D. all

15. **Which of the following statements about isotopes is correct ?**
A. Isotopes with odd atomic number are abundant
B. Isotopes with odd atomic number and even mass number are abundant
C. Isotopes with even atomic number and even mass number are abundant
D. Isotopes with even atomic number and odd mass no are abundant

16. **One mole of CO2 contains?**
A. 6.022 x 1023 atoms of oxygen
B. 22-gram electrons
C. 6.022 x 1023 atms of carbon
D. both B. & C.

17. **The number of isotopes of elements with even mass number and even atomic number are _____?**
A. 280
B. 300
C. 154
D. 54

18. **Which of the following terms is not used for ionic compound ?**
A. formula unit
B. empirical formula
C. molecular formula
D. formula mass

19. **moles of each aluminium and oxygen react with each other to produce aluminium oxide. The amount of product formed is_____?**
A. **0.18 mole**
B. 0.27 mole
C. 0.24 mole
D. 0.09 mole

20. **Which one of the following has the maximum number of isotopes ?**
A. oxygen
B. carbon
C. tin
D. chlorine

21. **The volume occupied by 2.8 g of N2 at STP_____?**
A. **2.24 dm3**
B. 22.4 dm3
C. 1.12 dm3
D. 112 dm3

22. **The number of moles of CO2 which contains 16 g of oxygen is_____?**
A. 0.25
B. 0.5
C. 0.75
D. 1

23. **How many isotopes have odd atomic number ?**
A. 154
B. 280
C. 86
D. 300

24. **Percentage of calcium in calcium carbonate is_____?**
A. 80%
B. 30%
C. 40%
D. 20%

25. **Mostly elements have fractional atomic masses because of_____?**

A. mass of an atom itself is in fraction
B. atomic masses are average masses of isobars
C. atmoic masses are average masses of isotopes proportional to their relative abundance
D. atmoic masses are average masses of isotopes

26. **Which of the following is not a macromolecule ?**
A. sand
B. haemoglobin
C. diamond
D. maltose

27. **Isotopes of the same elements has_____?**
A. different number of protons
B. same number of neutrons
C. different number of neutrons
D. same mass number (nucleon number)

28. **When cationic molecular ions are allowed to pass through strong magnetic field in mass spectrometer which of the following ions is fallen_____?**
A. **lighter**
B. intermediate
C. heavier
D. are collected at same time

29. **For which of the following compounds the term empirical formula cannot be applied ?**
A. NaCl
B. H2O
C. CCl4
D. It can be applied to all mentioned above

30. **The properties of an element mosly corresponds to that isotope which has greater_____?**
A. Mass number
B. Atomic mass
C. Relative abundance
D. all of the above

31. **1 a.m.u =_____?**
A. **1.6 x 10-27 kg**
B. 1.6 x 10-24 kg
C. 1.6 x 10-26 kg
D. 1.6 x 10-28 kg

32. **Which of the following are isoelectronic species ?**
A. H+ H H-
B. Li+ Na+ K+
C. C1- Br- I
D. F- Ne Na+

33. **Molecular ions are formed by passing_____?**

A. High energy electron beam
B. ? – particle
C. X-rays
D. All of the above

34. **Which one is true about isotope ?**
A. Same number of neutrons
B. Same mass number
C. Same physical properties
D. Same chemical properties

35. **Which of the following ion formation is always exothermic ?**
A. **Uni-negative**
B. Uni-positive
C. Di-negative
D. Di-positive

36. **The sample of isotopes of an element which needs not to be vaporized in the vaporization chamer_____?**
A. **Gas**
B. Liquid
C. Volatile solid
D. All

37. **Avogadros number may represent_____?**
A. volume of particles
B. number of particles
C. mass of particles
D. All of the above

38. **Size of molecule depends upon_____?**
A. Atomicity
B. Shape of molecule
C. Both A and B
D. Difficult to predict

39. **Which of the following terms is used for the mass of chlorine 35.5 ?**
A. **relative atomic mass**
B. mass number
C. atomic weight
D. relative isotopic mass

40. **Which one of the following is not the mono isotopic element ?**
A. arsenic
B. uranium
C. iodine
D. nickel

41. **The mass of decimole of electrons (NA) is_____?**
A. 1.008 mg
B. 0.184 mg

C. 0.054 mg
D. 5.4 mg

42. **Which of the following statements is wrong about isotopes ?**
A. they possess different mass number
B. they possess different physical properties
C. they possess same chemical properties
D. they possess different position in the periodic table

43. **Qualitative analysis is carried out for _____?**
A. **identification of elements**
B. estimation of amounts of elements
C. molar ration of elements
D. molar volume of elements

44. **Combustion analysis is performed to determine_____?**
A. **Empirical formula**
B. Molecular mass
C. Molecular formula
D. Formula mass

45. **Isotopes differ in_____?**
A. **properties which depend upon mass**
B. arrangement of electrons in orbitals
C. chemical properties
D. all of the above

46. **Which of the following methods is used to estimate hydrogen in an organic compound ?**
A. **Combustion method**
B. Dumas method
C. Kjeldahls method
D. All of the above methods are for different purposes

47. **The nucleus of an atom of every element will always contain_____?**
A. neutrons
B. protons and electrons
C. protons
D. protons and neutrons

48. **When 0.5 mole of phosphoric acid is dissolved in aqueous solution how many moles of -ve and +ve ions are collected altogether ?**
A. 0.5
B. 1
C. 1.5
D. 2

49. **Dempsters mass spectrometer has number of zones / parts_____?**
A. **5**
B. 4

C. 3
D. 2

50. **All the following variables are used to describle gases except_____?**
A. pressure
B. volume
C. moles
D. density

51. **Methyl alcohol is not used as_____?**
A. a solvent
B. an anti freezing agent
C. a substitute for petrol
D. for denaturing of ethyl alcohol

52. **Oxygen (molecular weight = 32) diffuses at a rate of 10cm3/min under the same conditions of temperature and pressure how fast will hydrogen (molecular weight = 2) diffuse ?**
A. 20cm3/min
B. 40cm3/min
C. 160cm3/min
D. 2.5cm3/min

53. **As a substance moves from a solid to a liquid all of the following changes occur except ?**
A. molecules become more disordered.
B. K.E of the molecules decreases
C. intermolecular forces become weaker.
D. molecules move more frequently.

54. **The rectified spirit is_____?**
A. 12% alcohol
B. 90% alcohol
C. 95% alcohol
D. 100% alcohol

55. **Which of the following solids show anisotropy_____?**
A. Plastic
B. Glass
C. Rubber
D. None of the above

56. **Butyl chloride gives possible isomers ?**
A. 2
B. 3
C. 4
D. 5

57. **Metallic crystals are soluble in_____?**
A. Polar solvent
B. Non polar solvent

C. Fused metal
D. None

58. **Paramagnetic behaviour of substance is measured by a balance called____?**
A. Analytical balance
B. Guoys balance
C. Electrical balance
D. Single beam balance

59. **Which of the following properties prove that cathode rays are material in nature_____?**
A. they cast shadow
B. they possess momentum
C. they are negatively charged
D. all of the above

60. **When an electron is moving with velocity of 2.188 x 106 ms-1 in the first orbit of Bohrs model of hydrogen. The de Broglie wavelength of electron is_____?**
A. **0.33 nm**
B. 0.34 nm
C. 0.35 nm
D. 0.36 nm

61. **When methl iodide and ethyl iodide are treated with sodium metal possible major products are obtained ?**
A. 1
B. 2
C. 3
D. 4

62. **Which statement is consistent with Hunds rule ?**
A. **Electrons fill orbitals with parallel spins until all the orbitals of the same energy are half filled then they go into sub-shells with anti-parallel (opposite) spin.**
B. The electrons in the same atom cannot have the same four quantum numbers
C. There is maximum of two electrons is an orbital.
D. None

63. **Atomic number of Mn is 25 what is the electronic configuration in the ground state_____?**
A. 1s2 2s2 2p6 3s2 3p6 3d7
B. 1s2 2s2 2p6 3s2 3p6 4s2 4p5
C. 1s2 2s2 2p6 3s2 3p5 3d10
D. 1s2 2s2 2p6 3s2 3p6 4s23d5

64. **Which of the following is mineral fiber ?**
A. Teflon
B. asbestos
C. saran
D. acrylic

65. **The hardest of the following solids is_____?**

A. sodium
B. diamond
C. graphite
D. magnesium

66. **Which of the solid does not contain covalent bond_____?**
A. **copper**
B. ice
C. diamond
D. graphite

67. **The balanced chemical equation for the reaction which occurs when Be is added to water is_____?**
A. Be+2H2O?Be (OH)2+H2
B. Be+H2O?Be (OH)2+H2
C. Be+H2O?[Be (OH)4]+2+H2
D. no reaction

68. **Which of the following theories is superior to others_____?**
A. VSEPR
B. VBT
C. MOT
D. none of the above

69. **Which of the following is not characteristics of reversible reaction_____?**
A. whole amount of reactant does not change into product
B. chemical equilibrium is established
C. a catalyst changes the direction of reaction
D. rate of forward reaction decreases as reaction proceeds

70. **A solution has pH = 0 its H+ ion concentration is_____?**
A. 1 x 10-1
B. 1 x 10-14
C. 1 x 10-7
D. 1

71. **1 mole of electron has mass in microgram_____?**
A. 1.008 x 10-3
B. 5.5 x 10-4
C. 1.84 x 10-4
D. 1.673 x 10-3

72. **The use of antifreeze in the automobile radiator is an important application of_____?**
A. constitutive property
B. additive property
C. colligative property
D. intrinsic property

73. **At which electrode the reduction of the solution is occurring in Al-Ag cell__?**

A. A
B. Ag
C. Both
D. Neither

74. **In which of the following type of reactions energy of reactant is greater than energy of product_____?**
A. endothermic
B. exothermic
C. unpredictable
D. same

75. **Which of following metals can be displaced by all other metals from its solution ?**
A. Ag
B. A
C. Au
D. Cu

76. **Which of the elements do not fall in stair case of the modern periodic table__?**
A. Si
B. As
C. Te
D. None of the above

77. **Across short period the melting and boiling point increase upto _____?**
A. IIIA group
B. IVA group
C. VA group
D. VIA group

78. **Which of the following is the formula of chrome red ?**
A. **Pb3 O4**
B. 2Pb CO3 – Pb (OH)2
C. Pb Cr O4 – Pb (OH)2
D. Pb2O

79. **Regular coiling or zigzagging of polypeptide through hydrogen bonding is its_____?**
A. Quantum structure
B. Secondary structure
C. Tertiary structure
D. Primary structure

80. **In the van der Waals equation (P + n2a / v2) (v – nb) = nRT which of the following statement is not true ?**
A. n2a/v correct for the intermolecular forces.
B. nb correct for the volume occupied by gas molecules.
C. at high densities the equation reduces to the ideal gas law
D. all of the above statements are correct.

81. **The inhaled breath of diabetics patient contain acetone. A medical student wishes to test for diabetes by asking patient to bubble their breath through a reagent ?**

A. **alkaline aquenous iodine**
B. aqueous bromine
C. Fehling solution
D. aqueous NaOH

82. **When aquious bromine is added to aqueous phenol a creamy white ppt is obtained. What does this reaction show ?**

A. phenol is unsaturated
B. 2-bromophenol is insoluble in water
C. a hydroxy group makes the benzene ring more susceptible to electrophilic attack
D. acid-base reaction

83. **If a graph is plotted between temperature on x-axis and volume on y-axis for 1 mole of gas then we get straight line which cuts the temperature exis at_____?**

A. 0?C
B. 273.16K
C. ?273.16 K
D. ?273.16?C

84. **Benzene is a good solvent for_____?**

A. fats
B. resins
C. iodine
D. all the above

85. **Which of the following element doesnot show allotropy_____?**

A. Carbon
B. Arsenic
C. Nitrogen
D. Sulphur

86. **Purines and pyrimidines are_____?**

A. Enzymes
B. Nitrogenous bases
C. Carbohydrates
D. Lipids

87. **All the transition elements show_____?**

A. Similar physical properties
B. Similar chemical properties
C. Both A and b
D. None

88. **In solids the temperature is the measure of_____?**

A. Average kinetic energy of molecules
B. Vibrational kinetic energy
C. Translational kinetic energy
D. None of the above

89. **Fruit juices and fizzy drinks such as lemonade are often sold in aluminium cans. What is the most important reason aluminium is a suitable metal ?**
A. aluminium can be recycled
B. aluminium has very low density
C. aluminium is the most abundant metal in the earth crust
D. aluminium is resistant to corrosion by organic acids.

90. **On heating aldehydes with Fehlings solution we get a precipitate whose colour is_____?**
A. pink
B. black
C. yellow
D. brick red

91. **What is maximum number of electrons in an orbital with m (magnetic quantum number) = 3 ?**
A. 6
B. 4
C. 3
D. 2

92. **Which catalyst is used in contact process ?**
A. Fe2O3
B. V2O5
C. SO3
D. Ag2O

93. **Which of the following elements has greater 1st ionization energy_____?**
A. B
B. C
C. N
D. O

94. **Which of the following molecule is polar_____?**
A. CCl4
B. CO2
C. BF3

D. none of the above
95. **Which of the following points are important in connection with equilibrium constant ?**
A. Kc is constant at given temperature
B. Kc is unaffected by change in concentration of reactants or products
C. Kc indicates the extent of reaction but not about the rate of reaction.
D. All of the above

96. **Solubility of CaF2 is 2.0×10-4 gdm-3 then Ksp of CaF2 is_____?**
A. 4.0 x 10-8
B. 3.2 x 10-11

C. 2.0 x 10-8
D. 4.0 x 10-12

97. **The unit of molality is_____?**
A. moles dm-3
B. moles kg-1
C. gram dm-3
D. none

98. **A solution can be both_____?**
A. **dilute and concentrated**
B. dilute and saturated
C. saturated and unsaturated
D. saturated and super saturated

99. **Consider the following redox reaction. Zn+dil HNO3? Zn (NO3)2 + N2O + H2O The coefficient number of HNO3 in the equation is_____?**
A. 6
B. 8
C. 10
D. 4

100. **Which of the following elements react with steam to produce H2 gas?**
A. Pd
B. Ni
C. Sn
D. All of the above

101. **The unit of the rate constant (k) is same as that of rate of reaction_____?**
A. First order reaction
B. Second order reaction
C. Zero order reaction
D. Third order reaction

102. **Acid present in acid rain may be_____?**
A. H2SO4
B. HNO3
C. both A and B
D. none of the above

103. **Which of the following elements conduct electricity and also melts below 100°C ?**
A. Aluminium
B. Sodium
C. Carbon
D. Sulphur

104. **The compound which is added to leaded gasoline to save engine from lead oxide and lead sulphate deposits is_____?**
A. Ethylene iodide
B. Ethylene bromide

C. Ethylene chloride
D. Ethylene fluoride

105. **Isotopes differs in_____?**
A. arrangement of electrons in orbitals
B. position in the periodic table
C. properties depend upon mass
D. chemical properties

106. **The volume occupied by 1.4g CO at S.T.P is_____?**
A. 22.4 dm3
B. 2.24 dm3
C. 1.12 cm3
D. 1.12 dm3

107. **Which of the following set has all species isoelectronic_____?**
A. F – Cl – Br
B. Li+1 – Na+1 – K+1
C. F – Ne – Na+
D. H+ – H- – H

108. **Water absorber used in combustion analysis is_____?**
A. 50% KOH
B. Lime water
C. CaCl2
D. Mg (ClO4)2

109. **The type of filtering media used for filtration depending upon_____?**
A. Nature of reactants
B. Nature of crucible
C. Nature of product
D. Nature of precipitate

110. **A method of separation of components from its solution using Distribution law is _____?**
A. Sublimation
B. Crystallisation
C. Solvent extraction
D. Distillation

111. **Equal masses of methane and oxygen are mixed in empty container at 250?(C) The fraction of total pressure exerted by oxygen is_____?**
A. one / seventeen
B. sixteen / seventeen
C. one / three
D. two / three

112. **The molecules of CO2 in dry ice form_____?**
A. Ionic crystal
B. Covalent crystal

C. Molecular crystal
D. Any type of crystal

113. **Only London dispersion forces are present among the_____?**
A. Molecules of water in liquid state
B. Atoms of helium in gaseous state at high temperature
C. Molecules of hydrogen chloride gas
D. Molecules of solid iodine

114. **Quantum number values for 3p orbitals are_____?**
A. n=3 l=2
B. n=3 l=0
C. n=3 l=1
D. n=3 l=3

115. **Which specie has unpaired electrons in antibonding molecular orbitals_____?**
A. O2+2
B. N2-2
C. B2
D. O2-2

116. **For a given process the heat changes at constant pressure (qp) and at constant volume (qv) are related to each other as_____?**
A. qp = qv
B. qp< qv
C. qp> qv
D. qp = qv / 2

117. **Solubility product of AgCl is 2.0 x 10-10 mol2 dm-6. Maximum Concentration of Ag+1 ions in the solution is_____?**
A. 2.0 x 10-10 mol dm-3
B. 1.414 x 10-5 mol dm-3
C. 1.0 x 10-10 mol dm-3
D. 1.0 x 10-5 mol dm-3

118. **Which of the following solution has the highest boiling point ?**
A. **5.85% NaCl Solution**
B. 18.0 % glucose solution
C. 6.0 % urea solution
D. All have same boiling point

119. **Which of the following can be used in laptops ?**
A. Silver oxide battery
B. Fuel cell
C. Nickel cadmium cell
D. Lead accumulator

120. **Which is the unit of (K) rate constant for zero order reaction ?**
A. s-1
B. mol dm-3 s-1

C. mol-1 dm3 s-1
D. mol-2 dm6 s-1

121. **Which is carnalite_____?**
A. KCl
B. NaCl
C. KCl MgCl2 6H2O
D. Na2CO3. 10H2O

122. **Which one does not give borax bead test_____?**
A. Copper sulphate
B. Barium sulphate
C. Cobalt sulphate
D. Nickel sulphate

123. **The most reactive allotropic form of phosphorus is_____?**
A. **White**
B. Redox potential
C. Black
D. Violet

124. **Which molecule has the highest bond energy among the halogens_____?**
A. Fluorine
B. Chlorine
C. Iodine
D. Bromine

125. **The most paramagnetic element is_____?**
A. **Iron**
B. Cobalt
C. Chromium
D. Manganese

126. **Which one of the following looks odd_____?**
A. H2SO4
B. KMnO4
C. H2S
D. K2CrO4

127. **In 1 – pentene -4- yne the carbon exhibit hybridization_____?**
A. sp3 – sp2
B. sp2 – sp
C. sp2 – sp
D. sp3 – sp2 – sp

128. **When benzene is heated in air with V2O5 at 450°C yields_____?**
A. Phenol
B. Maleic anhydride
C. Glyoxal
D. Benzoic acid

129. **Which one of the following will be sulphonated readily ?**
A. Chlorobenzene
B. Toluene
C. Nitrobenzene
D. Benzene

130. **When CO2 is made to react with ethy1 magnesium iodide in dry ether followed by acid hydrolysis yields_____?**
A. Carboxylic acid
B. Ethanoic acid
C. Propanoic acid
D. Butanoic acid

131. **Ethy1 chloride on reduction in the presence of Zn/HCl produces_____?**
A. n. butane
B. Ethanol
C. Ethane
D. Diethy1 ether

132. **For industrial preparation of CH3CHO catalytic promoter is_____?**
A. PdCl2
B. Cu2Cl2
C. CuCl2
D. PbCl2

133. **Which of the following is not a fatty acid ?**
A. Propanoic acid
B. Acetic acid
C. Phthalic acid
D. Butanoic acid

134. **Which one of the following fertilizers provides the nitrogen and phosphorus to the plant ?**
A. **Urea**
B. Calcium superphosphate
C. Diammonium phosphate
D. Potassium nitrate

135. **Chlorination of water may be harmful if the water contains_____?**
A. Ammonia
B. Dissolved oxygen
C. Carbon dioxide
D. All

136. **The mass of one mole of electron is_____?**
A. 1.008
B. 0.55
C. 0.184
D. 1.637

137. **The number of atoms in a molecule determines_____?**

A. macromolecule
B. macromolecule
C. molecularity
D. atomicity

138. **Which element has same isotopes like palladium_____?**
A. Nickel
B. Calcium
C. Cadmium
D. Tin

139. **A limiting reactant is one which_____?**
A. is taken in lesser quantity in grams as compared to other reactants
B. is taken in lesser quantity in volume as compared to other reactants
C. gives the maximum amount of the product which is required
D. gives the minimum amount of the product under consideration

140. **A safe and more reliable method for drying the crystal is_____?**
A. Hot air currents
B. folds of filter paper
C. oven
D. Vacuum desiccator

141. **A real gas obeying vanderwaals equation will resemble the ideal gas if_____?**
A. **Both a and b are small**
B. Both a and b are large
C. a is small and b is large
D. a is large and b is small

142. **Plasma is used in_____?**
A. Fluorescent bulb
B. Neon signs
C. Lasers
D. All of these

143. **Which of the following is pseudo solid_____?**
A. CaF2
B. NaCl
C. Glass
D. Diamond

144. **Bohrs model is contradicted by_____?**
A. Plancks theory
B. Dual nature of matter
C. Heisenbergs uncertainty principle
D. All of these

145. **Atomic radius can be determined by_____?**
A. **X – ray diffraction**
B. Spectrophotometer

C. Optical microscope
D. Electron microscope

146. **For which system does the equilibrium constant Kc has unit of (concentration)-1_____?**
A. N2+3H2 2NH3
B. H2+I2 2HI
C. 2NO2 N2H4
D. PCI5 PCI3+CI2

147. **18g glucose is dissolved in 90g water the relative lowering in vapour pressure is equal to _____?**
A. 8
B. 5.1
C. 6
D. one/fifty one

148. **Stronger is the oxidizing agent greater is the_____?**
A. Oxidation potential
B. Redox potential
C. e.m.f of cell
D. standard reduction potential

149. **Which is true about Zn-Cu galvanic cell ?**
A. Reduction occurs at anode
B. K+ ion transfer from salt bridge to left beaker of ZnSO4
C. Oxidation occurs at cathode
D. Anode is negatively charged

150. **Nitrates of which pair gives different products on thermal decomposition____?**
A. Na K
B. Mg Ca
C. Li Na
D. Li Ca

151. **Keeping in view the size of atom which is in correct order_____?**
A. Mg >Sr
B. Ba > Mg
C. Lu > Ce
D. CI > 1

152. **Which one is not the use of silicones_____?**
A. Lubricant
B. Water repellent film
C. Rubber sheet
D. Medicine

153. **Chemical composition of cinnabar is_____?**
A. FeS2
B. HgS

C. PbS
D. ZnS

154. **When chlorine is passed through hot solution of caustic soda the reaction is said as_____?**
A. Displacement
B. Reduction
C. Disproportionation reaction
D. Double displacement reaction

155. **In the complex [Cr(OH)3(H2O)3] the coordination number is _____?**
A. 2
B. 3
C. 4
D. 6

156. **A great variety of the organic compounds is due to its property of carbon___?**
A. Show tetravalency
B. Exhibit catenation
C. Show isomerism
D. Can form multiple bonds

157. **Vinyl acetylene combines with hydrochloric acid produces_____?**
A. Diviny1 acetylene
B. Ethylidine dichloride
C. Chloroprene
D. 1 – 3 – 3 – trichloro butane

158. **When toluene reacts with chlorine in sunlight the first major product is____?**
A. **Benzy1 chloride**
B. Benzal dichloride
C. O-chlorotoluene
D. O-chlorotoluene and P-chlorotoluene

159. **Which one of the following is not a good leaving group ?**
A. HSO4-
B. Cl-
C. OH-
D. Br-

160. **The process of fermentation involves all the enzymes except_____?**
A. Diastase
B. Invertase
C. Zymase
D. Sucrase

161. **Which one does not exhibit aldol condensation_____?**
A. Ethanal
B. Acetone
C. Benzaldehyde
D. Butanone

162. **The common name of propane -1 3-dioic acid is_____?**
A. Oxalic acid
B. Succinic acid
C. Malonic acid
D. Fumaric acid

163. **Industrial materials thermal power stations are coated with_____?**
A. Polyester resins
B. Epoxy paints
C. polyamide resins
D. Polyvinyl chloride

164. **Main source of organic compounds is_____?**
A. **Animal**
B. Fossil
C. Coal
D. Plants

165. **Hydro carbons which burn with smoky flame are called_____?**
A. Aliphatic
B. Alicyclic
C. Aromatic
D. Aldehyde

166. **Octane number 2 2 4-trimethyl pentane is_____?**
A. **100**
B. 90
C. 80
D. 70

167. **Geometric isomerism is usually found in_____?**
A. Alkanes
B. Alkenes
C. Alkynes
D. Esters

168. **Organic compounds that are essentially nonpolar and exhibit weak intermolecular forces have_____?**
A. **Low melting points**
B. Low vapour pressure
C. High boiling points
D. High electrical conductivity

169. **According to vital force theory_____?**
A. Oorganic compounds can be synthesized from inorganic compounds
B. organic compounds cannot be synthesized from inorganic compounds
C. organic compounds can be synthesized by animals
D. organic compounds can be synthesized by plants

170. **A double bond consists of _____?**

A. Two sigma bonds
B. Two Pi bonds
C. One sigma and one Pi bonds
D. One sigma and two Pi bonds

171. **Chemical properties of first member of homologous series with respect to other members are_____?**
A. **same**
B. different
C. depends upon number of C atoms
D. depends upon number of H atoms

172. **Compounds having same molecular formula but differ in structural formula are called _____?**
A. polymer
B. monomer
C. isomer
D. allotropes

173. **Organic compounds are soluble in _____?**
A. polar solvent
B. non-polar solvent
C. alkalies
D. water

174. **Methane is used in power generation in chemical industries being a_____?**
A. natural gas
B. good caloric value
C. cheaper
D. All

175. **The precess in which larger molecule with higher molecular weight breaks down into smaller moleucles with lower molecular weight_____?**
A. polymerization
B. pyrolysis
C. isomerism
D. no such process occurs

176. **The metallic sound produced by engine due to the pre-ignition of fuel is called _____?**
A. **knocking**
B. reforming
C. cracking
D. a and c

177. **Which of the following can be used as anti-knocking agent ?**
A. PbCl2
B. (C2H5)4 Pb
C. (C2H5)2 Pb
D. all of the above

178. **Isomerism which is present only in alkene is_____?**
A. structural isomerism
B. metamerism
C. cis-trans isomerism
D. both b and c

179. **Compound containing benzene ring in their structure are _____?**
A. aliphatic
B. aromatic
C. carboxylic acid
D. carbohydrates

180. **Which of the following is an amide_____?**
A. R-NH2
B. RCONH2
C. R – NH – R
D. C6H5NH2

181. **Only sigma bonds are present in_____?**
A. propene
B. butanoic acid
C. butanal
D. ethoxy ethane

182. **The structure of ethyne is_____?**
A. angular
B. trigonal
C. linear
D. trigonal planar

183. **The general formula of cycloalkene is _____?**
A. CnH2n
B. CnH2n+2
C. CnH2n-1
D. CnH2n-2

184. **C5H12 has the number of isomers _____?**
A. one
B. two
C. three
D. four

185. **Octane number can be improved by_____?**
A. Isomerization
B. Adding (C2H5)4 Pb
C. Adding (CH3)4 Pb
D. All

186. **Octane number 2 2 4-trimethyl pentane is_____?**
A. **100**
B. 90

C. 80
D. 70

187. **Propene can exhibit_____?**
A. cis-trans isomerism
B. geometric isomerism
C. both a & b
D. none of the above

188. **Pentane and 2-methyl butance have the same_____?**
A. Boiling point
B. Melting point
C. Percentage composition
D. Structural formula

189. **The first organic compound was synthesized in laboratory by_____?**
A. **Wohler**
B. Kolbe
C. Berzilius
D. Berthelot

190. **First organic compound synthesized in laboratory was _____?**
A. tartaric acid
B. ethyl alcohol
C. methanol
D. urea

191. **The property of carbon chain formation is called _____?**
A. **catenation**
B. hybridization
C. polymerization
D. solvation

192. **The organic compounds having very high molecular weight are called _____?**
A. carboxylic acids
B. ketones
C. aldehydes
D. polymers
193. **Rate of reactions of most organic compounds are_____?**
A. very slow
B. very fast
C. slow
D. no regular character present
194. **Coal is produced after a long time decay of_____?**
A. animals
B. fossils
C. wood
D. all of the above
195. **Crude oil is blackish coloured liquid produced after the decay of organic matter present between_____?**

A. earth layer
B. mountains
C. sedimentary rocks
D. rocks

196. **At low temperature and pressure cracking can be done in presence of catalyst_____?**
A. Al2O3
B. Fe2O3
C. Al2O3 and SiO2
D. Fe2O3 and SiO2

197. **Which one of the following compounds shows intense knocking ?**
A. n-pentane
B. iso-heptane
C. iso-octane
D. n-heptane

198. **Ether functional group can be represented as _____?**
A. OH
B. R-CO-R
C. R-O-R
D. R-COOH

199. **A single atom or group of atoms which gives characteristic properties to a compound is called_____?**
A. radical
B. hydrocarbon
C. functional group
D. ion

200. **2-propanol and 1-propanol show the isomerism_____?**
A. metamerism
B. functional group isomerism
C. geometric isomerism
D. position isomerism

201. **In sp3 hybridization the expected geometry of molecules will be_____?**
A. square planar
B. trigonal pyramidal
C. tetrahedral
D. linear

202. **In cyano group the carbon atom shows which kind of hybridization_____?**
A. sp2
B. sp
C. sp3
D. none of the above

203. **The fractional distillation of petroleum produces gasoline up to _____?**
A. 10%
B. 15%

C. 20%
D. 30%

204. **Which is not heterocyclic compound _____?**
A. Furan
B. Thiophene
C. Aniline
D. Pyridine

205. **Which one is not state function _____?**
A. Internal energy
B. Enthalpy
C. Gibbs free energy
D. Work

206. **If internal energy of the system is increased _____?**
A. Change in state of the system is increased
B. Temperature of the ystem may rise
C. Chemical reaction may take place
D. All

207. **A reaction has values of ?H and ?S which are both positive. The reaction ___?**
A. Is spontaneous
B. Spontaneity is temperature dependent
C. Has an increasing free energy
D. Is non-spontaneous

208. **The environment in which a system is studied is _____?**
A. State function
B. phase
C. surrounding
D. state

209. **Anything which depends upon initial and final state of a system is_____?**
A. environment
B. surrounding
C. state function
D. enthalpy

210. **Reaction in which heat evolves is called _____?**
A. endothermic
B. spontaneous
C. non-spontaneous
D. exothermic

211. **Pumping of water uphill is_____?**
A. spontaneous process
B. non-spontaneous process
C. irreversible process
D. reversible process

212. **Which one of the following is a state function _____?**
A. pressure
B. temperature
C. enthalpy
D. all of the above

213. **Enthalpy of a reaction can be measured by _____?**
A. **glass calorimeter**
B. manometer
C. Barometer
D. thermometer

214. **Most of thermodynamic parameters are_____?**
A. system
B. surrounding
C. phase
D. state functions

215. **Two fundamental ways to transfer energy are_____?**
A. pressure and temperature
B. pressure and volume
C. heat and work
D. heat and volume

216. **Enthalpy change can be_____?**
A. calculated by Hess law
B. can be measured by calorimeter
C. both A and B
D. none

217. **Enthalpy of combustion for food fuel and other compounds can be measured accurately by_____?**
A. glass calorimeter
B. bomb calorimeter
C. thermometer
D. manometer

218. **When enthalpy of reactants is higher than product then reaction will be_____?**
A. endothermic
B. spontaneous
C. non-spontaneous
D. exothermic

219. **State function the macroscopic property of system depends upon_____?**
A. path of reaction
B. initial state
C. final state
D. initial and final state

220. **CuSO4 + Zn?ZnSO4+Cu is_____?**

A. **Spontaneous reaction**
B. Non-spontaneous reaction
C. Endothermic
D. Exothermic

221. **Total energy of a system is_____?**
A. **P.E + K.E**
B. P.E + heat energy
C. K.E + heat energy
D. P.E + mechanical energy

222. **Unit of heat in SI system is_____?**
A. **J**
B. KCaL
C. Cal
D. GJ

223. **_____ is study about energy of a chemical system ?**
A. **thermochemistry**
B. thermodynamics
C. chemical kinetics
D. stoichiometry

224. **Which of the following has strongest intermolecular forces of attraction ?**
A. Hydrogen (H2)
B. Chlorine (Cl2)
C. Iodine (I2)
D. Methane (CH4)

225. **When substance moves from a solid to a liquid state all of the following changes occur except_____?**
A. Molecules become more disordered
B. K.E of the molecules decreases
C. Intermolecular forces become weaker
D. Molecule become further separated

226. **In order to mention the boiling point of water at 110°C the external pressure should be ?**
A. **Between 760 torr and 1200 torr**
B. Between 200 torr and 760 torr
C. 765 torr
D. any value of pressure

227. **Vapour pressure of water at 100°C is_____?**
A. 55 mm Hg
B. 760 mm Hg
C. 355 mm Hg
D. 1489 mm Hg

228. **Liquid crystal is discovered by _____?**

A. William Crooks
B. FredrackReinitzer
C. J.J Thomson
D. Bravis

229. **Hydrogen bonding is involved in_____?**
A. Solubility
B. Cleansing action of detergents
C. Biological molecules
D. All

230. **Forces of attraction which may be present between all kinds of atoms and molecules are _____?**
A. intramolecular
B. intermolecular
C. van der Waal
D. Dipole-induced dipole

231. **The quantity of heat required to convert one mole of liquid into its vapours at its boiling point is called molar heat of_____?**
A. **vaporization**
B. evaporation
C. crystallization
D. sublimation

232. **Water has maximum density at _____?**
A. 0°C
B. 2°C
C. 4°C
D. 100°C

233. **Formation of vapours from the surface of a liquid is called_____?**
A. vapourization
B. evaporation
C. condensation
D. cracking

234. **The ttractive forces between the partial positive end of one molecule and partial negative end of other molecule are called_____?**
A. **Dipole-dipole forces**
B. Ion dipole-dipole forces
C. London dispersion forces
D. Debye forces

235. **Vapour pressure is not affected by_____?**
A. **Surface area**
B. temperature
C. intermolecular forces
D. atmospheric pressure

236. **Table salt crystallizes with a_____?**

A. Face centered cubic lattice
B. body centered cubic lattice
C. simple cubic lattice
D. othorhombic lattice

237. **During which process empty spaces between particles become minimum ?**
A. ionization
B. condensation
C. fusion
D. evaporation

238. **Which one of the following has highest volatility_____?**
A. **Diethyl ether**
B. Ethyl alcohol
C. Water
D. Ethylene glycol

239. **If we provide very high amount of heat to a liquid its boiling point will_____?**
A. increase
B. remains constant
C. decrease
D. there will be no boiling

240. **A solid may be made up of_____?**
A. Atoms
B. Ions
C. Molecules
D. A, B, and C

241. **Amorphous substances posses_____?**
A. No definite geometry
B. No definite heat of fusion
C. No sharp melting points
D. All of the above

242. **Boiling points of hydrocarbons increase with the increase in number of carbon atoms. It is mainly due to_____?**
A. More strength of H-bonding
B. More strength of London forces
C. Less polarizability
D. All of the above

243. **The phenomenon in which a compound exists in two or more crystalline forms is called _____?**
A. Isomorphism
B. Polymorphism
C. Anisotropy
D. Allotropy

244. **Bucky balls is an allotropic from of_____?**

A. Sulphur
B. Carbon
C. Silica
D. Tin

245. **Isomorphic substances have _____?**
A. Same physical and chemical properties
B. Same physical and different chemical properties
C. Different physical and same chemical properties
D. Different physical and chemical properties

246. **The pressure during the molar heat of fusion is kept_____?**
A. 0 atmosphere
B. one atmosphere
C. 2 atmosphere
D. 10 atmosphere

247. **All the enthalpy changes are_____?**
A. Negative
B. Positive
C. May or may not be A or B
D. none

248. **Which has strongest bonding in the solid state ?**
A. Hydrogen Chloride (HCl)
B. Chlorine (Cl2)
C. Xenon(Xe)
D. Sodium Chloride (NaCl)

249. **When the atoms of third layer are arranged in such a way that they directly lie above the atoms of first layer then this arrangement is called_____?**
A. **ABAB (hexagonal)**
B. ABCABC (Cubic)
C. Orthorhombic
D. Rhombohedral

250. **Which one is false for evaporation ?**
A. Surface phenomenon
B. Continuous
C. Exothermic
D. Cause cooling

251. **Which one of the following does not show hydrogen bonding?**
A. Water
B. Ethyl alcohol
C. Phenol
D. Diethyl ether

252. **Which one is a conductor but is not malleable ?**
A. Iron
B. Graphite

C. Silver
D. Platinum

253. **The density of water may be_____?**
A. Equal to that of ice
B. Greater than that of ice
C. Less than that of ice
D. All are possible

254. **Steam causes more sever burn than the boiling water because it possesses _____?**
A. Latent heat of fusion
B. Latent heat of vaporization
C. Latent heat of sublimation
D. All of the above

255. **The conversion of vapours back into their liquid state is called_____?**
A. crystallization
B. evaporization
C. vaporization
D. condensation

256. **When water freezes at 0°C its density decreases due to_____?**
A. Change of bond angles
B. Cubic structure of ice
C. Empty space present in the structure of ice
D. Change of bond length

257. **The boiling point increases down the zero group element due to_____?**
A. Ion dipole forces
B. London forces
C. Hydrogen bonding
D. Dipole dipole forces

258. **Rising of a wetting liquid in a capillary tube is due to_____?**
A. Surface tension
B. Cohesive forces
C. Adhesive forces
D. viscosity

259. **The number of formula units in 29.25g of common salt_____?**
A. 6.022 x 1023
B. 3.01 x 1023
C. 2 x NA
D. 4 x 6.022 x 1023

260. **Liquid gets the shape of the container when it is poured into it. Which one of the following reasons justifies it ?**
A. Liquid do not have definite shape
B. Liquid do not have definite volume

C. Lieuid is highly compressible
D. Liquid molecules can slide over each other

261. **Molar heat of vaporization of water is_____?**
A. **40.7 KJ/mole**
B. 40.7 J/mole
C. 40.7 cal/mole
D. 40.7 Kcal/mole

262. **Crystallites are present in_____?**
A. crystalline solids
B. amorphous solids
C. liquid crystals
D. all of the above

263. **A malleable solid is one which can be_____?**
A. Converted into wires
B. Converted into thin sheets
C. Melted easily
D. All of the above

264. **Crystalline solids can be identified easily from their _____?**
A. **Sharp melting point**
B. Definite geometry
C. Transition temperature
D. Colour

265. **The viscosity of solids is_____?**
A. **Infinite**
B. Negligible
C. Medium
D. No concept of viscosity in solid

266. **Which solids are called true solids _____?**
A. Metallic
B. Amorphous
C. Crystalline
D. Vitreous

267. **The number amino acid units for each turn of helix on average are_____?**
A. 21
B. 23
C. 25
D. 27

268. **If a physical and chemical change takes place at a constant pressure then the heat change during the process is called_____?**
A. Heat of transition
B. Heat of fusion
C. Enthalpy change
D. All of above

269. **The amount of heat absorbed when one mole of a liquid is changed into gas at its boiling point is_____?**
A. Molar heat of sublimation
B. Molar heat of fusion
C. Molar heat of vapourization
D. Latent heat of that liquid

270. **All of the following were theorized by Bohr in his description of the atom except_____?**
A. Angular momentum of electrons in multiples of h/2?
B. Electrons revolve in discrete circular orbits
C. Energy of each electron is directly proportional to n2
D. Electrons radiate energy continuously in a given orbit.

271. **The magnetic quantum number (QN) has its values determined directly by the value of_____?**
A. Principal (QN)
B. Azimuthal (QN)
C. Spin (QN)
D. Both A & B

272. **The maximum number of electron in a sub shell with ? = 3fs_____?**
A. 6
B. 10
C. 14
D. 18

273. **When an atom absorbs energy the lines in the spectrum will appear which are?**
A. Brighter
B. Darker
C. Colourless
D. Hard to locate

274. **Which one is not true about cathode rays ?**
A. 9.11×10-31 Kg
B. Cast shadow
C. Heat up the platinum foil
D. Cannot ionize

275. **Rutherfords planet like structure was defective and unsatisfactory because_____?**
A. Moving e- accelerate towards the nucleus
B. Continuous spectrum
C. behavior of electron remain unexplained
D. all

276. **Splitting of spectral lines when atom is subjected to magnetic field is called _?**
A. **Zeemans effect**
B. Starks effect

C. Photo electric effect
D. Compton effect

277. **Which one of the following explain the shape of orbitals _____?**
A. Principal of quantum number
B. Azimuthal quantum number
C. Magnetic quantum number
D. Spin quantum number

278. **Pressure in gas discharge tube was kept_____?**
A. 10 torr
B. 1 torr
C. 0.1 torr
D. 0.01 torr

279. **Angle of deflection was studied by_____?**
A. Hitorff
B. Stoney
C. William Crookes
D. J.Perrin

280. **Positive rays give flash on_____?**
A. AgNO3 plate
B. AgCl plate
C. ZnO
D. ZnS

281. **The value of e/m ratio of electron is_____?**
A. 6.02 x 1023 C/kg
B. 1.7588 x 1020 C/kg
C. 9.1095 x 10-31 C/kg
D. 1.7588 x 1011 C/kg

282. **Planks theory says energy is emitted_____?**
A. In continuous manner
B. Discontinuous manner
C. Simultaneously
D. In the form of heat

283. **2nd orbit is _____ away from nucleus of H-atom as compared to 1st orbit is ?**
A. 2-times
B. 3-times
C. 4-times
D. 6 times

284. **The correct electronic configuration of Cu is _____?**
A. [Ar]4s1
B. [Ar]4s2
C. [Ar]3d104s1
D. [Ar]3d94s2

285. **Atomic orbits having same energy are called_____?**
A. **Degenerate orbitals**
B. Bonding molecular orbitals
C. Anti bonding molecular orbitals
D. Half filled orbitals

286. **When electrons collide with heavy metals than _____ are produced?**
A. Beta-rays
B. Alpha-rays
C. X-rays
D. Gamma-rays

287. **Atom with higher atomic number produces X-rays of_____?**
A. **Shorter wavelength**
B. Larger wavelength
C. X-ray not produced
D. All are possible

288. **Space around nucleus where finding probability of electrons is maximum is called _____?**
A. **Orbital**
B. Orbit is elliptical
C. subshell
D. Electron cloud

289. **Electronic configuration of K is_____?**
A. [Ar]4s2
B. [Ar]4s1
C. [Kr]5s1
D. [He]2s1

290. **Milikan used _____ in his atomizer?**
A. Milk
B. Honey
C. Oil
D. Water

291. **Spectrum is produced due to_____?**
A. **Different wavelength**
B. Different colours
C. Different intensities
D. all have little contribution

292. **When electron jump into orbit 1 then series obtained is_____?**
A. **Lyman**
B. Paschen
C. Pfund
D. Brackett

293. **Splitting of spectral lines when atoms are subjected to strong electric filed is called_____?**

A. Zeeman effect
B. Stark effect
C. Photoelectric effect
D. Compton effect

294. **Three quantum number have been derived from equation of_____?**
A. de-Broglie
B. Plancks
C. Schrodinger
D. Heisenberg

295. **The letters s p d and f are used to represent which quantum numbers_____?**
A. Principal
B. Azimuthal
C. Magnetic
D. Spin

296. **The atomic number of an element having maximum number of unpaired electrons in p-subshell is_____?**
A. **7**
B. 10
C. 12
D. 16

297. **Colour of fluorescene produced by cathode rays depends upon_____?**
A. Temperature
B. Pressure
C. Volume
D. Composition of glass

298. **Positive rays are produced_____?**
A. By burning of gas
B. By cooling of the gas
C. By the bombardment of cathode rays on gas molecules
D. From anode like cathode rays produced from cathode

299. **The relationship between energy of a photon of light and its frequency is given by_____?**
A. de-Broglie duel nature of matter
B. Bohrs model
C. Plancks Quantum theory
D. Rutherfords atomic model

300. **The velocity of the photon_____?**
A. **Is independent of wavelength**
B. Depends upon source
C. Depends upon its frequency
D. Equals to the square of amplitude

301. **Atom cannot be divided into simple unitstheorized by_____?**

A. Rutherford
B. Dalton
C. Bohr
D. Schrodinger

302. **The number of fundamental particles in an atom of the lightest isotope carbon are_____?**
A. 6
B. 12
C. 18
D. 20

303. **Increase in atomic number is observed during_____?**
A. Alpha emission
B. Beta emission
C. Both A & B
D. Radioactivity

304. **Free neutron changes into proton with the emission of_____?**
A. Neutrino
B. Electron
C. Both A & B
D. Meson

305. **Charge of electron was measured by_____?**
A. J.J Thomson
B. Millikan
C. Rutherford
D. Perrin

306. **Rutherford bombarded _____ particles in discovery of nucleus?**
A. Gamma-rays
B. Alpha-rays
C. Beta-rays
D. X-rays

307. **The maximum number of orbitals present in a subshell that is represented by Azimuthal quantum number = 3 will be_____?**
A. 1
B. 3
C. 5
D. 7

308. **Pfund series are produced in the spectrum of hydrogen atom_____?**
A. when electrons jump down to 2nd- orbit
B. when electrons jump down to 3rd- orbit
C. when electrons jump down to 4th- orbit
D. when electrons jump down to 5th- orbit

309. **Sommerfelds modification in Bohrs model is_____?**
A. Orbit is cylindrical
B. Orbit is elliptical

C. Orbit is longitudinal
D. Orbit is asymmetrical

310. **Wavelength of electron was verified by_____?**
A. Moseley
B. Davisson and Germer
C. Einstein
D. Roentgen

311. **Quantum number which tells the energy of electron is_____?**
A. **n**
B. 1
C. m
D. s

312. **_____ can expel proteons from paraffins ?**
A. Electron
B. Positron
C. Neutron
D. None of above has such capability

313. **Centrifugal forces are balanced in atom by_____?**
A. **Attractive forces**
B. Repulsive force
C. Electrons
D. Neutrons

314. **When 6d orbital is complete the entering electron goes into_____?**
A. 7f
B. 7s
C. 7p
D. 7d

315. **Neutrons moving with an energy of 1.2 MeV are called_____?**
A. **Fast neutrons**
B. Slow neutrons
C. Moderate neutrons
D. All are possible

316. **Which of the following way in used for classification of chromatography ?**
A. Shape
B. Phase
C. Mechanism
D. All

317. **Which of the following technique is used for the separation of insoluble particles from liquids ?**
A. **Filtration**
B. Crystallization
C. Solvent extraction
D. Chromatography

318. **Fluted filter paper is used to_____?**
A. Filter hot solution
B. Avoid premature crystallization
C. Increase the rate of filtration
D. Decrease the area

319. **A substance having very high vapour pressure at its melting point on heating will show_____?**
A. Melting
B. Sublimation
C. Decomposition
D. Condensation

320. **A technique of partition chromatography in which the solvent is in a pool at the bottom of container_____?**
A. Adsorption chromatography
B. Ascending chromatography
C. Radial chromatography
D. Descending chromatography

321. **Branch of chemistry that deals with the complete qualitative and quantitative analysis of a substance is_____?**
A. Stoichio chemistry
B. Physical chemistry
C. Analytical chemistry
D. Quantum chemistry

322. **Estimation of amounts of different components in a sample is_____?**
A. **Quantitative analysis**
B. Qualitative analysis
C. Stochiometery
D. Physical chemistry

323. **The solid which is left over the filter paper as a result of filtration_____?**
A. Insoluble particles
B. residue
C. crystals
D. mud

324. **Gooch Crucibles are made up of_____?**
A. plastic
B. fibre
C. porcelain
D. steel

325. **Sintered crucible is made up of_____?**
A. Plastic
B. glass
C. porcetain
D. fiber

326. **Separation of a solid from its hot saturated solution by cooling is called_____?**
A. vapourization
B. solvent extraction
C. filtration
D. crystallization

327. **Which of the following technique is simple and efficient to purify a substance_?**
A. Filtration
B. Sublimation
C. Crystallization
D. Solvent extraction

328. **95% ethanol is called_____?**
A. methylated spirit
B. wood spirit
C. rectified spirit
D. absolute alcohol

329. **Ratio of the amount of solute in organic and aqueous solvent is_____?**
A. Retardation factor
B. Distribution co-efficient
C. Distribution in aqueous solution
D. All statements are wrong

330. **Animal charcoal adsorbs the coloured_____?**
A. **impurities**
B. crystals
C. solvents
D. both A & B

331. **Crystallization does not involve_____?**
A. heating
B. sublimation
C. cooling
D. vaporization

332. **In CCl4 I2 shows_____?**
A. Red colour
B. Purple colour
C. Blue colour
D. Yellow colour

333. **Direct conversion of solids into vapours is called _____?**
A. Solvent extraction
B. sublimation
C. crystallization
D. vaporization

334. **Without suction pump filtration is _____?**

A. Fast process
B. Slow process
C. Rapid process
D. All are possible

335. **The use of CaCl2 and PCl5 in the process of crystallization is as a_____?**
A. oxidizing agent
B. reducing agent
C. drying agent
D. colouring agent

336. **In solvent extraction ether is used to separate products of organic synthesis from_____?**
A. **water**
B. iodine
C. hydrochloric acid
D. gases

337. **In crystallization if the solvent is inflammable then direct heating is_____?**
A. needed
B. avoided
C. depends on temperature
D. crystallization does not involve heating

338. **Rate of filtration can be increased by applying gentle suction_____?**
A. Gooch crucible
B. Filter paper
C. Sintered crucible
D. All of the above

339. **Size of filter paper is selected according to the amount of_____?**
A. solution
B. amount of insoluble solute
C. amount of soluble solute
D. Amount of solvent

340. **The tip of funnel should touch the wall of the breaker in order to avoid_____?**
A. Inconsistent flow of filtration
B. splashing
C. premature crystallization
D. all of above

341. **The technique used to separate components of mixture in solid phase ?**
A. Crystallization
B. Filtration
C. Sublimation
D. Solvent extraction

342. **Identification of the components of a sample is_____?**
A. Quantitative analysis
B. Qualitative analysis

C. Stoichiometry
D. Physical chemistry

343. **Different components of a mixture have different Rf values due to_____?**
A. Polar solvent used
B. Combination of solvents used
C. Their different distribution coefficients in the solvent
D. Distributive law

344. **A process controlled by Distributive law is_____?**
A. Crystallization
B. Sublimation
C. Solvent extraction
D. Filtration

345. **Safe and the most reliable method of drying crystals is through_____?**
A. Filter paper
B. Vacuum desiccators
C. Oven
D. None of these

346. **Silica gel and alumina are used as _____?**
A. Mobile phase
B. Stationary phase
C. Mixed phase
D. Single phase

347. **The solvent or mixture of solvents used for separation of compounds is called_____?**
A. Stationary phase
B. Mobile phase
C. Dynamic phase
D. Static phase

348. **Sintered glass is a porous material used for _____?**
A. absorption
B. adsorption
C. filtration
D. sublimation

349. **Which is not related pair of term used in analytical techniques_____?**
A. Filtrate residue
B. Sublimate sublimation
C. Drying desiccator
D. Separating funnel mother liquor

350. **The major steps involved in complete quantitative analysis are _____?**
A. 2
B. 3
C. 4
D. 5

351. **Selection of filter paper depends on size of particles to be_____?**
A. **filtered**
B. dried
C. decolorized
D. decanted

352. **Which is not a sublime material_____?**
A. Iodine
B. Benzoic acid
C. Ammonium chloride
D. Potash alum

353. **Shaking two immiscible liquids increases_____?**
A. Length of contact
B. Volume of contact
C. Area of contact
D. all of above

354. **The solution remaining after the formation of crystals is called _____?**
A. Mother liquor
B. Dilute solution
C. Residue
D. both A & B

355. **The ionization energy_____?**
A. **Generally increases from left to right in a period**
B. Does not change in a period
C. Increase from top to bottom in a group
D. Does not change in a group

356. **Which type of bond is formed by overlap of p orbitals _____?**
A. Pi
B. Sigma
C. Both
D. Neither

357. **The octet rule does not always hold for which of the following elements ____?**
A. C
B. O
C. F
D. P

358. **Which of the following is the best explanation that CO2 is non polar molecule?**
A. Linear geometry
B. Dipole moment is zero
C. Sp hybridization
D. None

359. **Which one is not the absolute term of the element _____ ?**

A. Ionization energy
B. Electron affinity
C. Electro negativity
D. Atomic size

360. **In O2 each oxygen atom is hybridized_____?**
A. sp3
B. sp2
C. sp
D. All

361. **Measurement of the degree of polarity is_____?**
A. Electron affinity
B. Ionic character
C. Ionization energy
D. Dipole moment

362. **A specie with maximum number of unpaired electrons ?**
A. F
B. H2O
C. HF
D. NH-2

363. **Force responsible to hold atoms together in a compound is called _____?**
A. **Bond**
B. Attractive force
C. Interaction
D. All of above represent same entity

364. **In a period the atomic radius ?**
A. Increases
B. Decreases
C. Remain same
D. First decreases then increases

365. **Energy required to remove electron from an atom_____?**
A. **Ionization potential**
B. Electronegativity
C. Electron affinity
D. Activation energy

366. **Greater shielding effect corresponds to ionization energy value_____?**
A. Greater
B. Lesser
C. Remain same
D. No effect

367. **Energy released or absorbed when electrons are added in atom is_____?**
A. Ionization potential
B. Electronegativity

C. Electron affinity
D. Activation energy

368. **Elements of group IA IIA are _____?**
A. Electronegative
B. Electropositive
C. Neutral
D. IA is electropositive while IIA is electronegative

369. **Mostly ionic compound are produced in between elements of_____?**
A. IA and VIA
B. IA IIA and VIIA
C. IB and VIIB
D. IA and IB

370. **The Lewis acids are_____?**
A. **Electron deficient**
B. Electron rich
C. Octet is complete
D. No such acids exist

371. **The geometry of ammonia is_____?**
A. Tetrahedral
B. Square planner
C. Trigonal bipyramidal
D. Trigonal Pyramidal

372. **By combining n atmic orbitals no. of hybrid orbitals will be_____?**
A. 2n
B. n
C. 3n
D. impossible to predict

373. **Geometry of simple molecule having sp3 hybrid orbital is _____?**
A. Triangular
B. Tetrahedral
C. Square planner
D. Linear

374. **Pi bonds are produced by overlapping of_____?**
A. **Un-hybrid orbitals**
B. Hybrid orbitals
C. Hybrid and un hybrid orbitals
D. atomic orbital and hybrid orbital

375. **Molecular orbital which have higher energy than atomic orbitals is called___?**
A. Bonding molecular orbital
B. Antibonding molecular orbital
C. Hybrid orbital
D. Super atomic orbital

376. **Bond order for N2 molecule is _____?**
A. 2
B. 1
C. 3
D. 4

377. **Unit of dipole moment is_____?**
A. **Debye**
B. Poise
C. Pascal
D. Newton

378. **The relative attraction of the nucleus for the electrons in a chemical bond is called _____?**
A. Ionization energy
B. Electron affinity
C. Electro negativity
D. None of the above

379. **Which of the following will have highest value of electron affinity_____?**
A. F
B. Cl
C. Br
D. I

380. **Which of the solid does not contain covalent bond_____?**
A. **Copper**
B. Ice
C. Diamond
D. Graphite

381. **Shielding effect across the period _____?**
A. Increases
B. Decreases
C. Constant
D. None

382. **Which one has maximum number of unpaired electrons ?**
A. 6X
B. 7Y
C. 9Z
D. 13W

383. **Molecular orbitals are filled according to _____?**
A. Auf bau principle
B. Hunds rule
C. Paulis Exclusion principle
D. All these

384. **Which one shows high %age of the ionic character ?**

A. H2O
B. HF
C. HCl
D. HBr

385. **Which of the following have their outer most shell complete in atomic form ?**
A. **Noble gases**
B. Alkali metals
C. Coinage metals
D. Gun metals

386. **nergy of atom in compound is_____?**
387. EA. Higher than individual
B. Lesser than individual
C. No change
D. Impossible to predict

388. **An atom loses or gains electrons to_____?**
A. Gain stability
B. Form a bond
C. Complete its outermost shell
D. all are accurate justifications

389. **In a group ionic radius ?**
A. **Increases**
B. Decreases
C. No change
D. Variable trend

390. **Ionization energy in a period generally _____?**
A. **Increases**
B. Decreases
C. No change
D. Variable trend

391. **Elements having high I.P values are_____?**
A. Metals
B. Non metals
C. Liquids
D. Solids

392. **In a period electronegativity from left to right_____?**
A. **Increases**
B. Decreases
C. Remain constant
D. Variable trend

393. **Ionic bond is produced after complete transfer of _____ ?**
A. Nucleus
B. Neutrons

C. Electrons
D. Protons

394. **Bond will beionic when E.N difference of bonded atom is _____?**
A. Equal to 1.7
B. Greater than 1.7
C. Less than 1.7
D. No specificity exists

395. **Which one of the following has polar covalent bond ?**
A. **HF**
B. CH4
C. H2
D. N2

396. **Sharing of 1 electron pair by one specie forms_____?**
A. Single covalent bond
B. Hydrogen bond
C. Double covalent bond
D. Coordinate covalent bond

397. **Orbitals of same energy produced after mixing of orbitals of different energy are called _____?**
A. **Degenerate orbitals**
B. Generate orbitals
C. Hybrid orbitals
D. Zeeman orbitals

398. **Geometry of molecule will be pyramidal if the outer post shell of the central atom has_____?**
A. **3 bond pair one lone pair**
B. 2 bond pair 2 lone pair
C. 1 bond pair 3 lone pair
D. 3 lone pair 1 bond pair

399. **According to VESPR Model the geometry of molecule having 5 bond pair in outer most shell will be _____?**
A. Triangular
B. Square planner
C. Trigonal bipyramidal
D. Octahedral

400. **Unpaired electron in a molecule gives _____ character ?**
A. **Ferromagnetic**
B. Paramagnetic
C. Diamagnetism
D. Both A & B

401. **Product of charge and distance is called_____?**
A. **Pressure**
B. Bond length

C. Work
D. Dipole moment

402. **on sp3 hybridization _____?**
A. All p-orbitals are involved
B. One s and 3 p-orbitals are involved
C. one p-orbital is involved
D. four p-orbitals are involved

403. **What is the relative rate of effusion of CO and CO2 ?**
A. **CO is 1.25 times faster than CO2**
B. CO is 3.75 times faster than CO2
C. CO is 1.25 times faster than CO
D. Both diffuse at the same rate

404. **Which of the following is not considered as an intermolecular force between molecules ?**
A. **Coordinate covalent bonds**
B. Hydrogen bonds
C. Debye forces
D. London dispersion forces

405. **Ideal gasses have all the following characteristics except ?**
A. Absence of intermolecular forces
B. Collisions among the molecules of an ideal gas are perfectly elastic
C. The molecules occupy no space
D. All of the above are correct

406. **Under what conditions the gases deviate from the ideal behavior ?**
A. High temperature
B. Low temperature
C. High pressure
D. B and C

407. **Which one has the lowest density at room temperature ?**
A. Ne
B. N2
C. NH3
D. CO

408. **The introduction of Kelvin scale in thermodynamic is according to_____?**
A. Boyles law
B. Charles law
C. Daltons law
D. Grahams law

409. **At constant temperature the pressure of an ideal gas is doubled its density becomes_____?**
A. Half
B. Double

C. Same
D. None

410. **The diffusion of gases at absolute zero will be_____?**
A. Unchanged
B. Slightly decreased
C. Slightly increased
D. Zero

411. **Critical temperature for different gases is different and depends upon_____?**
A. Size of molecule
B. Shape of molecule
C. Intermolecular attractions
D. All of the above

412. **What is the simplest form of matter ?**
A. **Gas**
B. Liquid
C. Solid
D. Semi solid

413. **Which state of matter has the lowest density ?**
A. **Gas**
B. Liquid
C. Solid
D. Plasma

414. **The solid particles only posses_____?**
A. Translational motion
B. Vibrational motion
C. Rotational motion
D. All of above motions

415. **If 1/V is plotted on X-axis and pressure on Y-axis at constant temperature what should appear _____?**
A. Straight line parallel to x-axis
B. Straight line parallel to y-axis
C. Straight line
D. Curve

416. **One mole of an ideal gas at 546.5 K under 2 atm pressure has a volume of___?**
A. 22.414 m3
B. 44.828 dm3
C. 22.414 dm3
D. 11.212 cm3

417. **Which one is not the partial pressure of oxygen in the lungs ?**
A. 0.1526 atm
B. 116 mm of Hg
C. 116 torr
D. 1 atm

418. **The kinetic molecular theory of gases was put forward in 1738 by _____?**
A. Boltzman
B. Maxell
C. Clausius
D. Bernoulli

419. **Hydrogen effuses four times more rapidly than volume of an unknown gas molar mass of unknown gas should be_____?**
A. 16 gmol-1
B. 32 gmol-1
C. 48 gmol-1
D. 64 gmol-1

420. **The processes of effusion and diffusion are best understand by_____?**
A. Daltons law
B. Avogadros law
C. Grahams law
D. Charles law

421. **The non-ideal behaviour results chiefly from_____?**
A. Intermolecular attraction and infinite volume
B. Elastic collisions and finite volume
C. Intermolecular attractions and finite volume
D. Intermolecular attraction only

422. **Linds method is employed for_____?**
A. Separation of gases
B. Expansion of gases
C. Compression of gases
D. Liquefaction of gases

423. **Which of these gases diffuse more quickly than oxygen ?**
A. H2S
B. NO
C. Cl2
D. N2O

424. **The weakest (in strength) of the following intermolecular forces is_____?**
A. Hydrogen bonding
B. Vander Waals force
C. Forces among the polar molecules
D. Ionic bond

425. **Which of the following statements is true about plasma_____?**
A. It may be the first state of matter
B. It is not a phase transition
C. It is a conductor of electricity
D. All of the above

426. **0.5 mole of nitrogen gas and 0.5 mole of carbon monoxide gas at STP have same_____?**
A. Value of a
B. Mass
C. Atoms
D. Both B and C

427. **Which of the following option is incorrect about gases ?**
A. **All molecules move with same speed**
B. All molecules behave independently
C. PV / RT = n
D. All gases cannot be liquefied through Linds Method

428. **In how many forms do matter exists ?**
A. Three
B. Four
C. Five
D. Two

429. **What is the abundant form of matter on earth ?**
A. Gas
B. Liquid
C. Solid
D. Plasma

430. **For a gas where volume and pressures are 1dm3 and 2 atm respectively what should be its new volume when pressure is increased to 6 atm at constant temperature ?**
A. 1/2dm3
B. 1/3dm3
C. 1/4dm3
D. 2/3dm3

431. **Which one is the right value for R ?**
A. **0.0821 atm dm3k-1mol-**
B. 0.0821 atm m3k-1mol-1
C. 2 cal k-1 mol-1
D. 8.314 Nm2k-1mol-1

432. **The partial pressure exerted by the water vapours is called_____?**
A. Surface tension
B. Aqueous tension
C. Vapour pressure
D. Hydraulic pressure

433. **The spreading of fragrance or scent in air is due to_____?**
A. **Diffusion**
B. Effusion
C. Attraction with air
D. Low dsensity

434. **The highest temperature at which a substance can exist as a liquid is called its_____?**
A. **Critical temperature**
B. Standard temperature
C. Absolute temperature
D. Upper consulate temperature

435. **What do we call to sudden expansion of plasma ?**
A. Avogadros law
B. Grahams law of diffusion
C. Joule Thompson effect
D. Daltons law of partial pressure

436. **What will be the pressure of 1 mole of an ideal gas maintained at 300 K and 250cm3 volume ?**
A. **98.5 atm**
B. 96.7 atm
C. 95.8 atm
D. 97.1 atm

437. **Who made volume and pressure correction to explain deviation of gases from ideal behaviour ?**
A. Clausius
B. Boltzman
C. Charles
D. Vander waal

438. **The gases become non-ideal at _____?**
A. High temperature and high pressure
B. Low temperature and low pressure
C. High temperature and low pressure
D. Low temperature and high pressure

439. **The pH of 10-3 mol dm-3 of an aqueous solution of H2SO4 is_____?**
A. 3
B. 2.7
C. 2
D. 1.5

440. **If a buffer solution of higher pH than seven is to be made we use_____?**
A. Strong acid and strong base
B. Weak acid and strong base
C. Weak acid and strong base
D. Weak acid and its salt with strong base

441. **AgCl dissolved with conc (2×10-2) Ksp will be_____?**
A. 3.6 x 10-6
B. 3.6 x 10-5
C. 7.2 x 10-6
D. 4 x 10-4

442. **Which of the following will not change the concentration of ammonia at the equilibrium ?**
A. Increase of pressure
B. Increase of volume
C. Addition of catalyst
D. Decrease of temperature

443. **For a reaction involving only gases at 25?C the equilibrium constant can be expressed in terms of molarity Ke or partial pressure Kp. Which is true about the numerical value of Kp ?**
A. Kc is generally greaer than Kp
B. Kc is generally less than Kp
C. Kc is generally equal to Kp
D. Kc is equal to Kp if the total moles of reactants and products are equal

444. **Which one of the following aqueous solutions will be basic ?**
A. NaCl
B. Na_2SO_4
C. Na_2CO_3
D. $FeCl_3$

445. **Reaction which proceeds in both directions is called_____?**
A. **reversible**
B. irreversible
C. spontaneous
D. non-spontaneous

446. **Conversion of reactant into product in unit time is called_____?**
A. **rate of forward reaction**
B. rate of backward reaction
C. rate constant
D. rate co-efficient

447. **Unit of Kc is_____?**
A. moles2dm+6
B. moles-2dm+6
C. moles+2dm-6
D. Kc may or may not have units

448. **Rate expression for ammonia synthesis is_____?**
A. Kc=x2/(a-x)(b-x)
B. Kc=x2/v(a-x)
C. Kc=4×2/(a-2x)2(b-x)
D. Kc=4x2v2/(a-x)(b-3x)3

449. **Catalyst used to speed up the reaction of ammonia synthesis is_____?**
A. V_2O_5
B. V_2O_5 and Pt
C. Fe
D. Pieces of Fe crystals are embedded in fused mixture of MgO Al_2O_3 and SiO_2

450. **By the addition of base in waterpH will be_____?**
A. **more than 7**
B. less than 7
C. equal to 7
D. no effect

451. **Negative log of mular concentration of H+ ions is called_____?**
A. **pH**
B. pOH
C. pKa
D. pKw

452. **Any substance which accepts H+ is base favours the concept_____?**
A. **Lowrys**
B. Lewis
C. Arrhenius
D. None of these

453. **When sparingly soluble salt is in equilibrium with molar concentration of its oppositely charged ion when the product is called_____?**
A. common ion effect
B. solubility product
C. dissociation constant
D. dissociation constant for an acid

454. **Addition of CH3COOH and CH3COONa gives in water_____?**
A. Standard solution
B. buffer solution
C. acidic buffer solution
D. both B & C

455. **Solubility of any salt can be determined from_____?**
A. Ka
B. Kb
C. Kc
D. Ksp

456. **By decreasing the pressure the reaction will go to that direction where_____?**
A. volume is decreased
B. volume increased
C. heat absorbed
D. no. of moles of specie decreased

457. **Equilibrium state is achieved quickly by the addition of _____?**
A. reactants
B. acid
C. base
D. catalyst

458. **Which one of the following is a buffer solution ?**

A. brine
B. blood
C. glue
D. solution of CuSO4

459. **Solution having the property of a very little change in pH on adding a small amount of strong acid or base is called_____?**
A. **buffer solution**
B. normal solution
C. standard solution
D. neutral solution

460. **Conjugated base of a weak acid is_____?**
A. weak
B. strong
C. moderately weak
D. unstable

461. **Kc value has_____?**
A. No units
B. Units
C. Both A & B
D. None

462. **Sodium benzoate and benzoic acid are mixed in equimolar ration to form buffer if pKa is 2 what will be the pH ?**
A. 0
B. 1
C. 2
D. any one

463. **In which of the following equilibria will Kc and Kp have the same value ?**
A. PCI5 = PCI3 + CI2
B. N2 + 3H2 = 2NH
C. 2CO + O2 = CO2
D. N2 + O2 = 2NO

464. **Which of following is not a base_____?**
A. KOH
B. NH3
C. PH3
D. BF3

465. **Which set of solutes will form a buffer when dissolved in water to make 1 litter of solution ?**
A. 0.0002M HCI
B. 0.2 mole of NaCI with 0.2 mole of HNO3
C. 0.4 mole of CH3COOH with 0.4 mole of NaOH
D. 0.4 mole of NH3 with 0.2 mole of HCI

466. **Chemical equilibrium state is_____?**

A. **dynamic state**
B. static state
C. free state
D. unidirectional state

467. **At start of reaction the concentration of reactants is_____?**
A. **high**
B. low
C. according to Kc
D. constant

468. **In case of gases Kc is replaced by_____?**
A. Ka
B. Kb
C. Kp
D. K

469. **When the value of Kc is very small then_____?**
A. reaction is at start
B. product conc. Is maximum
C. reactant conc. Is minimum
D. reaction is completed

470. **Idea of pH and pOH was put forward by_____?**
A. Gibbs
B. Einstein
C. Sorenson
D. Chadwick

471. **Ka<10-3 means_____?**
A. Very strong base
B. Very weak acid
C. Very strong acid
D. Very strong salt

472. **Sodium benzoate and benzoic acid are mixed in equimolar ration to form buffer if pKa is 2 what will be the pH ?**
A. 0
B. 1
C. 2
D. any one

473. **In which of the following equilibria will Kc and Kp have the same value ?**
A. $PCl_5 = PCl_3 + Cl_2$
B. $N_2 + 3H_2 = 2NH$
C. $2CO + O_2 = CO_2$
D. $N_2 + O_2 = 2NO$

474. **Which of following is not a base_____?**
A. KOH
B. NH_3

C. PH3
D. BF3

475. **Which set of solutes will form a buffer when dissolved in water to make 1 litter of solution ?**
A. 0.0002M HCI
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B. low
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D. constant

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A. Ka
B. Kb
C. Kp
D. K

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A. Gibbs
B. Einstein
C. Sorenson
D. Chadwick

481. **Ka<10-3 means_____?**
A. Very strong base
B. Very weak acid
C. Very strong acid
D. Very strong salt

482. **Which of the following is a macro nutrient ?**
A. boron
B. iron
C. copper
D. carbon

483. **Three elements needed for the healthy growth of plants are_____?**
A. **N P K**
B. N K C
C. N S P
D. N Ca P

484. **Residence time of methane in the atmosphere is_____?**
A. 3 – 7 days
B. 2 -3 days
C. 3 – 7 years
D. 2 – 3 years

485. **Hypochlorous acid is used for disinfecting the water it reacts with the dissolved ammonia producing_____?**
A. NH2Cl
B. NHCl2
C. NCl2
D. all of the above

486. **Acid present in acid rain may be_____?**
A. H2SO4
B. HNO3
C. both A and B
D. none

487. **Which of the following is not a condition for the formation of smog ?**
A. sufficient NO
B. sunlight
C. less movement of air
D. winds

488. **In which of the following layer of atmosphere there is more thickness of ozone layer ?**
A. troposphere
B. stratosphere
C. mesosphere
D. photosphere

489. **Which of the following air pollutants is more dangerous for ozone layer ?**
A. CFC
B. CO2
C. CO
D. Oxides of nitrogen

490. **Which statement is wrong ?**
A. **the amount of ozone layer is greater in the region close to the equator**
B. ozone acts as filter for UV radiations
C. in the equatorial region it acts as pollutant
D. CFCs play effective role in removing O3 in the stratosphere

491. **In the purification of portable water the coagulant used is_____?**
A. **alum**
B. nickel sulphate

C. copper sulphate
D. barium sulphate

492. **Newspaper can be recycled again and again how many times ?**
A. 2
B. 3
C. 4
D. 5

493. **The main pollutant of leather tanneries in the waste water is_____?**
A. chromium III
B. chromium IV
C. chromium V
D. chromium VI

494. **Which substance can be used for disinfecting water ?**
A. **KMnO4**
B. Alums
C. Ozone
D. All

495. **Which one of the following makes the bulk of hydrospheres content ?**
A. **oceans**
B. glaciers & icecaps
C. fresh water lakes and ponds
D. All have equal distribution

496. **The percentage of suspended solid waste in raw water is removed by coagulation is_____?**
A. 60
B. 70
C. 80
D. 90

497. **The main product of bacterial action is_____?**
A. Nox
B. NO2
C. N2O3
D. NO

498. **Pollutants have adverse effect over_____?**
A. Biosphere
B. Ecosystem
C. Both a & b
D. Hydrosphere

499. **Which of the following is not a heavy industry ?**
A. iron
B. fertilizer
C. paper
D. none