# Quiz: Chemistry set 17

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**Q801: The de Broglie wavelength of a particle decreases when its:**

A) Velocity increases
B) Mass decreases
C) Kinetic energy decreases
D) Momentum decreases

**Q802: For a first order reaction, the time required for 87.5% completion is:**

A) t1/2
B) 2t1/2
C) 3t1/2
D) 4t1/2

**Q803: The maximum number of electrons that can have n = 4 and l = 2 is:**

A) 6
B) 10
C) 14
D) 18

**Q804: The pH of a 1x10-6 M HCl solution at 25 degC is approximately:**

A) 6
B) 7
C) 5
D) 8

**Q805: Which colligative property depends on the number of solute particles directly?**

A) Relative lowering of vapour pressure
B) Elevation of boiling point
C) Depression of freezing point
D) All of these

**Q806: The correct order of increasing electronegativity is:**

A) Si < P < S < Cl
B) Cl < S < P < Si
C) P < Si < S < Cl
D) Si < S < P < Cl

**Q807: The hybridization of central atom in BrF5 is:**

A) sp3
B) sp3d
C) sp3d2
D) d2sp3

**Q808: Which of the following complexes is diamagnetic?**

A) [Fe(H2O)6]3+
B) [MnF6]3-
C) [Ni(CN)4]2-

D) [CoF6]3-

**Q809: The SI unit of Gibbs free energy change is:**

A) J
B) J mol-1
C) J K-1
D) J mol-1 K-1

**Q810: Which reagent reduces carboxylic acids to primary alcohols?**

A) NaBH4
B) PCC
C) LiAlH4
D) KMnO4

**Q811: The total number of sigma bonds in ethene is:**

A) 4
B) 5
C) 6
D) 7

**Q812: Which compound shows maximum covalent character?**

A) NaCl
B) MgCl2
C) AlCl3
D) KCl

**Q813: The oxidation state of sulphur in Na2S2O3 is:**

A) +2
B) +4
C) +6
D) Average +2

**Q814: The bond angle in CO32- ion is:**

A) 109.5 deg
B) 120 deg
C) 107 deg
D) 180 deg

**Q815: Which gas deviates least from ideal behavior?**

A) NH3
B) CO2
C) H2
D) SO2

**Q816: The molarity of a solution containing 3 g NaOH in 500 mL solution is:**

A) 0.15 M
B) 0.25 M
C) 0.30 M
D) 0.10 M

**Q817: Which amine is most basic in aqueous solution?**

A) NH3
B) CH3NH2
C) (CH3)2NH
D) (CH3)3N

**Q818: The coordination number of Cr in [Cr(en)3]3+ is:**

A) 3
B) 4
C) 6
D) 8

**Q819: Which of the following is an intensive property?**

A) Mass
B) Volume
C) Enthalpy
D) Density

**Q820: The Arrhenius equation relates rate constant to:**

A) Concentration
B) Temperature
C) Pressure
D) Time

**Q821: Which compound is commonly used as an antacid?**

A) NaCl
B) Mg(OH)2
C) NH4Cl
D) HNO3

**Q822: The total number of valence electrons in SO3 molecule is:**

A) 18
B) 24
C) 30
D) 32

**Q823: Which of the following is the strongest oxidizing agent?**

A) Cl2
B) KMnO4
C) O3
D) F2

**Q824: The time required for 93.75% completion of a first order reaction is:**

A) 3t1/2
B) 4t1/2
C) 5t1/2
D) 6t1/2

**Q825: Which is an example of heterogeneous catalysis?**

A) H+ in ester hydrolysis
B) Ni in hydrogenation
C) I- in H2O2 decomposition
D) NO in SO2 oxidation

**Q826: The correct order of bond length is:**

A) C≡≡C < C=C < C-C
B) C-C < C=C < C≡≡C
C) C=C < C≡≡C < C-C
D) C≡≡C < C-C < C=C

**Q827: Which molecule has zero dipole moment?**

A) NH3
B) H2O
C) CO2
D) SO2

**Q828: A buffer solution resists change in pH upon addition of:**

A) Strong acid only
B) Strong base only
C) Small amounts of acid or base
D) Large amount of acid

**Q829: Which of the following is a non-electrolyte?**

A) NaCl
B) HCl
C) KOH
D) Urea

**Q830: The IUPAC name of CH3-CH2-CO-CH3 is:**

A) Butan-1-one
B) Butan-2-one
C) Propanone
D) Pentane-2-one

**Q831: Which halogen has maximum electron affinity?**

A) F
B) Cl
C) Br
D) I

**Q832: The geometry of XeF4 is:**

A) Tetrahedral
B) Square planar
C) Octahedral
D) Trigonal bipyramidal

**Q833: Which of the following is a state function?**

A) Work
B) Heat
C) Entropy
D) Path

**Q834: The number of pi bonds in ethyne is:**

A) 1
B) 2
C) 3
D) 0

**Q835: Which compound shows optical isomerism?**

A) But-1-ene
B) But-2-ene
C) 2-Butanol
D) Ethane

**Q836: The SI unit of specific conductivity is:**

A) S m-1
B) S m2 mol-1
C) Ohm m
D) Ohm-1 m2

**Q837: Which metal is extracted by electrolysis of molten salt?**

A) Fe
B) Cu
C) Al
D) Zn

**Q838: The rate law for a second order reaction is:**

A) Rate = k
B) Rate = k[A]
C) Rate = k[A]2
D) Rate = k/[A]

**Q839: Which acid is weakest in aqueous solution?**

A) HF
B) HCl
C) HBr
D) HI

**Q840: The oxidation state of nitrogen in $NH_4^+$ ion is:**

A) -3
B) -1
C) +1
D) +3

**Q841: Which compound gives positive Fehling’s test?**

A) Acetone
B) Glucose
C) Benzaldehyde
D) Acetic acid

**Q842: The standard enthalpy of formation of O2(g) is:**

A) -286 kJ mol-1
B) 0
C) +286 kJ mol-1
D) -393 kJ mol-1

**Q843: Which ion has maximum hydration enthalpy?**

A) Li+
B) Na+
C) K+
D) Cs+

**Q844: The reagent used to dehydrate alcohols is:**

A) NaBH4
B) PCC
C) Conc. H2SO4
D) KMnO4

**Q845: Which ion is diamagnetic?**

A) Fe3+
B) Mn2+
C) Zn2+
D) Cu2+

**Q846: The correct order of thermal stability of hydroxides is:**

A) LiOH < NaOH < KOH
B) KOH < NaOH < LiOH
C) NaOH < KOH < LiOH
D) LiOH < KOH < NaOH

**Q847: Which ligand is ambidentate?**

A) NH3
B) H2O
C) NO2-
D) en

**Q848: The value of gas constant R in L atm mol-1 K-1 is:**

A) 8.314
B) 1.987
C) 0.0821
D) 2.303

**Q849: Which acid is strongest in aqueous solution?**

A) HNO3
B) H2SO4
C) HClO4
D) CH3COOH

**Q850: For an exothermic reaction, the sign of DeltaH is:**

A) Positive
B) Negative
C) Zero
D) Depends on catalyst