Date Planned : __ / __ / __	Daily Tutorial Sheet - 10	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level - 2	Exact Duration :_____

116. The electron affinity of the following elements can be arranged:

(A) Cl > O > N > C **(B)** Cl > O > C > N

(C) Cl > N > C > O **(D)** Cl > C > O > N

117. In which of the following arrangements, the order is not correct according to the property indicated against it?

(A) Increasing size: $Al^{3+} < Mg^{2+} < Na^{+} < F^{-}$

(B) Increasing I.E.$_1$: B < C < N < O

(C) Increasing E.A.$_1$: I < Br < F < Cl

(D) Increasing metallic radius: Li < Na < K < Rb

***118.** Which of the following statements is/are wrong?

(A) van der Waals' radius of iodine is more than its covalent radius

(B) All isoelectronic ions belong to same period of the periodic table

(C) I.E.$_1$ of N is higher than that of O while I.E.$_2$ of O is higher than that of N

(D) The electron affinity of N is almost zero while that of P is 74.3 kJ mol^{-1}

***119.** Stability of ions of Ge, Sn and Pb will be in the order :

(A) $Ge^{2+} < Sn^{2+} < Pb^{2+}$ **(B)** $Ge^{4+} > Sn^{4+} > Pb^{4+}$

(C) $Sn^{4+} > Sn^{2+}$ **(D)** $Pb^{2+} > Pb^{4+}$

***120.** Select the incorrect statement(s)/order(s):

(A) *d*-orbital can accommodate 10 electrons

(B) $\underset{2s^2\,2p^6\,3s^1}{Na} \xrightarrow{I.E._1} \underset{2s^2\,2p^6}{Na^{+}} \xrightarrow{I.E._2} \underset{2s^2\,2p^5}{Na^{2+}} \xrightarrow{I.E._3} \underset{2s^2\,2p^4}{Na^{3+}}$, order of successive I.E. is

I.E.$_1$ < I.E.$_2$ > I.E.$_3$

(C) Number of unpaired electrons in Co^{2+} cation > Number of unpaired electrons in Co^{3+} cation

(D) First ionisation energy of Pt is greater than that of Pd

121. In the compound M – O – H, the M – O bond will be broken if:

(A) Δ (E.N.) of M and O < Δ (E.N.) of O and H

(B) Δ (E.N.) of M and O = Δ (E.N.) of O and H

(C) Δ (E.N.) of M and O > Δ (E.N.) of O and H

(D) Cannot be predicted according to difference in E.N.

122. Aqueous solutions of two compounds $M_1 - O - H$ and $M_2 - O - H$ are prepared in two different beakers. If, the electronegativity of $M_1 = 3.4$, $M_2 = 1.2, O = 3.5$ and H = 2.1, then the nature of two solutions will be respectively: $M_1 = 3.4$, $M_2 = 1.2, O = 3.5$

(A) acidic, basic **(B)** acidic, acidic

(C) basic, acidic **(D)** basic, basic

***123.** Consider the following ionization steps:

$M(g) \longrightarrow M^{+}(g) + e^{-}; \quad \Delta H = +100\,eV$

$M(g) \longrightarrow M^{2+}(g) + 2e^{-}; \quad \Delta H = +250\,eV$

Select correct statement(s):

(A) $I.E._1$ of M(g) is 100 eV **(B)** $I.E._1$ of M^{+} (g) is 150 eV

(C) $I.E._2$ of M(g) is 250 eV **(D)** $I.E._2$ of M(g) is 150 eV

124. Consider the following statements:

(I) The radius of an anion is larger than that of the parent atom.

(II) The ionization energy generally increases with increasing atomic number in a period.

(III) The electronegativity of an element is the tendency of an isolated atom to attract an electron.

Which of the above statements is/are correct?

(A) I alone **(B)** II alone **(C)** I and II **(D)** II and III

125. Which of the following order is correct for the property mentioned in brackets?

(A) $S^{2-} > Cl^{-} > K^{+} > Ca^{2+}$ (Ionisation energy)

(B) C < N < F < O (2^{nd} Ionisation energy)

(C) B > Al > Ga > In < Tl (Electronegativity)

(D) $Na^{+} > Li^{+} > Mg^{2+} > Be^{2+} > Al^{3+}$ (Ionic radius)