

Tutorial No. 1

Date: 18-08-2014

**Q1.** Which of the following pair is isoelectronic?

(a) S, Se      (b)  $S^{2-}$ ,  $Se^{2-}$       (c)  $Na^+$ ,  $O^{2-}$       (d)  $F_2$ ,  $Cl_2$

**Q2.** Calculate  $Z^*$  values for F and  $F^-$  and from results predict which one has more electron affinity.

**Q3.** Calculate  $Z^*$  for 6s electron in Platinum.

**Q4.** Arrange the following elements in increasing order of Ionization Energy.

Li, Be, B, C, N, O, F

**Q5.** Why chloride ( $Cl^-$ , 181 pm)  $Cl^-$  is smaller than phosphide ion ( $P^{3-}$ , 212 pm)?

**Q6.** What is the total number of valence electrons in  $CO_2$  and  $NO_2$ ?

**Q7.** Which one of the following compounds have the same number of valence electrons as  $NO_2^-$

$CO_2$ ,  $NO_2$ ,  $O_3$ ,  $CO_3^-$ , or  $CO_2^-$ ?

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