Daily Tutorial Sheet-15	Level-3

157.(C) If Aufbau rule is not followed then, 19th electron in K enters in 3d sub-shell, not is 4s.

158.(ACD) (a) $S^-(g) \longrightarrow S^{2-}(g)$; $\Delta H_{e.g.} = (+)ve$

(b) $Na^+(g) + Cl^-(g) \longrightarrow Na^+Cl^-(s)$; $\Delta H = (-)ve$

(c) $N(g) \longrightarrow N^-(g)$; $\Delta H_{e.g.} = (+)ve$

(d) $Al^{2+}(g) \longrightarrow Al^{3+}(g)$; $\Delta H_{I.E.} = (+)ve$

159.(ABD)(A) Cations are small than parental atom due to less no. of e^-

(B) Size decreases due to presence of less e^- as compared to proton and hence attraction towards proton increases.

(C) Incorrect $\rightarrow$ Correct order is : Co $\approx$ Ni < Cu < Zn

(D) Down the group size increases. So, order is $K^+ > Mg^{2+} > Al^{3+} > Li^+$

160.(A) $Cl + e^- \longrightarrow Cl^- + 3.7\,eV$

Energy released for the conversion of 2.0 g of gaseous chlorine to chloride ion $= \frac{3.7 \times 23.06 \times 2}{35.5} = 4.8\,kcal$

161. **(A)** 3s-orbital cannot be filled before complete filling of 2p-orbital. So, this configuration is incorrectly written.

(B) Atomic number of boron is 5, so its electron configuration would be $1s^2 2s^2 2p^1$, the configuration written above is that of fluorine.

(C) Atomic number of chlorine is 17, so its electronic configuration would be $1s^2 2s^2 2p^6 3s^2 3p^5$. The configuration mentioned above is that of Argon.

(D) Cu : $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^1$

162.(ACD) On Pauling's scale electronegativities of H (2.1), Te (2.1) and P (2.1) are similar but the electronegativity of S (2.5) is different from the other three elements.