Daily Tutorial Sheet-7	Level - 2

86.(B) Energy is always required to add second electron because of decrease of zeff after adding one electron.

87. (ACD) Increasing order of size : $Mg^{2+} < Na^{+} < F^{-} < O^{2-}$

88.(B) As value of n increases, energy gap decreases due to increasing $Z_{eff.}$ on valence shell.

89.(B) Atomic radius and nuclear charge increases from top to bottom because number of shell and atomic mass increases down the group.

90.(C) The last halogen will have $7s^2 7p^5$ outer configuration. Since, the filling of 7p-orbitals will begin after 5f- and 6d-orbitals, thus the atomic number of the new halogen will be 112 (upto the filling of 6d-orbitals) plus 5, i.e., 117.

91.(B) $I.E._2$ of alkali metal is high.

Out of all alkali metal, $I.E._2$ is highest for Li^{+} due to its very small size.

92.(C) In isoelectronic species (same e^{-}), as Z increases, size decreases

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94.(ABCD)

(A) Due to smallest size of F among halogens and due to largest size of Cs among alkali metals

(B) As the size decreases by factor of n^2 as we go down the group I.E. $\downarrow$ses i.e. removal of e^{-} becomes easy

(C) Due to the larger size of Cl as compared to F, gain of e^{-} in F causes $e^{-} - e^{-}$ repulsion thereby causing difficulty in adding electron.

(D) Self explanatory.

95.(D) The first member of the lanthanide series is cerium (Z = 58)