Daily Tutorial Sheet-8	Level - 2

96.(B) I.E. = $I.E._1 + I.E._2$

97.(C) $\text{moles(n)} = \frac{110}{10^3 \times 7}$. Energy = moles × 720 kJ/mole = 11.3 kJ mol^{-1}

98.(D) Second ionization energy is amount of energy required to take out an electron from the monopositive cation.

$M(g) \longrightarrow Mg^{2+} + 2e^-$ ..... (5)

$M(g) \longrightarrow M^+ + e^-$ ..... (3)

Hence, (5 – 3)

99. (BC) W show +3 oxidation state and X show +2 oxidation state.

$Y = ns^2np^4$ Y show -2 oxidation state

$Z = ns^2np^5$, Z show -1 oxidation state

The compounds that can be formed are :

(A) $W^{+3} + Y^{2-} = W_2Y_3$ **(B)** $X^{+2} + Y^{-2} = XY$

(C) $W^{+3} + Z^{-1} = WZ_3$ **(D)** $X^{+2} + Z^{-1} = XZ_2$

100.(B) $IE \propto Z_{eff}$ and EGE of Cl > F, so IE of $F^- < Cl^-$

101.(B) Along the period I.E. increases

102.(B) Down the group I.E. decreases

103.(B) Ist I.E. Mg > Na more Z_{eff} & fully filled. But after removing one e^- from Na, it achieves Noble gas configuration, so removal of dual electron will be more difficult in comparison to 2^{nd} e^- removal from Mg.

104.(C) Along the period I.E. increases But I.E of P > S, due to stability of half filled configuration.

105.(A) $I.E. \propto Z_{eff}$