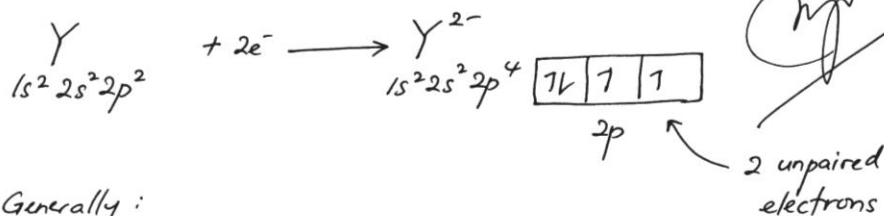
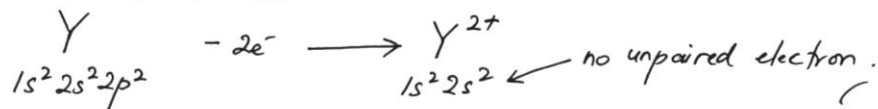


Q₁(c) - Ion Y^{2+} : no unpaired electron (all e^- are paired)

- Ion Y^{2-} : 2 unpaired electron

- a representative element (p block)

Assume $Y = \text{Carbon}$:



Generally:

Y should be from group 14 where the valence shell is $ns^2 np^2$

Y^{2+} will have electronic conf. of ns^2 (no unpaired electron)

Y^{2-} will have $ns^2 np^4$ (2 unpaired electrons)

$\therefore Y$ can be C, Si, Ge, Sn or Pb (Ans)