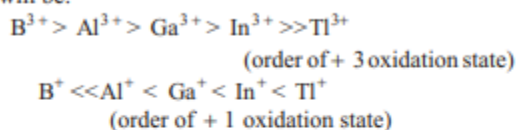


The relative stability of + 1 oxidation state of group 13 elements follows the order (2019 Main, 11 Jan II)

- (a) $\text{Al} < \text{Ga} < \text{Tl} < \text{In}$ (b) $\text{Al} < \text{Ga} < \text{In} < \text{Tl}$
(c) $\text{Tl} < \text{In} < \text{Ga} < \text{Al}$ (d) $\text{Ga} < \text{Al} < \text{In} < \text{Tl}$

The stability order of + 3 and + 1 oxidation states of group 13 elements will be:



The presence of two oxidation states in *p*-block elements is due to the inert pair effect.

Because of the presence of poor shielding *d* and *f*-orbitals, as we move from Ga to Tl, effective nuclear charge of these elements increases so as to hold the valence ns^2 electrons tightly. It causes difficulty to the ionisation of ns^2 -electrons and it remains inert, only np^1 -electron ionises to give + 1 oxidation state.