

Q7] The lanthanoid ion that would show colour? [2019]

- (a) Ce^{+3} (b) Sm^{+3} (c) La^{+3} (d) Lu^{+3}

Ans: Sm^{+3} . Colour depends on e^- in $4-f$.

Electronic Config: $\text{Ce}^{+3} = 4f^7$ $\text{Sm}^{+3} = 4f^5$
 $\text{La}^{+3} = 4f^0$ $\text{Lu}^{+3} = 4f^{14}$