

9. Consider the ground state of Cr atom ($Z=24$). The number of electrons with the azimuthal quantum numbers $l=1$ and $l=2$ are respectively

1) 12 and 4 2) 16 and 5

3) 16 and 4 4) 12 and 5

Ans. (4) Configuration of Cr ($Z = 24$) is $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 4s^1$

$l=1$, denotes p-electrons ($2p^6, 3p^6$)

$l=2$, denotes d-electrons ($3d^5$)