(ii) Azimuthal Quantum Number

It is represented by 'l'. It defined the no. of sub-shells (orbitals) in shell.

l can have any value from 0 to (n-1)

		l = 0 to (n-1)	No. of orbitals
K-shell	n=1	l=0	1-orbital
L-shell	n=2	l=0,1	2-orbitals
M-shell	n=3	l=0,1,2	3-orbitals
N-shell	n=4	l=0,1,2,3	4-orbitals

l=0 ⟶ s-orbital

l=1 ⟶ p-orbital

l=2 ⟶ d-orbital

l=3 ⟶ f-orbital

and so on- - - -

origin of s, p, d & f orbital

In the alkali metal spectra four series of lines were obtained these series were named as sharp series, pricipal series, diffused series and fundamental series. S, P, d & f are the first letter of sharp, prinerpal, diffused and fundamental.