(iii) Magnetic Quantum number —

It is represented by 'm'. It defined the no. of suborbitals in ~~that~~ orbital.

'm' can have all the value from +l to -l including zero.

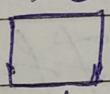
So, total value of m. ~~comes~~ comes to be (2l+1)

for —

s-orbital, l=0

$\therefore m = 2l+1 = 2\times 0+1 = 1$

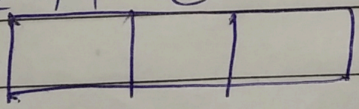
m=0



for p-orbital, l=1

$\therefore m = 2l+1 = 2\times 1+1 = 3$

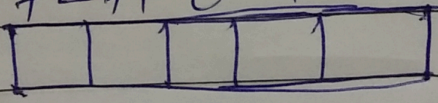
m= +1 0 -1



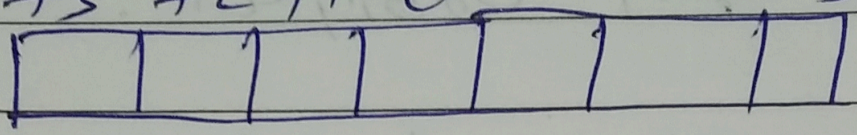
for d-orbital, l=2

$\therefore m = 2l+1 = 2\times 2+1 = 5$

m= +2 +1 0 -1 -2



for f-orbital, $l = 3$

$\therefore m = 2l + 1 = 2 \times 3 + 1 = 7$

$m =$ +3 +2 +1 0 −1 −2 −3