

[#] Distance of closest approach:-

- ⇒ It is the minimum distance between α -particle and centre of nucleus just before it reflect back by 180°
- ⇒ It is used to determine the approximate size of nucleus

$$\left[r_0 = \frac{1}{4\pi\epsilon_0} \cdot \frac{2Ze^2}{E_k} \right]$$

$$\left[E_k = \text{K.E. of } \alpha \text{ particle} \right]$$