Definition:- let (X,d) be ametric space let $E \subseteq X$ apoint $p \in E$ is Called an interier point of E if $\exists N_r(p) \ni N_r(p) \subseteq E$. The set of all interier point of E denoted by E° or int E.

Example:- Let (R,d) be ausual metric space. $E = [0,1)$? Find E°

Solution :- let $p \in [0,1)$

$$r = \frac{1}{2} \min \{ |p-0|, |p-1| \}$$

$\therefore$ p is interier point of $[0,1)$

Let $p=0$

it is not possible to find $N_r(p) \ni$

$N_r(p) \subseteq E$

$\therefore$ int $E = (0,1)$

Example!- let (R,d) be a usual metric space, $E = \{4,5,6\}$? Find E°

Solution!- Since there is no niegbourhood of any point of E which is subset of E then $E^\circ = \phi$.

Definition!- let (X,d) be ametric space asubset E of X is Called open set if every point of E is an interier point of E.

Example!- ① $E = (0,1)$, $E = \{x : 0 < x < 1\}$

Since every point of $(0,1)$ is an interier point

$\therefore$ $(0,1)$ is open

② - $A = [0,1]$, $A = \{x : 0 \le x \le 1\}$

Since (0) and (1) are in A and not interier