

# A1110 Assignment 1

## 11.16.3.16

K.SaiTeja  
AI22BTECH11014

**Question:** : 16 : Events E and F are such that  $P(\text{Not } E \text{ or not } F) = 0.25$ , State whether E and F are mutually exclusive.

**Solution:** :

As given in the question ;

$$\Pr(E' + F') = 0.25 \quad (1)$$

$$\Pr(E' + F') = \Pr(EF)' \quad (2)$$

$$\implies 1 - \Pr(EF) = 0.25 \quad (3)$$

$$\implies \Pr(EF) = 0.75 \quad (4)$$

$$\therefore \Pr(EF) \neq 0$$

As, the condition of mutually exclusive is

$$\Pr(EF) = \emptyset$$

$\therefore$  E and F are not mutually exclusive events.