

Assignment 3

CBSE Class 11 Exe 16.3 ,16

Burra Vishal Mathews
CS21BTECH11010

May 20, 2022

Outline

1 Question

2 Solution

Question

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

Solution

If A and B are mutually exclusive events then $\Pr(EF) = 0$

As given in the question ;

$$\Pr(\bar{E} + \bar{F}) = 0.25$$

As ,

$$\Pr(\bar{E} + \bar{F}) = \Pr(\overline{(EF)})$$

$$\implies \Pr(\overline{EF}) = 0.25 \quad (1)$$

$$\implies 1 - \Pr(EF) = 0.25 \quad (2)$$

$$\implies \Pr(EF) = 0.75 \quad (3)$$

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

\therefore E and F are not mutually exclusive events.