

A1110 Assignment 3

CBSE Class 11 Exe 16.3

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Question: : 16 : 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 ;

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

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

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

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

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

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

\therefore E and F are not mutually exclusive events.