EE22BTECH11032 - Meenakshi

Question :

The probabilities of occurances of two independent events A and B are 0.5 and 0.8 respectively. What is the probability of occurance of at least A or B(rounded off to 1 decimal place)?

Solution:

Given,

$\Pr(A) = 0.5$ and $\Pr(B) = 0.8$

Probability of occurance of at least A or B is given by $\Pr(A + B)$

Since A and B are independent events, we can say that:

$$\begin{aligned} \Pr(A + B) &= \Pr(A) + \Pr(B) - \Pr(AB) && (1)\\ &= \Pr(A) + \Pr(B) - \Pr(A) \times \Pr(B) && (2)\\ &= 0.5 + 0.8 - 0.5 \times 0.8 && (3)\\ &= 0.9 && (4) \end{aligned}$$