EE22BTECH11032 - Meenakshi

1

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(rounde off to 1 decimal place)?

Solution:

Given,

$$Pr(A) = 0.5 \text{ and } Pr(B) = 0.8$$

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:

$$Pr(A + B) = Pr(A) + Pr(B) - Pr(AB)$$
 (1)

$$= \Pr(A) + \Pr(B) - \Pr(A) \times \Pr(B) \quad (2)$$

$$= 0.5 + 0.8 - 0.5 \times 0.8 \tag{3}$$

$$=0.9\tag{4}$$