Question:The probability that at least one of the events A and B occurs is 0.6. If A and B occur simultaneously with probability 0.2, then $\Pr(A') + \Pr(B')$is
(A) 0.4
(B) 0.8
(C) 1.2
(D) 1.6
Solution: : Given,

$$\Pr(A + B) = 0.6 \tag{1}$$
$$\Pr(AB) = 0.2 \tag{2}$$

$$\Pr(A + B) = \Pr(A) + \Pr(B) - \Pr(AB) \tag{3}$$
$$0.6 = \Pr(A) + \Pr(B) - 0.2 \tag{4}$$

$$\Pr(A) + \Pr(B) = 0.8 \tag{5}$$
$$1 - \Pr(A') + 1 - \Pr(B') = 0.8 \tag{6}$$
$$\therefore \Pr(A') + \Pr(B') = 1.2 \tag{7}$$