

## Exemplar Problem with Solution :

**Q3.** The probability that at least one of the two events A and B occurs is 0.6. If A and B occurs simultaneously with probability 0.3, evaluate  $P(A) + P(B)$ .

**Sol.** We know that:

$A \cup B$  denotes that atleast one of the events occurs

and  $A \cap B$  denotes that the two events occur simultaneously.

So,  $P(A \cup B) = P(A) + P(B) - P(A \cap B)$

$$0.6 = P(A) + P(B) - 0.3$$

$$0.9 = P(A) + P(B)$$

$$0.9 = 1 P(A) + 1 P(B) \quad \dots$$

$$P(A) + P(B) = 2 - 0.9 = 1.1$$

Hence, the required answer is 1.1.