Assignment 1
AI22BTECH11015

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Question 12.13.6.17:

If A and B are two events such that $P(A) \neq 0$ and $P(B|A) = 1$, then

$(A) A \subset B$

$(B) B \subset A$

$(C) B = \phi$

$(D) A = \phi$

solution:

1) Given that

$$P(B|A) = 1 \tag{1}$$

2) This gives

$$\frac{P(BA)}{P(A)} = 1 \tag{2}$$

3) upon cross multiplication

$$P(BA) = P(A) \tag{3}$$

4) Then

$$BA = A \tag{4}$$

$$A \subset B \tag{5}$$

Hence,The correct option is (A).