

# 12.13.3.96

EE22BTECH11010 - Aryan Bubna

question: state True or False for the given statement:

if A and B are mutually exclusive events then they will be independent also.

**Solution:** As given in the question  $\Pr(AB) = 0$  but for these events to be independent

$$\Pr(AB) = \Pr(A) \times \Pr(B) \quad (1)$$

$$0 = \Pr(A) \times \Pr(B) \quad (2)$$

but  $\Pr(A) \times \Pr(B) \neq 0$  can also hold good if the events are disjoint. hence as this contradicates, the given statement is false.