AI1110 ASSIGNMENT-6

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Abstract—**This document contains the solution for Assignment 4 (CBSE CLASS 12 CHAPTER 13 QUESTION-7)**

QUESTION 7 :

If A and B are events such that $\Pr(A|B) = \Pr(B|A)$, then

(i) $A \subset$ B but A $\neq$ B

(ii) A = B

(iii) $A \cap B = \phi$

(iv) $\Pr(A) = \Pr(B)$

Solution : It is given that,

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

$$\frac{\Pr(A+B)}{\Pr(B)} = \frac{\Pr(A+B)}{\Pr(A)} \tag{2}$$

$$\implies \Pr(A) = \Pr(B) \tag{3}$$