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Assignment 1

Tera Keshavardhan Reddy AI22BTECH11029

Question 11.16.3.20: The probability that a student will pass the final examination in both English and Hindi is 0.5. and the probability of passing neither is 0.1. if the probability of passing the English examination is 0.75, what is the probability of passing the Hindi examination?

Solution: let E be the Event that student pass in English and H be the Event that student pass in Hindi.

$$\Pr\left(E\right) = 0.75\tag{1}$$

$$Pr(EH) = 0.5 \tag{2}$$

$$\Pr(E+H)' = 0.1$$
 (3)

$$Pr(E+H) = 0.9 from equation (3)$$

Now

$$Pr(H) = Pr(E+H) + Pr(EH) - Pr(E)$$
(5)

$$= 0.9 + 0.5 - 0.75 \tag{6}$$

$$=0.65\tag{7}$$

Hence the probability of student passing in Hindi examination is 0.65.

^{*}The student is with the Department of Artificial Intelligence,Indian Institute of Technology, Hyderabad 502285 India e-mail: ai22btech11029@iith.ac.in.