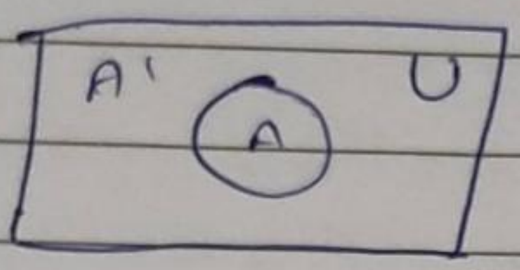
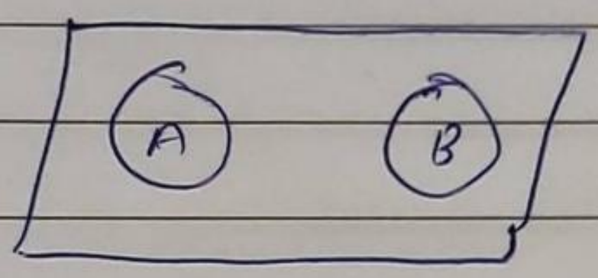
(1) impossible event :- $p(B) = 0$.

complement of an event :-

$$p(A') = 1 - p(A)$$



Disjoint events :-



independent events :- once occurence doesn't affect the occurence of other event.

3 events independent if they are mutually independent and independent in pairs as well. so if n events $A_1, A_2, \ldots A_n$ (let) are independent if $nC_2 + nC_3 + \ldots + nC_n = 2^n - n - 1$ conditions

Conditional probability :- $P(B|A)$ → probability of B if A is already taken place.

$$P(B|A) = \frac{P(A \cap B)}{P(A)}$$

Bayes theorem :-

$$P(E_i|A) = \frac{P(E_i) \cdot P(A|E_i)}{\sum_{k=1}^{n} P(E_k) \cdot P(A|E_k)}$$

PAGE NO.:

Binomial distribution :-

p → success, q → failure of a event.

$p + q = 1$

$P_k = {}^nC_k q^{n-k} p^k$.