Chapter -15

PROBABILITY

THEORETICAL PROBABILITY

The theoretical probability of an event E, P (E) = $\frac{number\ of\ outcomes\ favourable\ to\ E}{Number\ of\ all\ possible\ outcomes}$.

Note-: The sum of the probabilities of all elementary events of an experiment is 1.

i.e,If there are n events $E_1, E_2, \ldots E_n$, then $P(E_1) + P(E_2) + \ldots + P(E_n) = 1$

ELEMENTARY EVENT

An event having only one outcome

COMPLEMENTARY EVENTS

The complement of an event E is denoted as $\bar{E}$ (not E)

$P(E) + p(\bar{E}) = 1$

IMPOSSIBLE EVENT

An event is said to be impossible if its probability is 0.

For e.g: When we throw a die, Probability of getting a number greater than 7 =0

SURE EVENT (CERTAIN)

An event is said to be sure if its probability is 1.

For e.g: When we throw a die, Probability of getting a number less than 7 = 1

NOTE : The value of probability of an event is $0 \leq P(E) \leq 1$.