

Introduction.

Numerical study of chances of occurrence of events is dealt in probability theory.

The theory of probability is applied in many diverse fields and the flexibility of the theory provides approximate tools for so great a variety of needs.

There are two approaches to probability viz. (i) Classical approach and (ii) Axiomatic approach.

In both the approaches we use the term 'experiment', which means an operation which can produce some well-defined outcome(s). There are two types of experiments:

(1) **Deterministic experiment:** Those experiments which when repeated under identical conditions produce the same result or outcome are known as deterministic experiments. When experiments in science or engineering are repeated under identical conditions, we get almost the same result everytime.

(2) **Random experiment:** If an experiment, when repeated under identical conditions, do not produce the same outcome every time but the outcome in a trial is one of the several possible outcomes then such an experiment is known as a probabilistic experiment or a random experiment.

In a random experiment, all the outcomes are known in advance but the exact outcome is unpredictable.

For example, in tossing of a coin, it is known that either a head or a tail will occur but one is not sure if a head or a tail will be obtained. So it is a random experiment.