Probability and Statistics
(MAN: 006)

Random Experiment: An experiment is called a random experiment if

(I) All possible outcomes of the experiment are known in advance.

(II) The specific outcome of the experiment is not known in advance.

(III) The experiment can be repeated under identical conditions.

The set of all possible outcomes of a random experiment is called the sample space.

A point of the sample space is called a sample point.

An event is a subset of the sample space. If on performing an experiment the outcome is an event A, then we say that event A has occurred.

Two events A, B are said to be mutually exclusive if $A \cap B = \phi$, i.e. they cannot occur together.

Events $A_1, A_2, \cdots$ in a sample space S are called exhaustive if $\bigcup A_i = S$.