Summary

- Probability is a commonly used word in the day to day conversation of the people. For example: It may probably rain today, it is possible that life exists on other planet. Thus, we can define the term probability as the likelihood or chance of occurring of a particular event.
- Basic terminologies in Probability
 - Random Experiment: Random Experiment is an activity that results in one outcome out of disjoint outcomes, where an outcome cannot be predicted with certainty.
 - Sample Space: Sample Space is all possible outcomes of a random experiment.
 - Event is a set of possible outcomes of the experiment in which we are interested.
- Types of events
 - Compound Event
 - o Independent and Dependent Event
 - o Mutually Exclusive Events
 - Collective Exhaustive Event
 - o Equally Likely Event
 - Complimentary Event
- The likelihood or chance of occurring of a particular event is known as Probability.
- Approaches to Probability and their limitations are:
 - .Classical Approach: Classical Approach is also known as priori probability because we can state the answer in advance.

Limitations:

- **1.** If N, the exhaustive number of outcomes of the random experiment is infinite.
- 2. If the various outcomes of the random experiment are not equally likely.
- 3. If the actual value of N is not known.
- Relative Frequency Approach: This approach is based on statistical data.

Limitations:

- **1.** The experimental condition may not remain the same in a large number of repetitions.
- 2. The relative frequency m/N may not attain a unique value, no matter however large N may be.

• Subjective Approach: This is based on the personal belief of a person who i9s to make probability estimate.

Limitations:

1. This approach is totally based on a person's assessment of the situation or environment which differs from person to person.