Mathematical modeling deals with techniques of applying mathematics in the study of various scientific, technological and social processes. Such techniques include the formulation of mathematical models of real world situations, their mathematical analysis and simulation, and interpretation and validation of results obtained. The use of mathematical technique in scientific research is old, but only in recent time; mathematical modeling has emerged as an active area of mathematical research.

**Mathematical model:** A mathematical modelis a description of a system or phenomenon using mathematical language. A good mathematical model is simple in design and exhibits basic properties of the real system that is being investigated. The model should be testable empirical data. The comparisons of the model to the real system should improve mathematical models. Thus modeling is an evolutionary process, which continuous toward learning more about certain process rather than finding an absolute reality.

**Techniques of mathematical modeling:** the technique of mathematical modeling is to find a complete and consistent set of mathematical equations to explain some real life problems. For this, we follow the following general framework for modeling. The steps are:

(1). To identify real life problem which has a significant aspect that requires mathematical modeling.

(2). To identify critical observations on which to base a model and to distinguish between dependable and undependable experiment results.

(3). To formulate the model conceptually, making reasoned judgment regarding which process to include and which to exclude.

(4). To convert the conceptual model into a mathematical model and estimate parameters in the model.

(5). To analyze the model , both qualitatively and perhaps numerically, if analytical solution is impossible, use the results to interpret the original critical observations, makes new predictions and propose new experiments.