A decision is an act of choice wherein an executive forms a conclusion about what must and must not be done in a given situation. It is a point at which, plans, policies and objectives are translated into concrete actions. There is a general dictionary agreement that a decision is a conclusion or termination of a process. Decision-making is said to be an intellectual activity because it requires selection from among alternatives. Decision-making is intellectual because it calls for the use of both judgment and imagination. Decision-making involves commitment to something - a point of view, a principle, an individual, a group or a course of action. As JMC Donald has observed "The business executive is by profession a decision-maker. Uncertainty is his opponent, overcoming is his mission. Whether the outcome is a consequence of luck or wisdom, the moment of decision is undoubtedly, the most creative event in the life of an executive or manager". *C. William Emory - P. Niland also observe that "a decision is

* C. William Emory, Powell Niland,
Making Management Decisions,
a conclusion reached after consideration, it occurs when one option is selected to the exclusion of others". Also we can quote the following pertinent remark: -

"Managerial decision-making can be viewed from a systems perspective, which includes, an objective, inputs, processing, outputs, and feedback. The inputs are information and judgment. It is intangible blend of intellectual ability, past experience, and intuition that separates man from machine. Processing in this context means human thinking. The output is decision - a commitment to some course of action. Measuring the results of the decision, in terms of the decision-maker's objective, provides information to be fed back into the process".

In management literature the term 'decision-making' is viewed as a broader matter than merely reaching a conclusion after consideration. It encompasses the entire process by which goals are set, tasks defined, options searched for, choices made, and plans developed. It includes all of those investigative,

creative, diagnostic and evaluative activities which precede the decision point. In this regard we can quote the remark of Henry L. Doherty "Never make a decision yourself, if you don't have to. When one of your men asks you a question, ask him what is the answer. There is only one answer to many questions and therefore, this method answers many questions before they are asked; it not only develops your men, but also enables you to measure their ability". Thus, we get an idea about impersonalisation of decision-making. Truth is so simple that it need not be logically proved.

Decision-making is a continuous process. Whether knowingly or unknowingly the manager makes decisions constantly. The most important quality of a successful manager or executive is his ability to make sound decisions at the appropriate hour. A manager must make up his mind quickly on certain matters. It should be remembered that decision-making is a human process, when one decides he chooses a course which he thinks is the best. In this sense, decision-making is a blend of thinking, deciding and acting. Decisions also have a time dimension and a time lag. There is some element of compulsion in the act of decision-making. This is because situations sometime demand 'no-decision' which
also is a kind of decisions. Thus, there cannot be a situation in which decision of one kind or the other is not taken.

1) **Personal value judgment as the basis of decision-making**: 

A judgment is a kind of subjective opinion formation. It is a conclusion reached on the basis of personal values. A calculating mind can form judgment. **Whereas decision-making is a process which has a dynamic form. It is an intermediate state of judgment.** We judge people as well as things in terms of good and bad or right and wrong, but most often do nothing about them. We simply form an opinion, but when we make a decision we take an immediate action. **A decision is always result-oriented.**

When once faced with a problem one should program and simulate it in the form of a model, obtain adequate information and finally apply mathematical treatment, statistical analysis, electronic data processing and other tools before one makes decisions. Simply thinking without programming the problem could easily turn into a worry. Everyone knows the effects of worrying, especially sentimental nature coupled with worrying could easily
block and prevent thinking, a decision made under these circumstances would need blessings of the Almighty to be right and to bring correct course of action.

ii) Intuition as the basis of decision-making:

Judgment is the result of logical knowledge and intuitive knowledge. Logical reasoning governs the thought process leading to knowledge. However, logic can confirm the truth in the thought but cannot enable a person know the whole truth. Only intuition which eliminates thought process can lead to an appropriate decision and action. Intuition is the immediate grasping of an object by the mind without the aid of reasoning process. Decision-making based on intuition is characterised by the use of inner feelings, or the 'gut feeling' of the person reaching the decision. The suggestions, influences, characters, preferences, moods, likings and the psychological make-up of the deciding individual, play an important role. In other words, in business enterprises decision-making based on intuition is marked by the inner feelings and convictions of the manager or entrepreneur. Intuition denotes some sort of a sense on the part of the manager whereby he seems
to have an insight into a certain state of affairs which others lack. Intuition helps arrive at a conclusion, which is not supported by any data or facts and figures, that a particular action will indicate particular expected results.

**Decision based on intuition may not necessarily be apparently logical. It need not be reasoned out.** Whereas decision based on rashness may be illogical. Intuition is little different from rashness. Right intuition of what ought to be done just at the time of action does not come to many and this way, it can be regarded as a divine quality. But it is also true that rashness, if it fails is termed as madness and if it succeeds, it is accepted as the intuition of genius. *Rashness or intuition are not bound by any logical system helping thought process. In both the cases decision is not necessarily thoughtful.*

It is believed by many that the intuitive decider has more 'precognitive' ability and is better able to anticipate the future in instances where reliable data are lacking. In management decision-making one is often required to place final reliance on intuitive processes and to evaluate managers on their intuitive skills alone. Lacking any well-developed
alternatives, pressed by the ongoing affairs of the
firm, and taking considerable pride in 'managerial
judgment', managers are content to leave their deci-
sion processes on an intuitive level.

The scientist, however, makes full use of his
intuition to reach conclusions, make discoveries and
raise hypotheses, but does not finally rely on intui-
tion alone. Indeed, the meaning of 'objectivity' in
science is not that intuition is bad, but that it must (9)
be checked by logic and experiment. After having
reached a tentative conclusion, the scientist under-
takes to test it by logical deduction and experi-
mental inference. Intuition certainly helps in arriving at
quick decision. Critical situations leading to
disaster for want of decision require decisions at the
spur of the moment.

iii) Experience as the basis of decision-making :

Experience can certainly act as the basis of
decision-making. Sir John Dewey has rightly quoted

*"Experience cannot deliver to us necessary truths,

*A quotation from 'The International Encyclopedia of
Quotations' compiled by John P.Breadley, Leo F.Daniels,
Thomas C.Jones Published by J.G.Ferguson Publishing
truths completely demonstrated by reason. Its conclusions are particular, not universal".

Experience is regarded as the best guide. The value of experience cannot be described in words. People have to pay a great price for getting valuable experience in life. Experience is such a thing which one gets after constant efforts, great struggle, hardships, tensions and sometimes even at the cost of sacrifice. Past is a useful guide to the future. Experience gives precedence or a background. A person sees and understands things in terms of concepts with which one is familiar. Experience helps in guiding what should be done in a particular type of situation. One can also, avoid repetition of decisions which had misfired and/or had not succeeded to the desired extent.

It can be argued that dependence on past experience prevents experimentation with new ideas. It may lead to conservative thinking which is harmful for the success of any enterprise. In this rapidly developing world, it is wrong to assume that if a particular kind of decision-making had worked successfully in the past, it would give the same results every time. But only on this ground the value of experience cannot be underestimated. Perhaps the chief value of experience in
decision-making is developing an ability to discriminate and to generalise past situations.

iv) **Experimentation as the basis of decision-making**

Under experimentation one has to try out each alternative and see how it works in practice. Thus, in order to create a demand for the product, an alternative course of action is to improve the quality of that product, to reduce the price of the product, or to introduce improved version of the product in the market and then result must be observed. Experimentation implies also a specific statement of one's belief's prior to the experiment and an explicit examinations of the impact of the evidence on these beliefs. Without these, science would be a mere accumulation of observations. With them science can attempt to have the maximum amount of information from data. In this sense, experiment tries to use data efficiently, while casual experience may use them wastefully or unreasonably. Beyond the production of its marketable goods and services, the second most important output of a firm is likely to be information on how to improve its own operative. In moving from experience toward experiment, we hope to move toward optimising the production if this second output. Experimentation method has been
preferred by most of the decision-makers due to its scientific approach.

v) **Facts as the basis of decision-making**: -

A decision based on fact is widely accepted or has universal acceptance. A decision taken on the basis of facts has more reliance. It is said that 'seeing is believable'. **Logical reasoning can be advocated on the basis of facts.** For example, if the firm will realise that wastage is increasing in a particular department which is revealed with facts and figures, the firm will have to take a decision to control this wastage. Nobody can raise objection to this decision as everything is very clear. Similarly, if labour absenteeism is increasing in a particular industry; this can be studied with facts and figures. Naturally, the industry will have to adopt certain measures to control labour absenteeism. Increasing absenteeism can be proved with facts and figures.

Thus, fact can be regarded as an ideal base or basis for decision-making in any enterprise or any human activity for that matter.
(vi) **Behaviour Pattern of a successful Decision-maker** :-

Directed by the traits which make him successful, the successful decision-maker will follow the pattern of behaviour they dictate. This pattern, properly described as idealistic, will evidence itself in five ways:

1) A successful decision-maker will estimate the situation in its parts as well as its totality.

2) A successful decision-maker will learn how far the environment can be modified and maintain personal adaptability.

3) A successful decision-maker will be creative in proposing alternatives and in grasping new opportunities to meet the situation.

4) A successful decision-maker will anticipate reactions of others in terms of expected results as well as in terms of calculated risks and

5) A successful decision-maker will remain flexible and committed to a multiple front strategy.

The end result of this behaviour pattern can be the choice of the best alternative in each situation.

**Significance of Quantitative Techniques in Decision-making:**

The process of managerial decision-making has become very cumbersome. In order to evaluate the alternatives certain quantitative techniques have been developed, which facilitate in making objective decisions. Some of the important quantitative techniques in decision-making can be mentioned as under:

1) **Marginal Analysis** : (Marginal Costing technique)

Under marginal costing technique the additional revenues from additional costs are compared. The profits are maximum at the level where marginal revenues and marginal costs are equal. Einstein has rightly quoted "The concern for man and his destiny must always be the chief interest of all technical efforts. Never forget it among your diagrams and equations".

*The Institute of Cost and Management Accountants, England* defines the term marginal cost as "The amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit". Marginal analysis can be used in comparing
factors other than costs and revenues. For instance, in order to find the optimum output of a machine, one can vary inputs against outputs until the additional inputs equal to the additional output. This would be the point of maximum efficiency of the machine. Break even analysis is the modification of this technique which tells the management the point of production where there is no profit no loss. The term break even analysis is interpreted in the narrower as well as broader sense.

Assumption is all kinds of behaviour of variables can be quantified and measured. Used in its narrower sense, it is concerned with finding out the break even point i.e. level of activity where the total cost equals total selling price. Used in its broader sense, it means that system of analysis which determines the probable profit at any level of production. The break even analysis establishes the relationship of costs, volume and profits, so this analysis is also known as 'cost volume Profit Analysis'. The results of such analysis are usually presented in the form of Break Even Charts.

ii) Cost_Benefit_Analysis : Cost Benefit Analysis is a technique of weighing alternatives where the optimum solution cannot be conveniently reduced to monetary unit as in the case of marginal cost analysis. It is used for
choosing among alternatives to identify a preferred choice when objectives are far less specific than those expressed by such clear quantities as sales, costs or profits. For instance, social objectives may be to reduce pollution of air and water which lacks precision. Cost models may be developed to show cost estimates for each alternative and benefit models to show the relationship between each alternative and its effectiveness. Then, synthesizing models, combining these results, may be made to show the relationships of costs and effectiveness for each alternative.

iii) **Operational Research**/Operations Research:-

Operations Research is the application of scientific methods to study various alternatives to a decision problem with a purpose of obtaining an optimum solution in terms of the objectives to be achieved.

Till the development of management science, executive decisions used to be taken on the basis of intuition, subjectivity or past experience even in big organisations. Operations research proves very useful in replacing this process by an analytic objective and quantitative basis. Specifically the steps of operations include :-
a) Precise statement of the problem/Emphasis to defining the problem and objective
b) Careful Collection of relevant data
c) Creation of a valid mathematical model for the pertinent forces or values involved.
d) Substitution of data in the model and calculation of results under varying circumstances,
e) Selection of the optimum course of action and
f) Follow-up on the model validity with availability of new data.

Thus, operations research do not provide ready-made solution but provides the quantitative data and analytical frame-work which facilitate decision-making. Operations research gives emphasis to above mentioned steps.

This technique is widely accepted. For instance, inventory models are used to control the level of inventory and linear programming is used to allocate work to individuals in organisations. Sequencing theory is applied to determine the sequence of operations in the organisation. Besides these, there are other techniques like queing theory, games
theory, reliability theory and marketing theory which are important tools of operations research which can be used by the management to analyse the problems and take decisions. Operations research not only points out the significant relationship of activities taking place as they do but also predicts events when certain actions are taken.