4

PRINCIPLES OF MANAGEMENT

The process of economic liberalization and globalization is in full swing. As a result, intensive competition is on the increase both on industrial and service sectors. The entry of multinationals and foreign financial institutions has contributed a lot in strengthening the process of globalization of the economy. This has forced the organizations in India to face severe competition globally. In the face of stiff competition only the better managed organizations would be able to survive. It is estimated by experts that nearly 50 per cent of the top concerns in the corporate sector in India would be facing serious problems in the immediate future just because of this high degree of competition. This gives a warning to the effect that the organizations should get themselves equipped to meet the challenges in the national and international scene.

Twenty first century designated as an era of Leadership. The managers who emerge themselves as leaders can alone dominate in the next century in the industrial and service sector. Success, i.e., survival, goes to those who are able to:

- Identify needs before or more accurately than others do;
- Find better ways of satisfying identified needs than others do;
- Offer the prospects of a better financial return than others do; and

- Assemble a more powerful set of resources/ competence than others do.

In short, what is needed is "managerial excellence". Excellence in management is now considered the 'mantra' of management. An organization requires excellence in all spectrums of activities-planning, organizing, directing, co-coordinating and controlling. In the competitive world, excellence is inevitable more in action, i.e., excellence in production, marketing, finance, personnel and administration is the need of the hour.

Emergence of Excellence

It may be interesting to note the development of the science of management to the present concept of excellence. During 1885-1930 the classical management theories were in operation and Efficiency was given emphasis by this school of management thought.

Efficiency orientation normally merges into effectiveness orientation in a modified form. Efficiency orientation creates I vs. You division between management and employees.

Attributes of Excellence

The attributes of an excellent company are:

- The company has a bias for action for getting on with it:

- The company is close to the customer by providing unparallel quality, service and reliability;

- The company fosters may leaders and innovators throughout the organization;

- The company treats the rank and file as the root source of quality and productivity;

- The company does the business which it knows how to run;

- The company has elegantly simple structural forms and system; and

- The company is both centralized and decentralized in all activities.

The trend of business process re-engineering is based on the concept of empowering people down. Even with empowered worker's, there is a need for co-ordination.

World Class Manufacturing Management

In order to achieve excellence in management World Class Manufacturing Management (WCM) has been advocated. WCM describes manufacture of high quality products reaching customers quickly at a low cost with high performance and customers satisfaction. The emphasis on quality makes a clear distinction between traditional management view and WCM philosophy, as outlined below:

Traditional Management	*WCM Philosophy*
1. Improving quality increases time time and costs.	Improving quality reduces and costs.
2. Some defects are acceptable.	The goals is zero defect.
3. Quality must be inspected into the products.	Quality shall be designed into the products.

In an attempt to attain WCM performance companies have started investing into automation and advanced manufacturing technology. The emphasis is on better product design, reliability, productivity and flexibility with quick response time for consumers.

Barriers

As an absolute concept, quality is similar in nature to goodness., beauty and truth, an ideal on which there can be no compromise. It is synonymous with high quality or top quality. Based on this general viewpoint some barriers in the organizational hierarchy to achieve excellence are listed below:

- The company is close to the customer by providing unparallel quality, service and reliability;
- Power barrier i.e. Power concentrates on decision makers;
- Status barrier i.e. status goes with position and power;
- Delegation barrier i.e. people will delegate only those aspects that won't weaken their hard earned power and status;

- Procedural barrier i.e. attitude like "this is how we do things here and we don't do it like others do".

Innovative companies are continually responding to change of any sort in their organization Thus, innovation redefines the task of the excellent management team and bring out the desired results. The companies that have achieved the best innovative performance are labeled excellent companies. To be precise the question is how the organization is managed, and motivated to perform its best. The excellence in management remains in product leadership, pride in being to the customer, taking care of and concerned with the people, reliability, service motto, commitment for product quality, managing ambiguity and paradox and adoption of values. The excellence is required not only for business managers, but also for educational managers, monetary and fiscal managers, health managers and all the rest engaged in the promotion of services to the society. The function of MIS is to satisfy the information requirements of modern managers, and it must be designed on the basis of management principles, style and behavior and organizational structure.

Concepts of Planning and Control

Planning is an organizational function, providing the framework for translating. organizational mission into operational objectives. Organizationas require formal and informal planning, to guide their various activities. Plan is a predetermined course of action representing the goals and activities needed to achieve these goals. The control function measures deviation from lined performance and initiates corrective action. The different types of plans are mission, goals, objectives, strategies, budgets and policy. The chief characteristics of planning are: it is a tedious process, requiring complex computations; it makes evident the uncertainty of future events; it is very difficult and cognitive; it reduces the perceived freedom of action; it is highly intensive and popular.

Hierarchy of Planning

Conceptually, there are four levels of planning in an organization, which can be referred to as the hierarchy of planning. The planning horizon will also change with change in the levels of management. The four stages of planning are:

1. Strategic Planning: It refers to planning at the top level management, which determines the specific function serving the organization, predicts its future functions, and includes plans regarding the business to be in the market where it should sell, etc. it covers a long period in future, considering the changes forecasted in the environment in the long run. It provides overall targets towards which all activities of the organization are to be directed, resulting in long-term commitment of resources. It involves a great deal of uncertainty and tries to match the resources of the organization with the environment threats and opportunities, and provides direction for the growth of the enterprise.

2. Tactical Planning: It is the plan designed for the physical implementation of strategic plans by co-ordinating the work of different departments. It is more important, detailed and specific than long range strategic planning and covers a period of one to five years. A tactical plan is drawn up for short-term moves and maneuvers within the broader and stable strategic plans. Tactical plans are reflected in capital expenditure, budget, and long range staffing plan.

3. Operational Planning: This is planning for a period up to one year. It is specific and detailed in nature, providing form and content to the long-term plans. Such plans are prepared on the basis of strategic and tactical plans. The main purpose of operational planning is to maximize efficiency and to ensure uniformity in action. It reflected in the allocation of tasks to each organizational unit, in order to achieve the objectives in tactical plans, and in yearly budgets.

4. Scheduling and despatching: It is the last level in the planning hierarchy, where specific organizational activities are assigned to various units, to achieve the operational objectives.

Planning Process

Planning is an important activity reflecting the organizations expectations about the environment, decisions and capabilities in the allocation of resources. The planning process is viewed as an activity involving various steps such as identification of goals, development of planning premises, determination of alternative courses of action, evaluation of the alternatives, selection of an alternative, and formulation of sub-plans.

The sources of planning data are internal and external, obtained through environmental scanning. Internal data sources are past records of the organization, whereas external data sources are published documents, government documents etc., which may be collected from data banks. Data can also be obtained by way of environmental scanning techniques like scenario writing, simulation, cross impact analysis, etc.

Planning Models

Planning model is a method of structuring, manipulating, developing and communicating future plans. Model building in planning refers to the process by which plans are derived from inputs and internal calculations. A planning model provides a format for presenting the results, input, and processing statements, to operate on the input data. Planning models may be simple or detailed, which would assist the planners to understand the nature of the planning process and the effect of changes in variables. Profit models, sales estimation models, etc. are examples of planning models.

Planning requires four types of computational support for the preparatory analysis, and includes: analysis of historical data, with the help of techniques such as autocorrelation analysis, seasonal analysis, cross correlation analysis, data smoothing, etc., projection and forecasting of future values with the help of extrapolation, time series, interpolation, etc., internal computations and computations for outputs and formatting of the output results.

Control

Control is the continuous process of verifying whether actions are being taken as planned, and taking corrective action to ensure that events conform to plans as closely as possible. Its purpose is to indicate deviations from plans and provide corrective action in the system. Both planning and control are interrelated. Planning is the basis of control, which provides the standard by which actual results are evaluated. Without plans, control is blind. As such, it is said that planning is clearly a prerequisite for controlling. Control process requires measurement of performance and a standard for comparison. Information systems facilitate control purposes especially in reporting variance from the standard, with the help of control feedback loops. Information system support

for control includes variance analysis and continuous monitoring of performance. If the performance falls outside the control limits, the system provides a message to the control unit. Some information systems provide for automatic monitoring of performance and its evaluation. The concepts relevant to control systems are negative feedback control and law of requisite variety. Control is a way of avoiding understanding and has a negative implication.

Organizational Structure

It refers to the network of relationships among organizational subsystems and accompanying divisions of labours as well as their links with the hierarchy of authority. It is the structural framework within which the efforts of people in the organization are co-ordinated and related to each other. The common features of organizational structure are:

(i) **Hierarchy of authority:** Authority is distributed in an organization, on the basis of levels of hierarchy. Greater authority is conferred to the highest position in the hierarchy, and as we come down in a hierarchy, authority diminishes. If the span of control (number of immediate subordinates that a manager is to supervise) is narrow, hierarchy is tall and if the span is wider the hierarchical structure use must be flat. In an organization structure, the span of control can be narrow at some levels of the hierarchy and wide at some other levels.

(ii) **Specialization:** It refers to division of labour or division of work among various members of the organization, in such a way that activities of every member in the organization is confined to the performance of a single function, which encourages specialization with in each function. Specialization can be adopted in two ways, such as; giving a comprehensive range of activities to broadly trained specialists and subdividing the activities into small well-specified tasks that non-specialist can be easily trained to perform. Functional specialization can be introduced in an organization with the help of computerized information systems.

(iii) **Formalization:** It refers to the extent to which the activities of an organization are structured or programmed, with the help of rules and procedures to handle the decision-making situations. In formal organization structure, the pattern of activities, processes, human relationships and roles are planned and deliberately structured to accomplish the

organizational goals. Formal organization structure is a system of consciously co-ordinated activities of two or more persons towards common objectives; the jobs in such an organization are well defined, and given a definite measure of authority, responsibility and accountability.

(iv) Centralization: It refers to the concentration of decision-making power in a few hands in the organization. If the organization is highly centralized, the major part of the decision-making occurs at the top-level management, while in a decentralized organization, decision-making authority is delegated to the lower level managers. If the span of control is wide or the hierarchy is flat, then the system is characterized by decentralization; if the span is narrow, or if the hierarchy is tall, then the organisation can be referred to as a centralised organisation.

Basic Organizational Structures

The main types of organizational structure are:

(i) Line organization: These are organization having an unbroken vertical line of authority (hierarchy) flowing from top to bottom, where every manager exercises a direct authority over his subordinates who are in turn directly responsible to their superior.

(ii) Functional organization (lateral relation): Such organizations are structured, by functions such as, production, marketing, etc. Functional organization lays down systems and procedures for the performance of the specific function assigned to each and every level of the organization, and the individuals or departments have functional authority in their respective areas.

(iii) Line and Staff organization: It is an organization structure where two types of functions exist together. Line functions are responsible for the attainment of organizational goals, whereas staff functions help in attaining these goals.

(iv) Organization by products or service: It is an organization structure where the organization is structured on the basis of product or service. Each product or service organization will have its own functions such as production, marketing, accounting, etc. focused on output rather than on processes.

(v) Project organization: Here various resources are assigned to projects headed by a project director. Almost all

information system departments use project organization structure, as it is the dynamic form of organization in relation to a product or service.

(vi) Matrix organization: In matrix organization, lateral relations are formally integrated with the help of an integrating department having functional relationship with each level of organization. More often, it is used in large, diversified companies, where business units are organized around a product or service line. Functional specialists in each unit report through the hierarchy to the head of the unit, because they have some degree of responsibility to the corporate functional head. Two complementary structures, i.e., pure project structure and functional structure, are merged together to form the matrix organization.

(vii) Committee organization: This organization structure is also called free form organization, where activities are performed by groups of relative strangers with diverse professional skills. It reduces the emphasis on positions, departments, and other formal units and on the organizational hierarchy. It can be managed by a team or a cohesive group. The small central group at the top is relatively stable and consists of planners and a center of control and evaluation. Organizations of this type are suitable for those industries, which have to work in highly dynamic environments, where the emphasis is on the democratic values of the society.

Decision-making Process

Decision represents an action or series of actions chosen from a group of alternatives. The process involves all those activities undertaken by a manager to come to a conclusion Decision-making is the selection of the best alternative from a group of alternatives to fulfill the objectives most satisfactorily. The decision-making process consists of four interrelated phases, such as:

(i) Intelligence phase (explorative phase): In this phase, search for decision occasions or the environment requiring a decision is made, and data inputs are obtained, processed and examined to identify the problem or opportunities.

(ii) Speculative phase: This phase identifies the factors affecting the decision problem.

(iii) Evaluative phase: This involves analysis and weighing of alternative courses of action .

Speculative and evaluative phases are together called the design phase of decision-making. Thus, the three important aspects of intelligence and design phases are: problem finding - defined as the finding of differences between the existing situation and the desired state, problem formulation where the problem is clarified so that the design and choice activities operate on the right problem, and development of alternatives, involving the act of generating choices.

(iv) Choice phase: It is the selection of the best course of action from those available.

The design of an information system support for decision activities considers four aspects, such as: knowledge of outcomes, level of programmability, criteria for decision, and level of decision impact. Knowledge of outcome provides three types of decision-making situations, like decision-making under certainty, under risk and under uncertainty. When decisions are made under certainty, complete and accurate knowledge about the outcome of each alternative is available. Under risk condition, multiple possible outcomes are there and only a probability of occurrence of these outcomes can be predicted. In decision making under uncertainty, multiple outcomes are there but no knowledge about the probability of their occurrence is available to the decision–maker.

Decisions can be classified into two categories, such as:

(i) Programmed decisions: These are also called structured decisions and are well defined, respective, and routine in nature, for which pre-defined decision models or rules are worked out. Every time a situation or problem occurs, a new analysis is not required. Such decisions are reflected in rulebooks, decision tables and regulations. Examples of programmed decisions are preparation of pay rolls, giving material orders etc.

(ii) Non-programmed decisions: These decisions are occasional in nature, having no predefined procedures to solve the problem and are called unstructured decisions, where a new analysis is required for solving each problem. Owing to the absence of pre specified decision rules,

they are subject to personal judgment, and thus involved huge risk. Preparation of capital budgets, finding sources of additional capital introduction of new products, etc., are examples of non-programmed decisions.

The steps involves in scientific decision-making process are:

(i) Identification of the problem: Here the problem that calls for decision is recognized. Recognition of the problem is possible by continuously monitoring the decision-making environment, and if the problem requires managerial decisions, then imagination, experience, and judgment are required on the part of the decision maker. Identification of the problem is the real beginning of the decision-making process.

(ii) Diagnosis of the problem: It is the process of identifying the problem from its signs and symptoms. It exactly means knowing the gap between what is and what ought to be and identifying the reasons for them and understanding the problem in relation to the higher objectives of the system. Diagnosis implies analyzing the problem in terms of its elements, magnitude, urgency, courses of manifestation and its relation with other problems, so that the real causes of the problem can be identified.

(iii) Search for alternatives: In this stage, the decision-maker seeks possible alternative solutions to the problem, in order to get the most satisfactory result from a decision. Experience of the decision-maker plays a very important role in identifying and developing alternatives. The ideas here are to keep the range of alternatives within manageable limits, in terms of time and cost constraints.

(iv) Evaluation of alternatives: Evaluation is made after screening the feasible alternatives. It is the process of measuring the positive and negative consequences of each alternative in respect of costs and benefits. The alternatives are evaluated on the basis of risk, economy of effort, timing, limitation of resources, etc. The decision-maker has to go for evaluating how far each alternative may contribute to the objectives of the system.

(v) Selection of the best alternative: After comparing the outcomes of various alternatives, the optimum alternative is selected. Optimum alternative is that with

maximizes the results under given conditions. The most critical point in decision-making is the choice of an alternative. In choosing the best alternatives, the decision-maker can go through three approaches like, experience, experimentation, and research and analysis.

(vi) **Implementation and follow-up:** Once the best alternative is selected, it needs to be implemented. The decision should be communicated to those responsible for its implementation; their acceptance of the decision should be obtained; procedures and time sequence should be established; necessary resources should be assigned to individuals for its implementation. The implemented decision should be continuously monitored and judged through periodic progress report, and feedback should be obtained to evaluate the soundness of the decision.

Behavioral Model of Organizational Decision-making and Decision-maker

The behavioral theory of organization begins with the assumptions on the administrative model of decision-maker, and explains the behaviour of the decision maker in an organization. The administrative model of decision-maker explains the decision-making process in a complex and unknown environment. The decision-maker is not completely rational; instead he exhibits bounded rationality, within the limits imposed by the environment and perception factors. The administrative model assumes that the decision-maker does not know all the alternatives and outcomes, makes only a limited search to discover a few satisfactory alternatives, and always make a satisfying decision.

The important concepts used in explaining organizational decision-making are:

(i) **Quasi-resolution of conflict:** Organization is a group of members having different goals and objective, who are supposed to work for the common objectives of the organization. It is quite natural that certain conflicts arise among these individuals regarding their goals. The objective of production unit is to keep the standard level of production, where as the marketing unit is interested in meeting the requirements of the customers. These are contradictory in nature. Conflicts can be resolved by adopting three ways, such as: (i) using local rationality – where subunits are allowed

to set their own goals, (ii) acceptable level decision rules in which subunits are allowed to make their own decisions within certain limits, and (iii) sequential attention to goals where the organization responds first to one goal, then to another, so that each conflicting goal has a chance to influence organizational behaviour.

(ii) Uncertainty avoidance: The behavioral theory of organizational decision-making is based on the assumption that the organization will try to avoid risk and uncertainty. The behavior of the suppliers, customers, workers, etc., is uncertain and the consequences of such uncertainty is very high in business organizations. As a general rule, the decision-maker will be leading to accept a reduced return for a decrease in uncertainty. The important legal measures to avoid uncertainty are: short-run feedback and reaction cycle, and negotiated environment. The short-run feedback and reaction cycle allows frequent and new decisions, reducing the need for bearing uncertainty in future. Negotiated environment in industries helps to reduce uncertainty by ensuring long-term supply or sales contracts.

(iii) Problematic search: It refers to the search for solutions called for by problems. There is no planned search for solutions in behavioral theory, which assumes that the search for solutions is based on two rules. The first rule provides for local search either close to the present symptom or close to the present solution. If the first rule fails, then the second rule facilitates the expansion of search to organizationally vulnerable areas (areas with slack resources).

(iv) Organizational learning: Organization revises their goals and procedures on the basis of their experience. As such, the aspiration levels are also subject to change in response to the result expected. Performance depends upon the aspiration levels. The role of information system is to reconcile this achievement and aspiration level.

(v) Incremental decision-making: It refers to decision-making confined to small changes from existing policies and procedures. The organization emphasises correcting the existing policies and procedures instead of making new ones. It is better for organizations to use the incremental approach in minor decisions, and satisfying approach (including significant changes in existing policies and procedures) in major policy decisions.

Decision-making Under Stress

Stress is a force transmitted by a system's supra-system that causes a system to change, so that the supra-system can better achieve its goals. In trying to accommodate the stress, the system may impose stress on its subsystems. There are two basic forms of stress that a system can impose in its subsystems.

(i) Change in the goal set of the system. New goals may be created or old goals may be eliminated.

(ii) Change in the achievement levels desired for existing goals-either increase or decrease in the desired achievement level.

Normally, the decision-maker has a strong desire to achieve the goals or to avoid undesirable consequences. But the environment expects strong opposing forces on the desire of the design-maker, which results in decisional conflicts. Decisional conflicts are derived from psychological stress leading to impaired decision-making. Decisional conflicts can be resolved with the help of copying pattern developed on the basis of the conflict. Theory Model of Irving L. Janis and Leon Mann, where four questions determine the typical copying pattern regarding the risk involved in the absence of change, the risk involved in change, the realistic hope for a better solution, and the time required to search and deliberate. An important and effective copying strategy is defensive avoidance where the decision-maker avoids exposure to disturbing information, wishful thinking, etc.

Consequences of Stress

When the supra-system exerts stress on a system, the system will try to accommodate the stress by changing itself, or, it will decay in an effort to overcome the stress and terminate. The supra-system enforces compliance by the system, through its control over the supply of resources and information input to the system. If the system does not accommodate the stress, the supra-system decreases or terminates the supply of energy and other information inputs. For instance, in a computer environment, if the system does not facilitate decision-making (by way of sending purchase order etc.) it will be discarded by the user.

Documenting and Communicating Decision Rules

Decision-making process is meaningful only if the decision-rules developed in the process are well documented in the form of procedures, manuals, forms, instructions, reports, etc., and are communicated to the personnel in the organization so as to enable them to make use of them. In computer-aided information systems, decision procedures can be documented in the form of program narrative, program code, and user manuals. The important methods of documentation of decision rules are:

(i) Matrix: It is a method of documentation where pairs of conditions and a decision resulting from these conditions are presented with the help of a matrix. A typical matrix reflecting the decision rule documentation is given below:

Matrix

If condition B and Y satisfy, then choose the decision given in the intersection

Fig. 4.1: Matrix

(ii) Decision table: It is a method of documenting decision rules that select one or more actions (rules) based on one or more conditions, from a set of possible conditions in precise and compact tables, called decision-table.
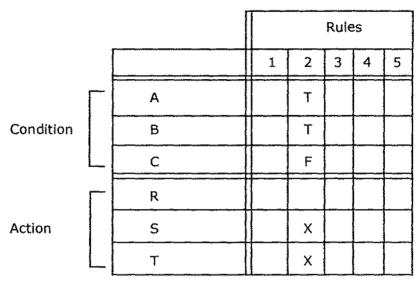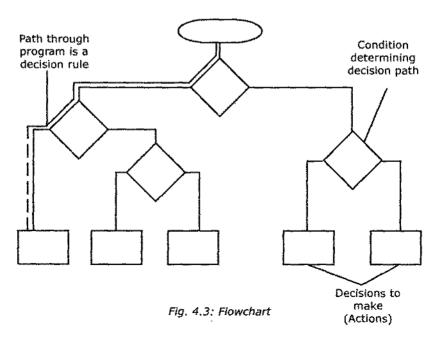
	Rules				
	1	2	3	4	5
A		T			
B		T			
C		F			
R					
S		X			
T		X			

Condition = A, B, C

Action = R, S, T

Fig. 4.2: Decision table

The table specifies that if conditions A and B are true and condition C is false, then select actions S and T in rule 2.

(iii) Flowchart: It is a chart specifying the path representing a specific decision rule.

Path through program is a decision rule

Condition determining decision path

Decisions to make (Actions)

Fig. 4.3: Flowchart

(iv) Decision tree: It is a kind of flowchart in which decision rules are presented without using symbols or decision boxes. If reflects the decision path but does not provide the criteria for selection of these paths. A decision tree depicting two alternative decisions and their respective outcomes is shown below.
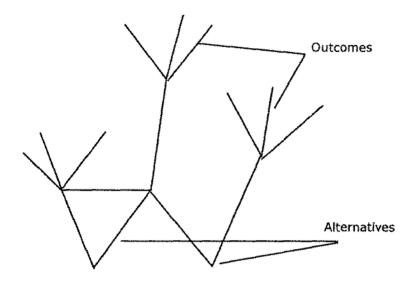

Fig. 4.4: Decision tree

(v) Pseudo-code: It refers to the representation of decision rules in 'if.... then' format, giving a precise description of the decision rule. For instance, a pseudo-code can take the following form:

```
Do for all departments
        Select department number in order
        For each employee PRINT detail
        IF net pay is outside limits
        (> 300) PRINT
        Error code on same line ·
End Do.
```

Programmed Decisions in Computer-based Information Systems

In computerized information system, the information production process is designed in such a way that the computer automatically makes the decision. It involves three steps: analysis of the problem and designing a decisions rule for solving the problem, programming the decision rule for the computer, and designing the input and output of the computer information system to provide automatic designs.

Quality of Decision–making

Quality of decision is difficult to define and evaluate; instead, it is better to evaluate the quality of the decision-making process. Quality of decision-making can be ensured by following the steps specified.

(i) Conducting surveys regarding the objectives and value of each alternative;

(ii) Canvassing all the alternative courses of action;

(iii) Identifying the negative and positive consequences of decisions;

(iv) Conducting search for new information;

(v) Reexamining the consequences of decisions on the basis of new information;

(vi) Making provisions for implementing the selected course of action.

Conclusion

The prospects of MIS in programming organizational decisions assume greater significance in view of the revolution in programmed decision-making in organizations to support the information systems, to provide timely information to the end-users. Decision-making is the central job of every manager, and it permeates all managerial functions. Decisions of managers give form and direction to the organizational behaviour, and result in some tangible actions such as rules, policies, orders, changes, etc. An effective organizational decision calls for action orientation, goal direction, and efficiency in implementation. The decision–making environment is characterized by certainty, risk and uncertainty. The rational and administrative models are the two major

models of decision-making. In the modern dynamic world, creativity is a vital ingredient in successful decision making, especially in overcoming problems and generating alternatives. The important creativity techniques used in decision-making are: attribute listing, brainstorming, Gordon's technique, Nominal group technique, and Delphi technique. The important techniques used in organizations for decision-making are: Probability theory, Game theory, Queueing theory, Replacement theory, Linear programming, Simulation, Network analysis (PERT and CPM), Decision tree, etc. Effective decision-making implies objective quality of decisions and their acceptance by those who implement the decisions.

Exercise

Short Answer Questions

1. Explain the concept 'hierarchy of planning'.
2. Describe the features of organizational structure.
3. What are the basic organizational structure?
4. Explain project and matrix organizations.
5. Write short notes on: (a) strategic planning, (b) tactical planning and (c) operational planning.
6. What are the phases in decision–making process?
7. Explain programmed and non-programmed decisions.
8. Write short note on decision-making under stress.
9. Explain the consequences of stress in information system.
10. What are the important methods of documentation of decision rules?
11. What is a decision-tree?
12. How it is possible to ensure quality of decision making?
13. What do you mean by formalization in organization?
14. What is a line and staff organization?
15. Explain the significance of committee organization.

Essay Questions

1. Explain organizational structure, its features and the basic organizational structure

2. Explain the decision-making process and the various steps involved in it.

3. Describe the behavioural model of organizational decision –making

4. What are the tools for documenting and communicating decision rules?

5. Discuss the concept of planning and control in organizations.