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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

NAME OF THE SUBJECT : PRINCIPLES OF MANAGEMENT

Subject code : GE3751

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SYLLABUS

GE3751 PRINCIPLES OF MANAGEMENT

UNIT I INTRODUCTION TO MANAGEMENT AND ORGANIZATIONS

Definition of Management – Science or Art – Manager Vs Entrepreneur - types of managers -managerial roles and skills – Evolution of Management – Scientific, human relations, system and contingency approaches – Types of Business organization - Sole proprietorship, partnership, company-public and private sector enterprises - Organization culture and Environment – Current trends and issues in Management.

UNIT II PLANNING

Nature and purpose of planning – planning process – types of planning – objectives – setting objectives – policies – Planning premises – Strategic Management – Planning Tools and Techniques – Decision making steps and process.

UNIT III ORGANISING

Nature and purpose – Formal and informal organization – organization chart – organization structure – types – Line and staff authority – departmentalization – delegation of authority – centralization and decentralization – Job Design - Human Resource Management – HR Planning, Recruitment, selection, Training and Development, Performance Management, Career planning and management.

UNIT IV DIRECTING

Foundations of individual and group behavior – motivation – motivation theories – motivational techniques – job satisfaction – job enrichment – leadership – types and theories of leadership – communication – process of communication – barrier in communication – effective communication –communication and IT.

UNIT V CONTROLLING

System and process of controlling – budgetary and non-budgetary control techniques – use of computers and IT in Management control – Productivity problems and management – control and performance – direct and preventive control – reporting.

TEXTBOOKS:

1. Stephen P. Robbins & Mary Coulter, ―Management‖, Prentice Hall (India) Pvt. Ltd., 10th Edition, 2009. 3 2. JAF Stoner, Freeman R.E and Daniel R Gilbert ―Management‖, Pearson Education, 6th Edition, 2004.

REFERENCES:

1. Stephen A. Robbins & David A. Decenzo& Mary Coulter, ―Fundamentals of Management‖ Pearson Education, 7th Edition, 2011.
2. Robert Kreitner&MamataMohapatra, ― Management‖, Biztantra, 2008.
3. Harold Koontz & Heinz Weihrich ―Essentials of management‖ Tata McGraw Hill,1998.
4. Tripathy PC & Reddy PN, ―Principles of Management‖, Tata McGraw Hill, 1999

important to control. Some managers can readily interpret tabular statistical data, but most managers prefer presentation of the data on charts.

ii) Break- even point analysis:

An interesting control device is the break even chart. This chart depicts the relationship of sales and expenses in such a way as to show at what volume revenues exactly cover expenses.

iii) Operational audit:

Another effective tool of managerial control is the internal audit or, as it is now coming to be called, the operational audit. Operational auditing, in its broadest sense, is the regular and independent appraisal, by a staff of internal auditors, of the accounting, financial, and other operations of a business.

iv) Personal observation:

In any preoccupation with the devices of managerial control, one should never overlook the importance of control through personal observation.

v) PERT:

The Program (or Project) Evaluation and Review Technique, commonly abbreviated PERT, is a is a method to analyze the involved tasks in completing a given project, especially the time needed to complete each task, and identifying the minimum time needed to complete the total project.

vi) GANTT CHART:

A Gantt chart is a type of bar chart that illustrates a project schedule. Gantt charts illustrate the start and finish dates of the terminal elements and summary elements of a project. Terminal elements and summary elements comprise the work breakdown structure of the project. Some Gantt charts also show the dependency (i.e., precedence network) relationships between activities.

PRODUCTIVITY

Productivity refers to the ratio between the output from production processes to its input. Productivity may be conceived of as a measure of the technical or engineering efficiency of production. As such quantitative measures of input, and sometimes output, are emphasized.

Typical Productivity Calculations

Measures of size and resources may be combined in many different ways. The three common approaches to defining productivity based on the model of Figure 2 are referred to as physical, functional, and economic productivity. Regardless of the approach selected,

adjustments may be needed for the factors of diseconomy of scale, reuse, requirements churn, and quality at delivery.

a) Physical Productivity

This is a ratio of the amount of product to the resources consumed (usually effort). Product may be measured in lines of code, classes, screens, or any other unit of product. Typically, effort is measured in terms of staff hours, days, or months. The physical size also may be used to estimate software performance factors (e.g., memory utilization as a function of lines of code).

b) Functional Productivity

This is a ratio of the amount of the functionality delivered to the resources consumed (usually effort). Functionality may be measured in terms of use cases, requirements, features, or function points (as appropriate to the nature of the software and the development method). Typically, effort is measured in terms of staff hours, days, or months. Traditional measures of Function Points work best with information processing systems. The effort involved in embedded and scientific software is likely to be underestimated with these measures, although several variations of Function Points have been developed that attempt to deal with this issue.

c) Economic Productivity

This is a ratio of the value of the product produced to the cost of the resources used to produce it. Economic productivity helps to evaluate the economic efficiency of an organization. Economic productivity usually is not used to predict project cost because the outcome can be affected by many factors outside the control of the project, such as sales volume, inflation, interest rates, and substitutions in resources or materials, as well as all the other factors that affect physical and functional measures of productivity. However, understanding economic productivity is essential to making good decisions about outsourcing and subcontracting. The basic calculation of economic productivity is as follows:

Economic Productivity = Value/Cost

PROBLEMS IN MEASUREMENT OF PRODUCTIVITY OF KNOWLEDGE WORKERS

Productivity implies measurement, which in turn, is an essential step in the control process. Although there is a general agreement about the need for improving productivity, there

is little consensus about the fundamental causes of the problem and what to do about them. The blame has been assigned to various factors. Some people place it on the greater proportion of less skilled workers with respect to the total labor force, but others disagree. There are those who see cutback in research and the emphasis on immediate results as the main culprit. Another reason given for the productivity dilemma is the growing affluence of

people, which makes them less ambitious. Still others cite the breakdown in family structure, the workers‘ attitudes, and government policies and regulations. Another problem is that the measurement of skills work is relatively easy, but it becomes more difficult for knowledge work. The difference between the two kinds is the relative use of knowledge and skills.

COST CONTROL

Cost control is the measure taken by management to assure that the cost objectives set down in the planning stage are attained and to assure that all segments of the organization function in a manner consistent with its policies.

Steps involved in designing process of cost control system:

- **Establishing norms:** To exercise cost control it is essential to establish norms, targets or parameters which may serve as yardsticks to achieve the ultimate objective. These standards, norms or targets may be set on the basis of research, study or past actual.
- **Appraisal:** The actual results are compared with the set norms to ascertain the degree of utilization of men, machines and materials. The deviations are analyzed so as to arrive at the causes which are controllable and uncontrollable.
- **Corrective measures:** The variances are reviewed and remedial measures or revision of targets, norms, standards etc., as required are taken.

Advantages of cost control

- Better utilization of resources
- To prepare for meeting a future competitive position.
- Reasonable price for the customers
- Firm standing in domestic and export markets.
- Improved methods of production and use of latest manufacturing techniques which have the effect of rising productivity and minimizing cost.
- By a continuous search for improvement creates proper climate for the increase efficiency.
- Improves the image of company for long-term benefits.
- Improve the rate of return on investment.

PURCHASE CONTROL

Purchase control is an element of material control. Material procurement is known as the purchase function. The functional responsibility of purchasing is that of the purchase manager or the purchaser. Purchasing is an important function of materials management because in purchase of materials, a substantial portion of the company's finance is committed which affects cash flow position of the company. Success of a business is to a large extent

influenced by the efficiency of its purchase organization. The advantages derived from a good and adequate system of the purchase control are as follows:

a) Continuous availability of materials: It ensures the continuous flow of materials. so production work may not be held up for want of materials. A manufacturer can complete schedule of production in time.

b) Purchasing of right quantity: Purchase of right quantity of materials avoids locking up of working capital. It minimizes risk of surplus and obsolete stores. It means there should not be possibility of overstocking and understocking.

c) Purchasing of right quality: Purchase of materials of proper quality and specification avoids waste of materials and loss in production. Effective purchase control prevents wastes and losses of materials right from the purchase till their consumptions. It enables the management to reduce cost of production.

d) Economy in purchasing: The purchasing of materials is a highly specialized function. By purchasing materials at reasonable prices, the efficient purchaser is able to make a valuable contribution to the success of a business.

e) Works as information centre: It serves as a function centre on the materials knowledge relating to prices, sources of supply, specifications, mode of delivery, etc. By providing continuous information to the management it is possible to prepare planning for production.

f) Development of business relationship: Purchasing of materials from the best market and from reliable suppliers develops business relationships. The result is that there may be smooth supply of materials in time and so it avoid disputes and financial losses.

g) Finding of alternative source of supply: If a particular supplier fails to supply the materials in time, it is possible to develop alternate sources of supply. the effect of this is that the production work is not disturbed.

h) Fixing responsibilities: Effective purchase control fix the responsibilities of operating units and individuals connected with the purchase, storage and handling of materials.

In short, the basic objective of the effective purchase control is to ensure continuity of supply of requisite quantity of material, to avoid held up of production and loss in production and at the same time reduces the ultimate cost of the finished products.

MAINTENANCE CONTROL

Maintenance department has to excercise effective cost control, to carry out the maintenance functions in a pre-specified budget, which is possible only through the following measures:

First line supervisors must be apprised of the cost information of the various materials so that the objective of the management can be met without extra expenditure on maintenance functions. A monthly review of the budget provisions and expenditures actually incurred in respect of each center/shop will provide guidlines to the departmental head to exercise better cost control.

The total expenditure to be incurred can be uniformly spread over the year for better budgetary control. however, the same may not be true in all cases particularly where overhauling of equipment has to be carried out due to unforseen breakdowns. some budgetary provisions must be set aside, to meet out unforeseen exigencies.

The controllable elements of cost such as manpower cost and material cost can be discussed with the concerned personnel, which may help in reducing the total cost of maintenance. Emphasis should be given to reduce the overhead expenditures, as other expenditures cannot be compromised.

It is observed through studies that the manpower cost is normally fixed, but the same way increase due to overtime cost. however, the material cost, which is the prime factor in maintenance cost, can be reduced by timely inspections designed, to detect failures. If the inspection is carried out as per schedule, the total failure of parts may be avoided, which otherwise would increase the maintenance cost. the proper handling of the equipment by the operators also reduces the frequency of repair and material requirements. Operators, who check their equipment regularly and use it within the operating limits, can help avoid many unwanted repairs. In the same way a good record of equipment failures/ maintenance would indicate the nature of failures, which can then be corrected even permanently.

QUALITY CONTROL

Quality control refers to the technical process that gathers, examines, analyze & report the progress of the project & conformance with the performance requirements

The steps involved in quality control process are

1) Determine what parameter is to be controlled.
2) Establish its criticality and whether you need to control before, during or after results are produced.
3) Establish a specification for the parameter to be controlled which provides limits of acceptability and units of measure.
4) Produce plans for control which specify the means by which the characteristics will be achieved and variation detected and removed.
5) Organize resources to implement the plans for quality control.
6) Install a sensor at an appropriate point in the process to sense variance from specification.
7) Collect and transmit data to a place for analysis.
8) Verify the results and diagnose the cause of variance.
9) Propose remedies and decide on the action needed to restore the status quo.
10) Take the agreed action and check that the variance has been corrected.

Advantages and disadvantages

- Advantages include better products and services ultimately establishing a good reputation for a company and higher revenue from having more satisfied customers.
- Disadvantages include needing more man power/operations to maintain quality control and adding more time to the initial process.

PLANNING OPERATIONS

An **operational planning** is a subset of strategic work plan. It describes short-term ways of achieving milestones and explains how, or what portion of, a strategic plan will be put into operation during a given operational period, in the case of commercial application, a fiscal year or another given budgetary term. An operational plan is the basis for, and justification of an annual operating budget request. Therefore, a five-year strategic plan would need five operational plans funded by five operating budgets.

Operational plans should establish the activities and budgets for each part of the organization for the next 1 – 3 years. They link the strategic plan with the activities the organization will deliver and the resources required to deliver them.

An operational plan draws directly from agency and program strategic plans to describe agency and program missions and goals, program objectives, and program activities. Like a strategic plan, an operational plan addresses four questions:

- Where are we now?
- Where do we want to be?
- How do we get there?
- How do we measure our progress?

The OP is both the first and the last step in preparing an operating budget request. As the first step, the OP provides a plan for resource allocation; as the last step, the OP may be modified to reflect policy decisions or financial changes made during the budget development process.

Operational plans should be prepared by the people who will be involved in implementation. There is often a need for significant cross-departmental dialogue as plans created by one part of the organization inevitably have implications for other parts.

Operational plans should contain:

- clear objectives
- activities to be delivered
- quality standards
- desired outcomes
- staffing and resource requirements
- implementation timetables
- a process for monitoring progress.