LECTURE NOTES ON

MANAGEMENTSCIENCE

IVB.TECHISEMESTER

UNIT– 1
INTRODUCTIONTOMANAGEMENT

Management in businesses and organizations is the function that coordinates the efforts of people toaccomplishgoals andobjectivesby usingavailableresources efficientlyand effectively.

<u>IntroductiontoManagement</u>:

Whenhumanbeingstartedgroupactivitiesfortheattainmentofsamecommonobjectiveswhenevera group is formed and a group activity is organized to achieve certain common objectivesmanagement is needed to direct, co-ordinate and integrate the individual activities of a group and secureteams work to accomplish organizational objectives. The objectives of all business are attained by utilizingthescareresourceslike men, materials, machines,moneyetc.

Inprocessofmanagement,amanageuseshumanskills,materialresourcesandscientificmethodsto perform all theactivities leadingto theachievement of goods.

<u>CONCEPTOFMANAGEMENT</u>

"**Management** is the coordination of all resources through the process of planning, organizing, directingandcontrolling in order to attain stated goals."

1. **"To manage is to forecast, to plan, to organize, to command, to co-ordinate and to control."** — Henry Fayol. It attempts to describe management in terms of what a manager does, and not whatmanagementis.
2. **"Management is a multipurpose organ that manages a business and manages manager, andmanagesworkerand work."**—P. Drucker: ThePracticeofManagement

(i) Managingabusiness;
(ii) Managingmanager;and
(iii) Managingworkersandwork.

Even if one is omitted, we would not have management anymore and we also would not have a businessenterprise or an industrial society. According to P. Drucker, the manager has to balance and harmoniesthreemajorfunctions of thebusiness enterprise.
Hence, a manager is a dynamic and life-giving element in every business. Without efficient managementwecannot securethe bestallocation and utilizationofhuman,materialand financialresources.

<u>DEFINITIONOFMANAGEMENT</u>

Management is an art of getting things done through by others with the help of planning, organising,staffing,directingandcontrollingfunctions toachieveanindividual/groupgoalsand objectives.

"Management is knowing exactly what you want men to do and then seeing that they do it the best andcheapestways".ByF.W.Taylor

"Managementis defined as the creation andmaintenanceofaninternalenvironmentin anenterprise where individuals working together in groups, can perform efficiently and effectively towardstheattainmentofgroupgoals".BYKoontzandO'Donell

NATUREANDIMPORTANCEOFMANAGEMENT

NATURE

1. Managementisgoalorientedorpurposiveactivity

2. Managementisgroupactivity

3. Managementisauniversalprocessorpervasiveactivity

4. Managementismulti-disciplinary

5. Managementisongoingactivity/continuousprocess

6. Managementisasocialprocess

7. Coordinationofhumanandphysicalresourcesor managementintegrateshumanandphysicalresources

8. Activatingemployees

9. Managementisbothascienceandanart

IMPORTANCE

Achieving business

objectiveOptimum use of business

resourcesEffectiveleadershipandmo

tivation

Effective organization and co-

ordinationEstablishing clear authority

andresponsibilitySolutionof laborproblems

Fulfillingsocialresponsibility

FUNCTIONSOFMANAGEMENT:

Planning: Involves selecting the objectives and actions to achieves themplanningstageinvolves decision making and choosing future courses of action from the various alternatives**Organizing**:Roleofeachpersoninanyorganizationisfixed.Theconceptofroleiswhowillbedoing what should be known, to achieve organizational targets efficiently. It is intended thatallthetasksnecessarytoachievetargetsareassignedtopeoplewhocandothebest.

Staffing: Staffing function includes keeping the various organizational positionfixed. This activity is done by identifying work force requirements, keeping therecords of the performance of people working with the organization. So thatsuitable people can be prompted and at the same time people performing not upto the mark could be send for training. If all the above activities are taking placeinnicewayinanyorganization,itwillgiveriseminimumworkforceturnover.

Directing: Directing means influencing people, so that they will contribute to the organization targetsdirectinginvolvesmotivation,leadershipstylesandpropercommunication.

Controlling:Itisthe process of comparing the plans with the results. If there isdeviationattaintakentobebridgethegapbetweenplanandactualresults.

EVALUATIONOFSCIENTIFICMANAGEMENT

F.W.TAYLOR1856-1915

Scientificmanagementisatheoryofmanagement thatanalyzesandsynthesizesworkflows.Its mainobjectiveis improving economicefficiency,especially labourproductivity.Itwasone of the earliest attempts to apply science to the engineering of processesandto management.Scientificmanagement issometimes known as**Taylorism**afteritsfounder,FrederickWinslowTaylor.

Taylor began the theory's development in theUnited Statesduring the 1880s and '90swithinmanufacturingindustries,especiallysteel.Itspeakofinfluencecameinthe1910s;[2]Taylordied in1915andbythe1920s,scientificmanagement was still influential but had enteredintocompetition and syncretismwith opposing orcomplementaryideas.

Although scientific management as a distinct theory or school of thought was obsolete by the 1930s,most of its themes are still important parts of industrial engineering and management today. Theseinclude: analysis; synthesis; logic; rationality; empiricism; work ethic; efficiency and elimination ofwaste; standardization of best practices; disdain for tradition preserved merely for its own sake or toprotect the social status of particular workers with particular skill sets; the transformation of craftproduction into mass production; and knowledge transfer between workers and from workers into tools,processes, and documentation.

ThemainelementsoftheScientificManagementare:"TimestudiesFunctionalorspecializedsupervisionStandardizationoftoolsandimplementsStandardizationofworkmethodsSeparatePlanning function Management by exception principle The use of "slide-rules and similar time-savingdevices" Instruction cards for workmen Task allocation and large bonus for successful performance Theuse of the'differentialrate' Mnemonic systemsforclassifying productsand implementsAroutingsystem A modern costing system etc. etc. " Taylor called these elements "merely the elements or detailsof themechanismsofmanagement"He saw themasextensionsofthe fourprinciples ofmanagement.

1. Thedevelopment of atruescience
2. Thescientificselection oftheworkman
3. Thescientificeducationanddevelopmentoftheworkman
4. Intimateandfriendly cooperationbetweenthemanagementandthemen.

PRINCIPLESOFSCIENTIFICMANAGEMENT

Principles of scientific management propounded by Taylor are: 1. Science, Not Rule of Thumb 2.Harmony, Not Discord 3.Mental Revolution 4.Cooperation, Not Individualism 5.Development of eachandevery person to his or her greatest efficiency and prosperity.

1. Science, NotRuleofThumb:

In order to increase organisational efficiency, the ‘Rule of Thumb’ method should be substituted by themethodsdeveloped through scientificanalysis ofwork.

Rule of Thumb means decisions taken by manager as per their personal judgments. According to Taylor,even a small production activity like loading iron sheets into box cars can be scientifically planned. Thiswill help in saving time as well as human energy. Decisions should be based on scientific enquiry withcauseandeffect relationships.

This principle is concerned with selecting the best way of performing a job through the application ofscientificanalysis and notby intuition or hit and trial methods.

The work assigned to any employee should be observed and analyzed with respect to each element orpartthereofandthetimeinvolvedthereinsoastodecidethebestwayofperformingthattheworkandtodetermine the standardoutput forsame.

2. Harmony,NotDiscord:

Taylor emphasized that there should be complete harmony between the workers and the managementsince if there is any conflict between the two, it will not be beneficial either for the workers or themanagement.

Both the management and the workers should realize the importance of each other. In order to achievethisstate,Taylor suggestedcompletemental revolutionon thepartofbothmanagement andworkers.

It means that there should be complete change in the attitude and outlook of workers and managementtowards each other. It should always be kept in mind that prosperity for an employer cannot exist for alongtimeunlessitisaccompaniedbytheprosperityoftheemployeesofthatorganisationandviceversa.

It becomes possible by (a) sharing a part of surplus with workers (b) training of employees, (c) divisionofwork (d) team spirit(e) positiveattitude(f) senseof discipline (g) sincerityetc.

Management should always be ready to share the gains of the company with the workers and the lattershould provide their full cooperation and hard work for achieving organizational goals. Group actionwithmutual-trust and understandingshould be perfect understandingthefocus of working.

This principle requires that there should be perfect understanding between the management and workersand both should feel that they are part of same family. It helps to produce synergy effect since bothmanagementandworkers work in unison.

For example, in most of the Japanese companies, paternalistic style of management is in practice andthere is complete openness between workers and the management. Usually, workers don't go on thestrike but, if at all they do so, they just wear a black badge and work even more than the normal hoursjust to impress upon the management that their focus is on their demands as well as organisationalobjectives.

3. MentalRevolution:

The technique of Mental Revolution involves a change in the attitude of workers and managementtowardseachother.Bothshouldrealizetheimportanceofeachotherandshouldworkwithfullcooperation.Managementaswellasthe workersshouldaimtoincreasetheprofitsoftheorganization.

For this the workers should put in their best efforts so that the company makes profit and on the otherhand management should share part of profits with the workers. Thus, mental revolution requires acompletechangeintheoutlookofbothmanagementandworkers.Thereshouldbeaspiritoftogethernessbetween workers and management.

4. Cooperation,NotIndividualism:

Thisprincipleisanextensionofprincipleof'Harmony,notdiscord'andlaysstressonmutualcooperationbetweenworkersandthe management.Cooperation,mutualconfidence,senseofgoodwill should prevail among both, managers as well as workers. The intention is to replace internal competitionwithcooperation.

Both ‘Management’ and ‘Workers’ should realize the importance of each other. Workers should beconsidered as part of management and should be allowed to take part in decision making process of themanagement. Management should always welcome their suggestions and should also reward them iftheir suggestions proveto be beneficialfor the organisation viz. reduction of costs or increase inproductionetc.

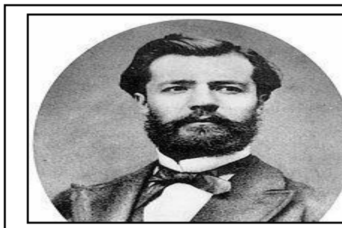
At the same time, workers should also resist from going on strike or making unnecessary demands frommanagement. Workers should be treated as integral part of organisation and all important decisionsshould be taken after due consultation with workers. Both of them should visualize themselves as twopillarswhosesoundnessalone canensure achievement ofcommon goalsof the organisation.

Taylor also suggested that there should be proper division of work and responsibility between the two.Managementshould always guide, encourageandhelp theworkers.

5. Development ofeachandeveryperson tohisorher greatest efficiencyandprosperity: Efficiency of any organisation also depends on the skills and capabilities of its employees to a greatextent.Thus,providingtraining totheworkers wasconsideredessentialinordertolearn thebestmethoddeveloped through the use of scientific approach. To attain the efficiency, steps should be taken rightfromthe processofselectionofemployees. Employees shouldbescientificallyselected.

The work assigned to each employee should suit his/her physical, mental and intellectual capabilities.Efficient employees produce more to earn more. This ultimately helps to attain efficiency and prosperityforboth organisation andthe employees.

<u>EVOLUTIONOFMODERNMNAGEMENT(OR)HENRYFAYOL’SADMINISTRATIVETHEORY</u>



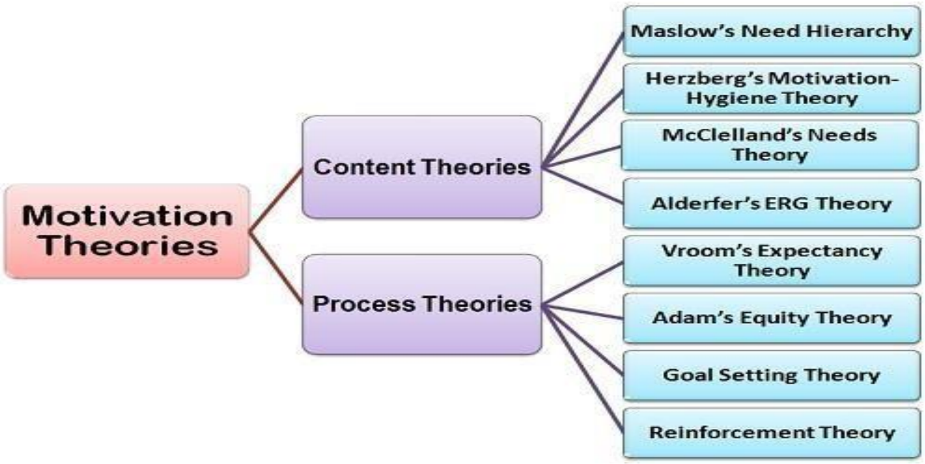
HENRYFAYOL1841-1925

HenriFayol(Istanbul,29 July1841 – Paris,19November1925)wasaFrenchmining engineer,mining executive,authorand director ofmineswho developed ageneral theoryofbusiness administrationthatisoftencalledFayolism.Miningengineering

He and his colleagues developed this theory independently of scientific management but roughlycontemporaneously.Like hiscontemporary,FrederickWinslowTaylor, heiswidelyacknowledgedasafounderofmodern management methods.

1. **Division of work** - The division of work is the course of tasks assigned to, and completed by, agroup of workers in order to increase efficiency. Division of work, which is also known asdivision of labour, is the breaking down of a job so as to have a number of different tasks thatmakeupthewhole.
2. **Authority and Responsibility** - Authority is the right to give orders and obtain obedience, andresponsibilityisthe corollaryofauthority.
3. **Discipline** - Employees must obey and respect the rules that govern the organization. Gooddisciplineisthe result ofeffectiveleadership.
4. **Unity of command** - Every employee should receive orders from only one superior or behalf ofthesuperior.
5. **Unity of direction** - Each group of organizational activities that have the same objective shouldbedirected by onemanager using oneplanfor achievement ofone commongoal.
6. **Subordination** - The interests of any one employee or group of employees should not takeprecedenceover theinterests oftheorganization as awhole.
7. **Remuneration**-AllWorkersmustbepaidafairwagefortheirservices.
8. **Centralisationanddecentralisation-** Centralisationreferstothedegreetowhichsubordinatesareinvolved indecisionmaking.
9. **Scalarchain**- Thelineofauthorityfromtopmanagementtothelowestranksrepresentsthescalarchain. Communications should follow thischain.
10. **Order**- thisprincipleisconcernedwithsystematicarrangementofmen,machine,materialetc.Thereshould beaspecificplace forevery employeein an organization
11. **Equity**-Managers shouldbe kindand fairto theirsubordinates.
12. **Stability of tenure of personnel** - High employee turnover is inefficient. Management shouldprovideorderlypersonnelplanningandensurethatreplacementsareavailabletofillvacancies.
13. **Initiative**-Employeeswhoareallowedtooriginateandcarryoutplanswillexerthighlevelsofeffort.
14. **Espritdecorps** -Promotingteam spiritwillbuildharmonyand unitywithintheorganization.

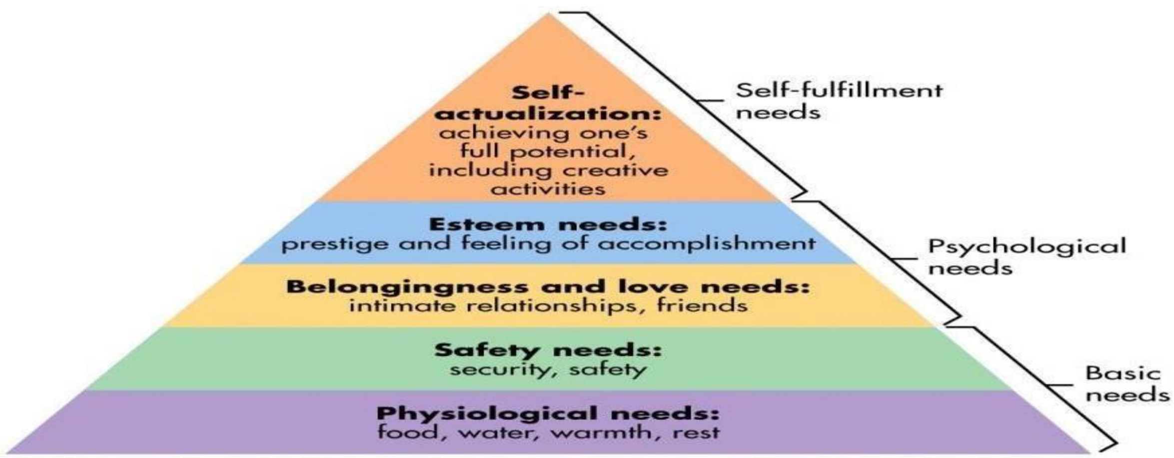
MOTIVATIONTHEORIES



1.Maslow'sNeedHierarchyTheory:

It is probably safe to say that the most well-known theory of motivation is Maslow's need hierarchytheory Maslow's theory is based on the human needs. Drawing chiefly on his clinical experience, heclassifiedall human needsinto ahierarchical mannerfrom the lower tothehigherorder.

In essence, he believed that once a given level of need is satisfied, it no longer serves to motivate man.Then, the next higher level of need has to be activated in order to motivate the man. Maslow identifiedfivelevels in his need hierarchyas shown in figure



1. PhysiologicalNeeds:

These needs are basic to human life and, hence, include food, clothing, shelter, air, water and necessitiesof life. These needs relate to the survival and maintenance of human life. They exert tremendousinfluence on human behaviour. These needs are to be met first at least partly before higher level needsemerge.Oncephysiological needsaresatisfied, theyno longer motivate theman.

2. SafetyNeeds:

After satisfying the physiological needs, the next needs felt are called safety and security needs. Theseneedsfindexpressioninsuchdesiresaseconomic securityandprotectionfromphysicaldangers.Meeting these needs requires more money and, hence, the individual is prompted to work more. Likephysiologicalneeds, thesebecome inactiveoncethey aresatisfied.

3. SocialNeeds:

Man is a social being. He is, therefore, interested in social interaction, companionship, belongingness,etc. It is this socialising and belongingness why individuals prefer to work in groups and especially olderpeoplego to work.

4. EsteemNeeds:

Theseneedsrefertoself-esteemandself-respect.Theyincludesuchneedswhichindicateself-confidence, achievement, competence, knowledge and independence. The fulfillment of esteem needsleads to self-confidence,strength and capability of being usefulin the organisation. However, inabilitytofulfill theseneedsresultsinfeelinglikeinferiority, weakness andhelplessness.

5. Self-ActualisationNeeds:

This level represents the culmination ofall the lower, intermediate, and higher needs ofhuman beings.In other words, the final step under the need hierarchy model is the need for self-actualization. Thisreferstofulfillment.

The term self-actualization was coined by Kurt Goldstein and means to become actualized in what one ispotentiallygoodat.Ineffect,self-actualizationistheperson’smotivationtotransformperceptionofselfintoreality.

According to Maslow, the human needs follow a definite sequence of domination. The second need doesnotariseuntilthefirstisreasonablysatisfied,andthethirdneeddoesnotemergeuntilthefirsttwoneeds have been reasonably satisfied and it goes on. The other side of the need hierarchy is that humanneedsareunlimited. However,Maslow’sneed hierarchy-theoryisnotwithoutitsdetractors.

2.Herzberg’sMotivationHygieneTheory:

The psychologist Frederick Herzberg extended the work of Maslow and propsed a newmotivationtheory popularly known as Herzberg’s Motivation Hygiene (Two-Factor) Theory. Herzberg conducted awidely reported motivational study on 200 accountants and engineers employed by firms in and aroundWesternPennsylvania.

Heaskedthesepeopletodescribetwoimportantincidentsattheirjobs:

(1) Whendidyoufeelparticularlygoodaboutyourjob,and

(2) When did you feel exceptionally bad about your job? He used the critical incident method ofobtainingdata.

The responses when analysed were found quite interesting and fairly consistent. The replies respondentsgave when they felt good about their jobs were significantly different from the replies given when theyfelt bad. Reported good feelings were generally associated with job satisfaction, whereasbad feelingwith job dissatisfaction. Herzberg labelled the job satisfiers motivators, and he called job dissatisfieshygiene or maintenance factors. Taken together, the motivators and hygiene factors have become knownasHerzberg’s two-factortheory ofmotivation

According toHerzberg, the opposite of satisfaction is not dissatisfaction. The underlying reason, hesays, is that removal ofdissatisfying characteristics from a job does not necessarily make the jobsatisfying. He believesin the existence of a dual continuum. The opposite of 'satisfaction'is 'nosatisfaction'andthe oppositeof 'dissatisfaction'is'nodissatisatisfaction'.

According to Herzberg, today's motivators are tomorrow's hygiene because the latter stop influencingthe behaviour of persons when they get them. Accordingly, one's hygiene may be the motivator ofanother.

However,Herzberg'smodelislabeledwiththefollowingcriticismalso:

1. People generally tend to take credit themselves when things go well. They blame failure on theexternalenvironment.

2. Thetheorybasicallyexplainsjobsatisfaction,notmotivation.

3. Even job satisfaction is not measured on an overall basis. It is not unlikely that a person may dislikepartofhis/ her job,stillthinksthe jobacceptable.

4. Thistheoryneglectssituationalvariabletomotivateanindividual.

Becauseofitsubiquitousnature,salarycommonlyshowsupasamotivator aswellashygine.

Regardless of criticism, Herzberg's 'two-factor motivation theory' has been widely read and a fewmanagers seem untaminar with his recommendations. The main use of his recommendations lies inplanningand controlling of employees work.

3.McClelland'sNeedTheory:

Another well-known need-based theory of motivation, as opposed to hierarchy of needs of satisfaction-dissatisfaction, is the theory developed by McClelland and his associates'. McClelland developed histheory based on Henry Murray's developed long list of motives and manifest needs used in his earlystudiesofpersonality.McClelland'sneed-theoryiscloselyassociatedwithlearningtheory,because he believedthatneedsarelearnedoracquiredbythekindsofeventspeopleexperiencedintheirenvironmentand culture.

He found that people who acquire a particular need behave differently from those who do not have. Histheory focuses on Murray's three needs; achievement, power and affiliation. In the literature, these threeneedsareabbreviated"nAch", "n Pow", and"nAff"respectively'.

Theyaredefinedasfollows:
NeedforAchievement:
This is the drive to excel, to achieve in relation to a set of standard, and to strive to succeed. In otherwords, need for achievement is a behaviour directed toward competition with a standard of excellence.McClelland found that people with a high need for achievement perform better than those with
amoderateorlowneedforachievement,andnotedregional/nationaldifferencesinachievementmotivation.

Throughhisresearch,McClellandidentifiedthefollowingthreecharacteristicsofhigh-needachievers:
1. High-needachievershaveastrongdesireto
assumepersonalresponsibilityforperformingataskforfindingasolution to aproblem.

2. High-needachieverstendtosetmoderatelydifficultgoalsandtakecalculatedrisks.

3. High-needachievershaveastrong desireforperformancefeedback.

NeedforPower:
The need for power is concerned with making an impact on others, the desire to influence others, theurge to change people, and the desire to make a difference in life. People with a high need for power arepeoplewholiketobeincontrolof people andevents. Thisresultsin ultimatesatisfaction toman.

Peoplewhohaveahighneedforpowerare characterizedby:
1. Adesiretoinfluenceanddirectsomebodyelse.

2. Adesiretoexercise controloverothers.

3. Aconcernformaintainingleader-followerrelations.

NeedforAffiliation:
The need for affiliation is defined as a desire to establish and maintain friendly and warm relations withotherpeople'.Theneedfor affiliation,in manyways, issimilartoMaslow'ssocialneeds.

Thepeoplewithhighneedforaffiliationhavethesecharacteristics:
1. Theyhave astrongdesireforacceptanceandapproval fromothers.

2. Theytendto conform tothe wishes ofthosepeoplewhosefriendship and companionship theyvalue.

3. Theyvaluethe feelingsofothers.

4. ALDERFER'SERGTheory:

Alderfer further developed Maslow's hierarchy of needs by categorizing the hierarchy into his **ERGtheory** (Existence, Relatedness and Growth). The existence group is concerned with providing the basicmaterialexistencerequirementsofhumans.TheyincludetheitemsthatMaslowconsideredtobephysiological and safety needs. The second group of needs is those of relatedness – the desire peoplehaveformaintainingimportantinterpersonalrelationships.Thesesocialandstatusdesiresrequireinteraction with others if they are to be satisfied, and they align with Maslow's social need and theexternalcomponentofMaslow'sesteemclassification.Finally,Alderferisolatesgrowthneeds:anintrinsic desire for personal development. These include the intrinsic component from Maslow's esteemcategory and the characteristics included under self-actualization. Alderfer categorized the lower orderneeds (Physiological and Safety) into the Existence category. He fit Maslow's interpersonal love andesteem needs into the Relatedness category. The Growth category contained the self-actualization andself-esteem needs. Alderfer also proposed a regression theory to go along with the ERG theory. He saidthat when needs in a higher category are not met then individuals redouble the efforts invested in a lowercategory need. For example if self-actualization or self-esteem is not met then individuals will investmoreeffort in therelatedness category in thehopesof achieving the higherneed.

DESIGNINGORGANISATIONSTRUCTURE–PRINCIPLESANDTYPESOFORGANISATION

Organization:

Organization is form of organizing which is a part of management processOrganization defined as collectivity of people for achieving commonobjectives

"Organizationmeansthedeterminationandassignmentofdutiestopeople,andalsotheestablishment and the maintenance of authority relationships among these grouped activities it is thestructuralframework with inwhichthe variouseffortsare coordinatedandrelatedtoeachother".

Definitions: "Organization are collectivities of people that have been establishedforthepursuitofrelativelyspecific objectivesona moreorlesscontinuousbasis".

WilliamScott

"Organizationistheformof everyhuman associationfortheattainmentofacommonpurpose".

MooneyandReilly

"Organization involves the grouping of activities necessary to accomplishgoals and plans assignment and these activities to appropriate departments and positions to appropriatedepartmentsandpositionsforauthoritydelegationandcoordination".

KoontzandO'Donnell

Organizationis usedin thefollowing wayswith orwithout prefixorsuffix

1. asentity
2. asgroupofpeople
3. asstructure
4. asprocess

ProcessofOrganization:

Determinationofobjectives,strategies,plans andpolicies:

Objectivesshouldbeclearandprecise,be causetheentireorganizationistobebuiltaroundtheobjectivesoftheenterprises.

Determinationofactivities:Determineactivitiesneededtoexecutetheseplansandpoliciesand accomplish the objectives. The work load is broken into component activities thataretobeperformedbyalltheemployees.Theactivitiesaresosplittodeterminethejob which can beperformed by anindividual.

Separation and grouping of activities: To attain the benefits of specialization and division oflabour, every company, will separate its activities on the basis ofprimaryfunctions likefinance, engineering, purchasing,production,sales andindustrialrelations. Allthe similarordirectlyrelatedactivitiesaregroupedtogetherintheformofdepartments.

Delegation of authority: Authority is necessary for the performance of the job and thereforeauthority is delegated to the subordinates for enabling them to carry out their work smoothly andefficiently.

Delegationof responsibility: Responsibility may be described as the obligation andaccountabilityfortheperformanceofdelegatedduties.Asuperiorisalwaysaccountablefortheacts ofhissubordinate.Therefore,responsibilityalwaysflowsfromsubordinatestosuperiors.

Establish inter-relationships: The grouped activities are placed in the overall organizationstructureatappropriatelevel. Itisnecessarytointegrateorthethesegroupsofactivitiesthrough.

a) Authorityrelationshiphorizontally,verticallyanddiagonally
b) Organized information or communication system i.e., with the help ofeffectivecoordinationandcommunication.

Providingphysicalfacilitiesandproperenvironment:Physicalfacilitiesmeansprovidemachinery, tools equipments, infrastructure etc, environment means provide proper lighting,ventilation, heating, cooling arrangement at the work place, reasonable hors of work, safetydevices,job security etc

PrinciplesofOrganization:

Principleofunityofobjectives: Anorganizationstructureiseffectiveifisenablesindividualstocontributetoentireobjectives.

Principleofco-ordination: Theaimof theobjectivecan beachieved itpropercoordination existsforefferentactivities

Principles of organizational efficiency: An organization is efficient it is structured to aid theaccomplishmentofenterpriseobjectivewithaminimumofunsoughtconsequencesorcosts.Spanofmanagementprinciple:Ineachmanagerialposition,thereisalimittothenumberofpersonsanindividualcaneffectivelymanagebuttheexact number will depend on theimpactofunderlyingvariables.

Scalar principle: The clearer the line of authority from the ultimate management position in anenterprisetoeverysubordinateposition,theclearerwillbetheresponsibilityfordecisionmakingthemoreeffectivewillbe organizationcommunication.

Principleofdelegationbyresultsexpected:Authoritydelegatedtoallindividualmanagersshouldbeadequateenoughtoensuretheirabilitytoaccomplishtheresultsexpected.

Principle of responsibility: The responsibility of subordinates totheir superiors for performanceisabsolute,andsuperiorscannotescape responsibilityfortheorganizationactivityoftheir subordinates.

Principle of parity of authority and responsibility: The responsibility for actionscannotbegreaterthanthat implied by the authority delegated, not should it beless.

Principleofunitycommand:Themorecompleteanindividual’sreportingrelationshipsto a single superior, the smaller the problemofconflictinginstructions and the greater thefeeling of personal responsibility for results.Authority level principle: Maintenance of intended delegationrequiresthatdecisionswithin the authority of individual managers should be made by themand not be referred upward intheorganizationstructure.

Principle of balance: The application of principles or technique must be balancedto ensure the over alleffectiveness of the structure in meeting enterpriseobjectives.

Principleofflexibility:themorethatprovisionsaremadeforbuildingflexibilityintoanorganizationstructurecan fulfill its purpose.

Principleofleadershipfacilitation:Themorean organization structure and itsdelegationsofauthorityenable managers to design and maintain an environmentfor performance, the more they will help the leadership abilities of thosemanagers.

DesignofOrganizationstructure:

The main objective of an organization structure is to ensure that efforts of allthe peopleworking in various sections are co-ordinate and integrated for achieving the task in the mostefficienteffectivewaywithminimumconsumptionofresourcesi.e.economicalways

1) Formalorganizationstructure
2) Informalorganizationstructure

Formal organization structure:Accordingtoclassicaltheoriststheformalorganizationisbuiltanfourpillars

1) Divisionoflabour
2) Scalarfunctionalprocesses
3) Structure
4) Spanofcontrol

Definition: An organization is formal when the activities of two or more persons are consciouslycoordinatedtowards common objectives.

Informal organization: Informal organization arises spontaneously based onfriendshiporsomecommoninterest and not based on rules, regulation andprocedures.Itisdevelopedbytheemployeesthemselvesandnot by the formalauthority.

Definition: Informal organization brings cohesiveness to a formal organization, it brings to thememembers of formal organization a feeling of belonging of status, of self-respect and of gregarioussatisfaction.

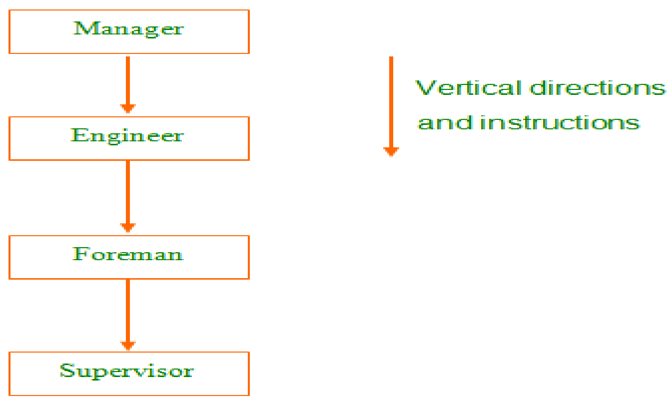
Comparisonbetween formal andinformal organization:

Basisofcomparison	Formal	Informal
Formation	PlannedSpo & deliberated ntaneous	
Purposeint eraction	Well-setgoals	Social
Structure structured	Wellstructured	Un
Focus	Positions	Persons
Nature	Official	Unofficial
Leadership	Superior	Anyone
Sourceofpowerg roup	Delegated	Given by
Guidelinesforbehaviourn orms	Rulesprocedures	Group
Sourceofcontrol	Rewards/Punishment	Sanctions

Typeoforganization:Onthebasisofauthority relationshipsorganizationclassified as follows

1. LineorganizationorMilitaryorganizationorScalarorganization
2. Functionalorganization
3. LineandStafforganization
4. Projectorganization
5. Committeeorganization
6. Matrixorganization

1. LINEORGANIZATIONSTRUCTURE



Where efforts of large number of people have to becontrolledanddiscipline is ofprime importancelinetypeorganization structurewill serve the purpose.This isalsooneoftheoldeststructures.However,inpresentconditionsthistypeofstructurehaslosttheapplicability.In line structure tenlines ofinstruction, directing is vertical. This means in thistypebossisalwaysrightandhisordersaretobeobeyedatanycost.

Merits:

Simplicity:Lineorganizationisverysimpletoestablishandcanbeeasilyunderstandbytheemployees

Discipline:Sinceeachpositionissubjecttocontrolbyitsimmediatesuperiorposition,oftenthe maintenance of discipline is easy unity of command and unity of direction foster disciplineamong the people in the organization.Co-ordination: The hierarchy in management helps in achieving effective coordinationEffective communication: There will be a direct link between superior and hissubordinate; both can communicate properly among himself or herself.Economical: Line organizationis easy to operate andlessexpensiveUnityofcommand: Inlineorganization everypersonisunder thecommandofonebossonly.

Promptdecision:Onlyonepersonisinchargeofonedivisionordepartment.Thisenablesmanager totakequickdecisions.

Over all development of the managers: The departmental head has to look after all the activitiesof his department; therefore, it encourages the development of all round managers at the higherlevelofauthority.

Demerits:

Undue reliance: The success of the enterprisedepends upon the caliber and ability of fewdepartmentalheads, loss ofoneor twocapable men mayput the organizationin difficulties.

Personnel limitations: In this type of organization an individual executive is suppose todischarge different types of duties. He cannot do justice to all different activities because hecannot bespecializedinall thetrades.

Overloadof work:Departmentalheadsareoverloadedwithvariousroutine jobshencetheycannotsparetime forimportant managerialfunctionslikeplanning,development budgetingetc.

Dictatorialway:

Inlineorganization,toomuchauthoritiescentreonlineexecutive.Henceitencouragesdictatorialwayofworking.

Duplicationofwork:

Conflictingpoliciesofdifferentdepartmentsresultinduplicationofwork.

Unsuitableforlargeconcerns:Itislimitedtosmallconcerns

General interest of enterprise may be over looked: Departments may work for their self-interestand may sacrifice the general interest of the enterprise.

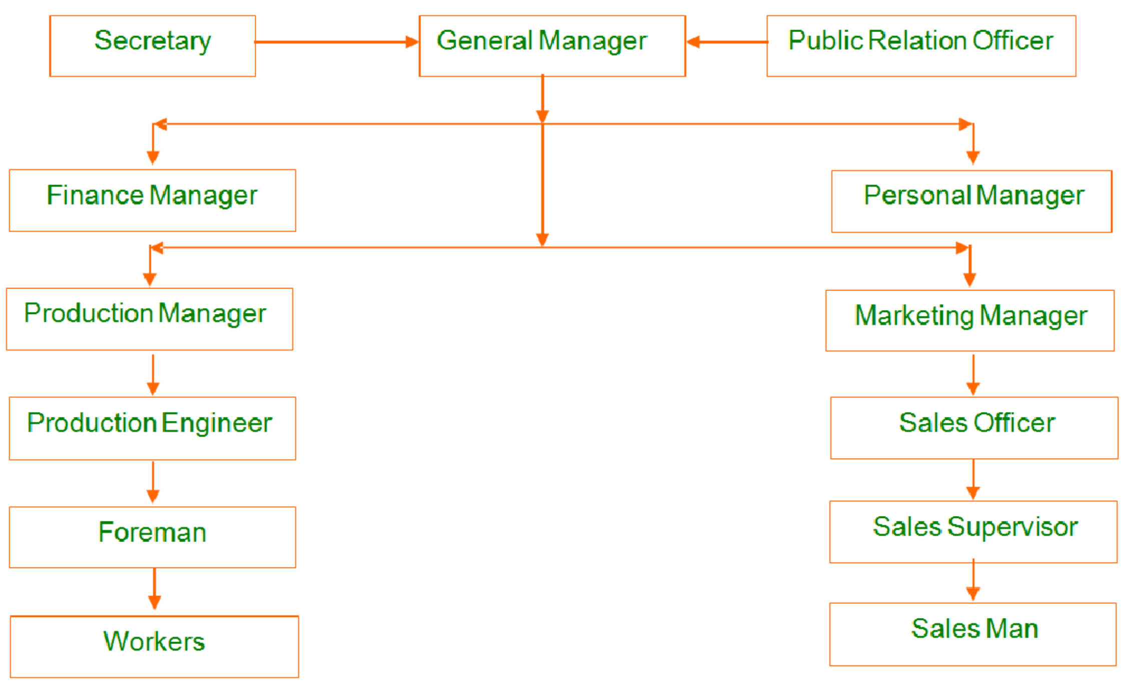
2. LINEANDSTAFFORGANIZATIONSTRUCTURE

LineandStaff organizationis thein whichtheline headsare assistedby specialiststaff.
If the firm is of large size, manager cannot give careful attention to everyaspect of management. They are busy with ordinary task of production andselling. Hence staff is deputed to do the work of investigation, research,recording, and advising to managers. Thus the staff brings advising tomanagers.Thusthe staffbringsspecializationbyassistingthe lineofficers.

"Line" means -

Operating"Staff"means-

Service



Merits:

Planned specialization: The line and staff structure is based upon the principle of specialization.The line managers are responsible for operations contributing directly to the achievement oforganizationalobjectiveswhereasstaffpeoplearetheretoprovideexpertadviceonthemattersoftheirc oncerns.

Qualitydecisions: Decisions come after careful consideration and thought eachexpert giveshisadviseintheareaofhisspecializationwhichisreflectedin thedecisions.
Prospectforpersonalgrowth:Prospectforefficientpersonaltogrowintheorganizationnot only that, it also offers opportunityforconcentratinginaparticular area, there byincreasingpersonalefficiency

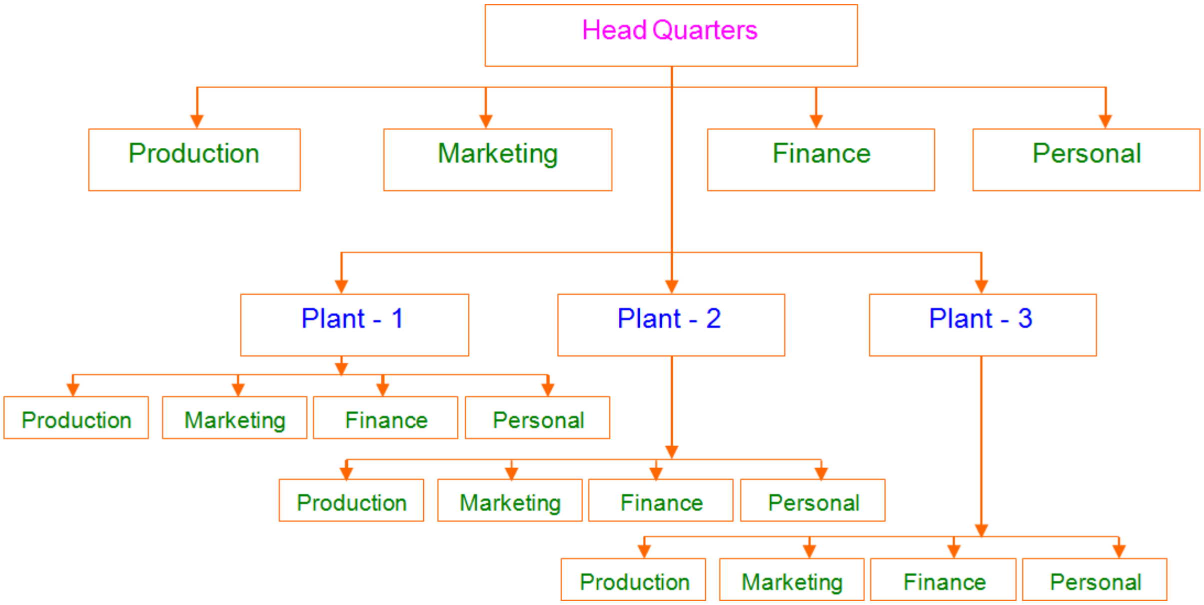
Lesswastage:Therewillbelesswastageofmaterial.
Training ground for personnel: It provides training ground to the personnel in two ways. First,since everybody is expected to concentrate on one field, one's training needs can easily beidentified.Second,thestaff withexpertknowledgeprovidesopportunitiestothelinemanagersforadoptingrationalmultidimension alapproachtowardsaproblem.

Demerits:
Chances of Misinterpretation: Although the expert advice is available, yet it reaches theworkers through line supervisors. The line officers may fail to understand the meaning ofadvice andthereisalways arisk ofmisunderstandingandmisinterpretation.
Chancesoffriction:Therearebound tobeoccasionswhenthelineandstaffmaydifferinopinionmayresen t inconflictof interestsand preventsharmoniousrelations betweenthe two.
Ineffective Staff in the absence of authority: The staff has no authority to execute their ownadvice. Their advice is not a binding on the line officers. Therefore the advice given by specialistmaybeignoredbylineheads.
Expensive:Theoverheadcostoftheproductincreasesbecauseofhighsalariedspecializedstaff.Lossof initiativebylineexecutives:Ifistheystartdependingtoomuchonstaffmayloosetheirinitiativedrivean dingenuity.

3. FUNCTIONALORGANIZATIONSTRUCTURE

Functional organization: This structure most widely used, in the medium and large organizationshavinglimited numberof products.
This was introduced by F.W.Taylor and is logical extension of the division of labour coverdepartments as well as men. In this authority is delegated to an individual or department tocontrolspecifiedprocesses,policiesorothermatterrelatingtoactivitiesundertakenbypersonsinother departments.

Inthissystemplanningisseparatedfromperformancesincethedirectionofworkisdividedby variousfunctionin thefactory.Ithasbeenfoundthatthistypeofstructurebecomesineffectivewhentheworkofdepartmentsandindividualsincreasesinvarietyandcomplexity.



Merits:

Separation ofwork: Infunctional organization, workhas been separated fromroutine work.Thespecialisthasbeengiventheauthorityandresponsibilityforsupervisionandadministrationpertainingtotheirfieldofspecializationunnecessaryoverloadingofresponsibilitiesisthusavoided.

Specialization: Specialization and skilled supervisory attention is given toworkerstheresultisincreaseinrateofproductionandimprovedqualityof work.Narrow range with high depth: The narrow range of activities enable thefunctionalexperttodeveloping in depth understanding in his particular area ofactivity

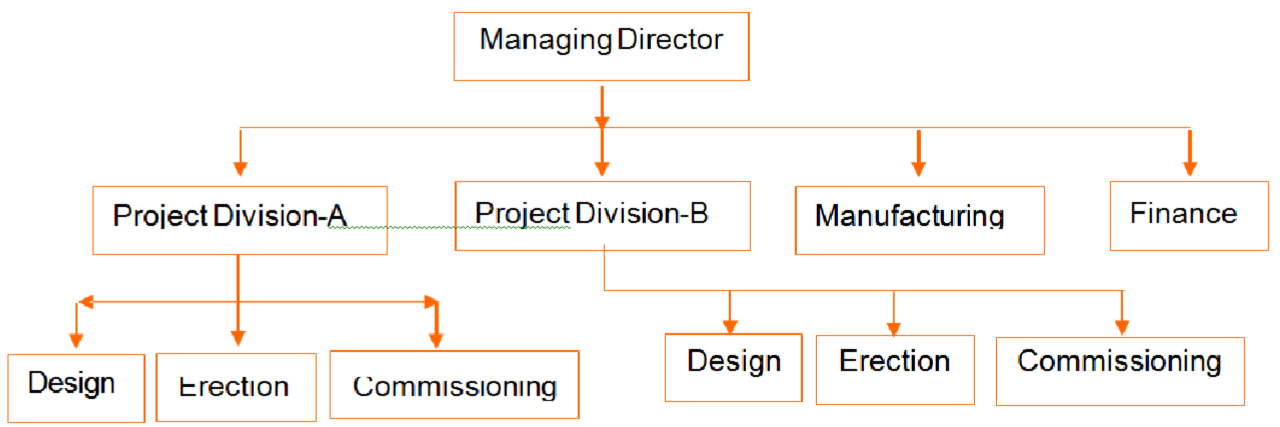
Easeinselectionand training: Functional organization is based upon expertknowledge. The availability of guidance through experts makes it possible totrain the workers properly in comparatively short span of time.Reduction in prime cost: Since for every operation expert guidance isthere,wastage ofmaterial is reduced and thus helps to reduce prime cost.Scope of growth and development ofbusiness:Thistypeoforganizationpresentsamplescope for the growth and development of business.Demerits:

Indispline: Sincetheworkersreceiveinstructionsfromnumberofspecialistitleadstoconfusion to whom they shouldfollow.Therefore,itisdifficulttomaintain disciplineShiftingofresponsibility: Itisdifficultforthetopmanagementtolocateresponsibilityfortheunsatisfactoryworkeverybodytriestoshiftresponsibilityonothersforthefaultsand

failure.
Killstheinitiativeofworkers:Asthespecializedguidanceisavailabletotheworkerstheworkers will not be using their talents and skills therefore their initiative cannot be utilized.Overlappingofauthority:Thesphereofauthoritytendstooverlapandgivesrisetofrictionbetweenthepersonsofequalrank.
Lackofco-ordinationbetweenfunctions:exceptthefunctioninwhichheisspecializedheis absolutely indifferent to other functions. Therefore, there is a lack of coordination of functionandefforts.

4.PROJECTORGANIZATION STRUCTURE

ProjectOrganization:Aprojectorganizationis aspecialcasewherecommonservicelikefinance, purchase etc.are organized at the functionallevel.Butprojectresources areallocatedtotheprojectmanager.Sincethebusinessresponsibilityrestswiththeprojectmanager,necessaryauthorityisgiventohimwiththerequisiteresources.Thistypeoforganization structure helps in making decisions for project control in terms of cost, resourceand time.Ina project organizationsome of the functions are corporateresponsibility and someofthemareprojectmanager'sresponsibility.



Merits:

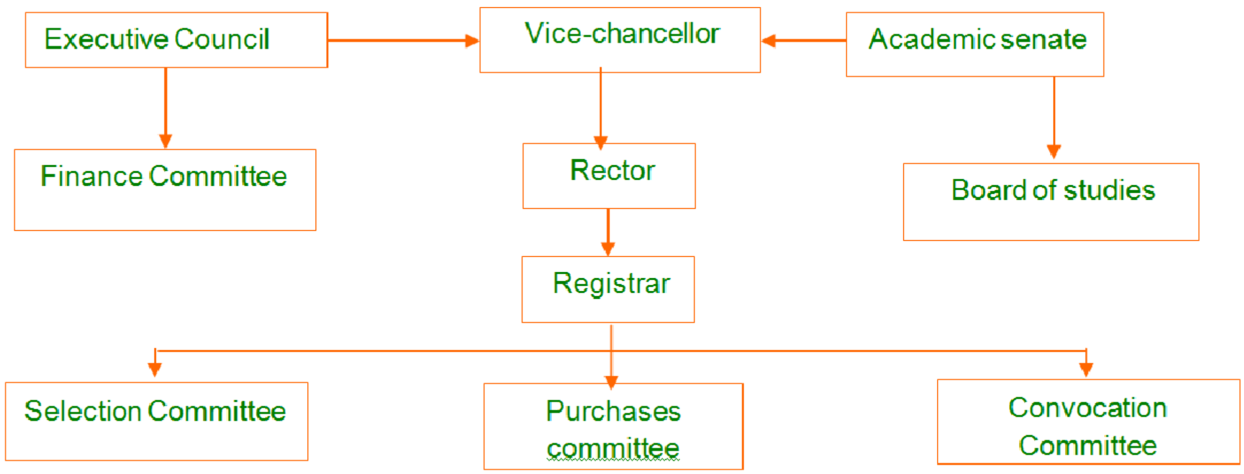
1. Thiscallsforquickdivisions
2. Organizingallfunctional
3. Propercoordinationofworkofdifferentdepartments

Demerits:

1. Ittendstoincreasetheproblemsofcontrolfortopmanagement
2. Itisspecialcaseofproductorganization
3. Theorganizationmaygetdisintegratedwithincreasingfocusondepartments

5. COMMITTEEORGANIZATIONSTRUCTURE

Committee Organization: A committee is formed when two or more persons are appointed towork as a team to arrive at a decision on the matters referred to it. It is intended to utilize theknowledge,skills,andexperiencesofalltheconcernedparties.Particularly,inlargeorganizations,problemsaretoobigtobehandledbyonesingleexpert.



Merits:

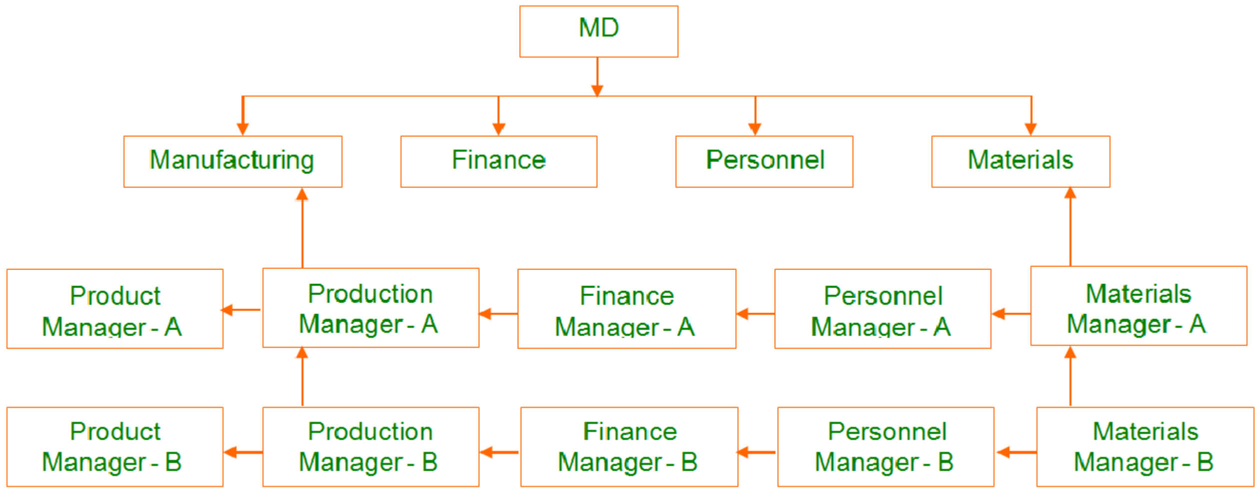
1. Itpoolsuptheorganizationalresourcesintermsofknowledgeskillsandexperiences.
2. Itrepresentsallinterestedgroupsandthus,facilitatesgroupdecision.
3. It yieldsgoodresultsifthecommitteeare headedbytaskmasterlikechairmanandtimeboundintermsofdecision-making.
4. Itminimizesthefearoftoomuchauthorityvestedinoneperson
5. Itmotivatesalltheconcernedoreffectedgroupstoparticipate.

Demerits:

1. Responsibilityofdecisionscannotbefixedon a particularperson.
2. Itcallsfor highdegreeofcoordination.
3. Itinvolvedhighcostintermsoftimeandmoney.

6.MATRIXORGANIZATIONSTRUCTURE

Matrix Organization: This is also called as project orgnisationit is acombination of all relationships in the organization in vertical, horizontal anddiagonal. It is mostly used incomplex projects. It provides a high degree ofoperational freedom, flexibility and adoptability for both the line and staff managersinperforming their respectiveroles.Themainobjective ofmatrix organization is to secure a higher degree of coordination than what is possiblefromtheconventionalorganizationalstructureasthelineandstaff.



Merits:

1. Itoffersoperationalfreedomandflexibility
2. Itseekstooptimizetheutilizationofresources
3. Itfocuses onresults
4. Itmaintainsprofessionalidentity
5. Itholdsemployeesresponsibleformanagementofresources

Demerits:

1. Itcallsforgreaterdegreeofcoordination
2. Itviolatesunityofcommandprinciple
3. Itmaybedifficulttodefineauthorityandresponsibilityprecisely
4. Employeesmayfinditfrustratingtoworkwithtwobosses

PLANTLOCATION ANDPLANTLAYOUT

PLANTLOCATION

Plant location refers to the choice of the region where men, materials, money, machinery andequipment are brought together for setting up a business or factory. A plant is a place where thecost of the product is kept to low in order to maximize gains. Identifying an ideal location is verycrucial, it should always maximize the net advantage, must minimize the unit cost of productionand distribution. Plant location decisions are very important because once the plant is located at aparticularsitethen theorganization hasto facethepros andcons of that initial decision.
While taking plant location decision organizations need to consider various factors such asavailabilityofmen,materials,money, machineryandequipment.At thesame timeplant,location decisions should also focus on expanding and developing facilities, the nearness of themarket, transport facilities, availability of fuel and power, availability of water and disposal ofwater etc. There is no exact method of analysis or assurance for the selection of an optimallocation. But an extent of analysis and study can help in maximizing the probability offindingtherightlocations.

Factorsaffectingtheplantlocation

Decisions regarding selecting a location need a balance of several factors. These are divided intoprimary factors and secondary factors; here both the factors can influence the businessin thelong run.

Primaryfactors

Availabilityofrawmaterials

Availability of raw materials is the most important factor in plant location decisions. Usually,manufacturing units where there is the conversion of raw materials intofinished goodsis themaintaskthensuchorganizationsshouldbelocatedinaplacewheretherawmaterialsavailabilityismaximumandcheap.

Nearnesstothemarket

Nearness of market for the finished goods not only reduces the transportation costs, but it canrender quick services to the customers. If the plant is located far away from the markets then thechances of spoiling and breakage become high during transport. If the industry is nearer to themarketthen it can grasp themarket shareby offering quickservices.

Availability of labor

Another most important factor which influences the plant location decisions is the availability oflabor.

The combination of the adequate number of labor with suitable skills and reasonable labor wagescan highly benefit the firm. However, labor-intensive firms should select the plantlocationwhichisnearer to thesourceofmanpower.

Transportfacilities

In order to bring the raw materials to the firm or to carrying the finished goods to the market,transport facilities are very important. Depending on the size of the finished goods or rawmaterials a suitable transportation is necessary such as roads, water, rail, and air. Here thetransportation costs highly increase the cost of production, such organizations can not completewiththerival firms.Herethe pointconsidered is transportation costsmust bekeptlow.

Availabilityoffuel andpower

Unavailability of fuel and power is the major drawback in selecting a location for firms. Fuel andpower are necessary for all most all the manufacturing units, so locating firms nearer to the coalbeds and power industries can highly reduce the wastage of efforts, money and time due to theunavailabilityof fuel andpower.

Availabilityofwater

Dependingonthenatureoftheplantfirmsshouldgiveimportancetothelocationswherewaterisavailable.

Forexample, powerplants whereusewatertoproducepowershould belocatednear thewaterbodies.

Secondary

factorsSuitabilityofc

limate

Climate is really an influencing factor for industries such as agriculture, leather, and textile, etc.For such industries extreme humid or dry conditions are not suitable for plant location. Climatecanaffect thelaborefficiency and productivity.

Governmentpolicies

Whileselectingalocationfortheplant,itisveryimportanttoknowthelocalexistedGovernment policies such as licensing policies, institutional finance, Government subsidies,Governmentbenefitsassociatedwithestablishinga unitintheurbanareasorruralareas,etc.

Availabilityoffinance

Finance is the most important factor for the smooth running of any business; it should not be faraway from the plant location. However, in the case of decisions regarding plant location, it is thesecondary important factor because financial needs can be fulfilled easily if the firm is runningsmoothly. But it should be located nearer to the areas to get the working capital and otherfinancialneeds easily.

Competitionbetweenstates

Inordertoattracttheinvestmentandlargescaleindustriesvariousstatesoffersubsidies,benefits, and sales tax exemptions to the new units. However, the incentives may not be big but itcanhelp thefirmsduring itsstartupstages.

Availabilityoffacilities

Availability of basic facilities such as schools, hospitals, housing and recreation clubs, etc canmotivate the workers to stick to the jobs. On the other hand, these facilities must be provided bythe organization, but here most of the employees give preference to work in the locations whereallthesebenefits/facilitiesareavailableoutsidealso.Sowhileselectingplantlocation,organizationsmustgivepreferencetothelocationwhereit is suitableforprovidingotherfacilitiesalso.

Disposalofwaste

Disposal of waste is a major problem particularly for industries such as chemical, sugar, andleather,etc.Sothat theselectedplant locationshouldhaveprovision forthedisposal ofwaste.

PLANTLAYOUT

MeaningandDefinitionofPlant Layout:

Plant layout is the most effective physical arrangement, either existing or in plans of industrialfacilities i.e arrangement of machines, processing equipment and service departments to achievegreatest co-ordination and efficiency of4M's (Men, Materials, Machines and Methods) in aplant.

Layout problems are fundamental to every type of organisation/enterprise and are experienced inallkinds of concerns/undertakings.

The adequacy of layout affects the efficiency of subsequent operations. It is an important pre-requisite for efficient operations and also has a great deal in common with many problems. Oncethe site of the plant has been decided, the next important problem before the management of theenterpriseis to plan suitable layout forthe plant.

Definition:

According to James Lundy, **"Layout identically involves the allocation of space and thearrangementofequipmentinsuchamannerthatoveralloperatingcostsareminimized."**

NeedofPlantLayout:

Many situations give rise to the problem of plant layout. Two plants having similar operationsmay not have identical layouts. This may be due to size of the plant, nature of the process andmanagement'scalibre.

Thenecessityofplantlayout maybefeltand theproblemmayarise when:

(i) Thearedesignchanges inthe product.

(ii) Thereisanexpansionoftheenterprise.

(iii) Thereisproposedvariation inthesizeofthedepartments.

(iv) Somenewproductistobeaddedtotheexistingline.

(v) Some new department is to be added to the enterprise and there is reallocation of the existingdepartment.

(vi) Anewplantistobesetup.

Importanceof Plant Layout:
The layout of a plant is quite important in view of the above definition but the importance of alayoutmay greatly vary from industry to industry.

The possibility of attaining the best possible layout is directly proportional to followingfactors:
(i) TheWeight,VolumeorMobility ofthe Product:
If the final product is quite heavy or difficult to handle involving costly material handlingequipment or a large amount of labour, important consideration will be to move the productminimumpossiblee.g. boiler,turbines, locomotiveindustries andship buildingcompanies etc.

(ii) ComplexityoftheFinalProduct:
If the product is made up of a very large number of components and parts i.e. large number ofpeople may be employed for handling the movement of these parts from shop to shop or frommachineto machine or oneassemblypoint to anothere.g. automobileindustry.

(iii) TheLengthoftheProcessinRelationtoHandlingTime:
Ifthematerialhandlingtimerepresentsaappreciableproportionofthetotaltimeofmanufacturing, any reduction in handling time of the product may result in great productivityimprovementofthe industrial unit e.g. Steam TurbineIndustry.

(iv) TheExtenttowhichtheProcessTendstowardsMassProduction:
Withtheuseofautomaticmachinesinindustriesforadoptingmassproductionsystemofmanufacturing the volume of production will increase. In view of high production output, largerpercentageofmanual labourwillbe engagedintransporting theoutput unlessthelayout isgood.

ObjectivesofGoodPlantLayout:
Agoodratheranoptimum layoutisonewhichprovides maximumsatisfactiontoallconcerned i.e.shareholders,managementemployeesandconsumers.

Theobjectivesof agood layoutareasfollows:
(i) Shouldprovideoverallsatisfactiontoallconcerned.

(ii) Material handling and internal transportation from one operation to the next is minimized andefficientlycontrolled.

(iii) Theproductionbottlenecksandpointsofcongestions aretobeeliminatedsothatinputrawmaterialsand semi-finishedpartsmovefastfrom oneworkstation toanother.

(iv) Shouldprovidehighworkinprocessturnover.

(v) Shouldutilizethespace mosteffectively;maybecubicalutilization.

(vi) Shouldprovideworker’sconvenience,promotejobsatisfactionandsafetyforthem.

(vii) Shouldavoidunnecessaryinvestmentofcapital.

(viii) Shouldhelpineffectiveutilizationoflabour.

(ix) Should lead to increased productivity and better quality of the product with reduced capitalcost.

(x) Shouldprovideeasysupervision.

(xi) Shouldprovidespaceforfutureexpansion of theplant.

(xii) Shouldprovideproper lightingandventilation oftheareas of workstations

FactorsAffectingPlantLayout:
Whateverbethe typeof layoutbeing contemplatedthefollowing factorsaretobe consideredbecausethesefactors havegotsignificant influenceon the designof thelayout.

(i)ManFactor:
Theman is very flexibleelementwho can bemadesuitableforall sort oflayouts.

Main considerationsareasfollows:
(i) Safetyandworkingconditions.

(ii) Man power requirements-skill level of workers, their number required and their trainingprogramme.

(iii) Manpowerutilization inthe plant.

(iv) Humanrelations.

(ii)MaterialFactor:
Itincludesthevariousinputmaterialslikerawmaterials,semi-finishedparts,andmaterials

inprocessscrap, finishedproducts, packing materials,tools and otherservices.

Themainconsiderationsare:

(i) Designandspecificationsoftheproductto bemanufactured.

(ii) Quantity and varietyofproductsandmaterials.

(iii) Physicalandchemicalcharacteristicsofvariousinputsmaterials.

(iv) Component parts or material and their sequence of operations i.e. how they go together togeneratethe finalproduct.

(iii)MachineryFactor:

The operating machinery is also one of the most important factors therefore all the informationregardingequipmentand thetoolsarenecessary forinspection,processingandmaintenanceetc.

(i) Theprocessesand methodsshouldbestandardizedfirst.

(ii) Machinery and tools selections depend upon the type of process and method, so propermachineryandothersupportingequipmentshouldbeselectedonthebasisofvolumeofproduction.

(iii) Equipment utilization depends on the variation in production, requirements and operatingbalance.

(iv) Machinesshouldbeusedtotheiroptimumlevelsofspeed,feedanddepthofcut.

(v) Machineryrequirementismostlybasedontheprocess/method.

(v)Maintenanceofmachinesandreplacement of partsisalsoimportant.

(iv) MovementFactor:

It mainly deals with the movement of men and materials. A good layout should ensure shortmoves and should always tend towards completion of product. It also includes interdepartmentalmovementsandmaterialhandlingequipment.Thisincludestheflowpatternreductionofunnecessaryhandling, spacefor movement andanalysis of handling methods.

(v) Waiting Factor:

Whenever material or men is stopped, waiting occurs which costs money. Waiting cost includeshandlingcost in waiting area, moneytied up with idlematerial etc.

Waitingmayoccur atthe receivingpoint,materialsinprocess,betweenthe operationsetc.

(vi) ServiceFactor:

It includes the activities and facilities for personnel such as fire protection, lighting, heating andventilation etc. Services for material such as quality control, production control, services formachinerysuchasrepair andmaintenanceandutilitieslikepower,fuel/gasandwatersupply etc.

(vii) BuildingFactor:

It includes outside and inside building features, shape of building, type of building (single ormulti-storey)etc.

(viii) Flexibility Factor:

This includes consideration due to changes in material, machinery, process, man, supportingactivities and installation limitations etc. It means easy changing to new arrangements or itincludesflexibility and expendability of layouts.

Typesof Plant Layout:

Productionresultsfrommen,materialsandmachinerytogetherwithmanagement.Thecharacteristics are changed. To manufacture a product layout begins with which element orelementsmentioned abovemove.

Keeping in view the type of industry and volume of production, the type of layout to beselectedis to bedecided fromthe following:

1. ProductorLineLayout.

2. ProcessorFunctionalLayout.

3. FixedPositionLayout.

4. CombinationtypeofLayout.

1. ProductorLineLayout:

Ifalltheprocessingequipmentandmachinesarearrangedaccordingtothesequenceofoperations ofa product, the layout is called product type oflayout. In this type of layout, onlyone product or one type of products is produced in an operating area. This product must bestandardizedandproducedinlargequantitiesinorderto justifytheproductlayout.

The raw material is supplied at one end of the line and goes from one operation to the next quiterapidly with a minimum work in process, storage and material handling. Fig. 3.3 shows productlayoutfor two types ofproducts A and B.

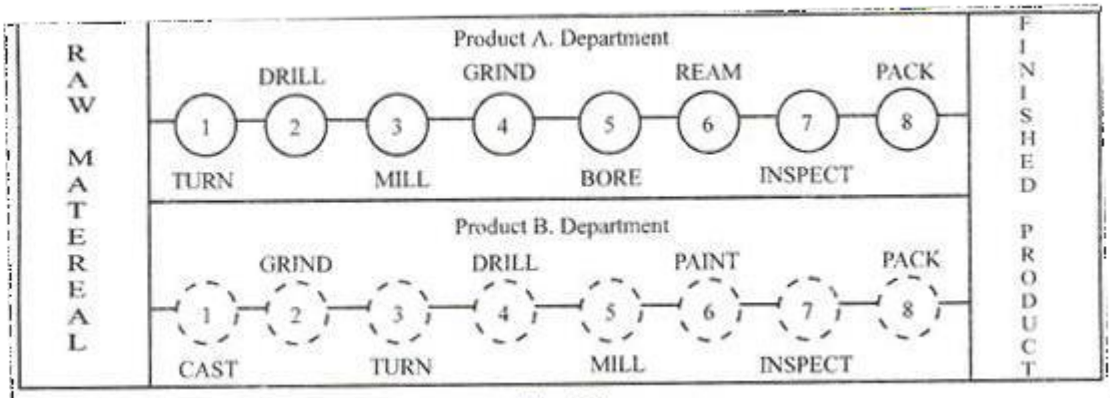


Fig. 3.3

AdvantagesofferedbyProductLayout:

(i) Lowerstotalmaterial handlingcost.

(ii) Thereislessworkinprocess.

(iii) Betterutilizationofmenandmachines.

(iv) Lessfloorareaisoccupiedbymaterialintransitandfortemporarystorages.

(v) Greatersimplicityofproductioncontrol.

(v)Totalproductiontimeisalsominimized.

Limitationsof ProductLayout:

(i) Noflexibilitywhichisgenerallyrequiredisobtainedinthislayout.

(ii) Themanufacturingcostincreaseswith afallinvolumeofproduction.

(iii) Ifoneortwolinesarerunninglight,thereisaconsiderablemachineidleness.

(iv) Asinglemachinebreakdownmayshutdownthewholeproductionline,

(v) Specializedandstrictsupervision isessential.

2. ProcessorFunctionalLayout:

The process layout is particularly useful where low volume of production is needed. If theproducts are not standardized, the process layout is more desirable, because it has greater processflexibility than other. In this type of layout the machines are not arranged according to thesequenceof operations butarearranged according to thenatureortypeof theoperations.

This layout is commonly suitable for non-repetitive jobs. Same type of operation facilities aregrouped together such as lathes will be placed at one place all the drill machines are at anotherplace and so on. See Fig. 3.4 for process layout. Therefore, the process carried out in any area isaccordingto themachineavailable in that area.

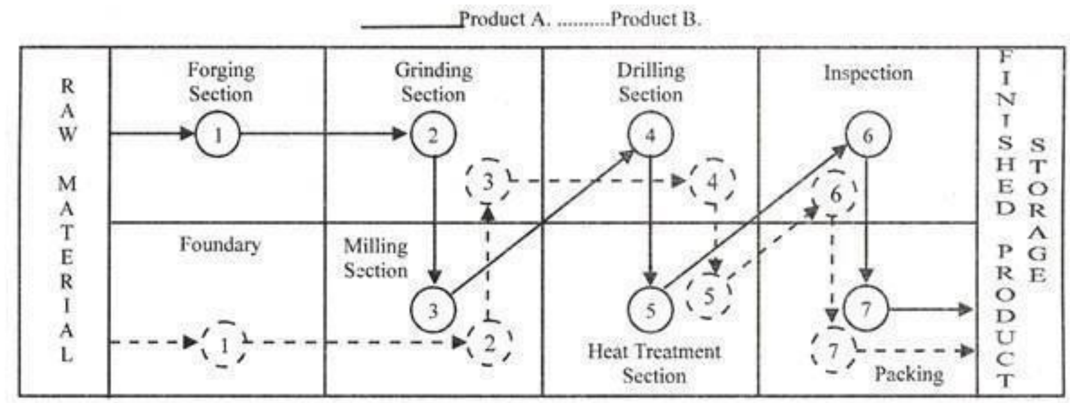


Fig. 3.4

AdvantagesofProcessLayout:

(i) Therewillbelessduplicationofmachines.Thustotalinvestmentinequipmentpurchasewillbereduced.

(ii) Itoffersbetterandmoreefficientsupervisionthroughspecializationatvariouslevels.

(iii) Thereisagreaterflexibilityinequipmentandmanpowerthusloaddistributioniseasilycontrolled.

(iv) Betterutilizationofequipmentavailableispossible.

(v) Breakdownofequipmentcanbeeasilyhandledby transferringworktoanothermachine/workstation.

(vi) Therewill bebettercontrolofcomplicatedorprecisionprocesses,especiallywheremuchinspectionisrequired.

LimitationsofProcessLayout:

(i) Therearelongmaterialflowlinesandhencetheexpensivehandlingisrequired.

(ii) Totalproductioncycle timeismoreowingtolongdistancesandwaiting atvariouspoints.

(iii) Sincemoreworkisinqueueandwaitingforfurtheroperationhencebottlenecksoccur.

(iv) Generallymorefloorareais required.

(v) Sinceworkdoesnotflowthroughdefinitelines,countingandschedulingismoretedious.

(v)Specializationcreates monotonyandtherewill bedifficultyforthelaid workerstofindjobinotherindustries.

3. FixedPositionLayout:

This type of layout is the least important for today's manufacturing industries. In this type oflayout the major component remain in a fixed location, other materials, parts, tools, machinery,manpowerand othersupporting equipment arebrought to this location.

The major component or body of the product remains in a fixed position because it is too heavyortoobigandassuchitiseconomicalandconvenienttobringthenecessarytoolsandequipment'sto workplacealong-withthemanpower.Thistypeoflayoutis usedinthemanufactureof boilers, hydraulicand steamturbines and shipsetc.

AdvantagesOfferedbyFixed PositionLayout:

(i) Materialmovementisreduced

(ii) Capitalinvestmentisminimized

(iii) Thetask isusually donebygang ofoperators, hencecontinuityofoperationsisensured

(iv) Productioncentresareindependentof eachother. Henceeffectiveplanning andloadingcanbemade. Thus total productioncost willbereducedand

(v) Itoffersgreaterflexibilityandallowschangeinproductdesign,productmixandproductionvolume .

LimitationsofFixed Position Layout:

(i) Highlyskilledmanpowerisrequired.

(ii) Movementofmachines equipment'stoproductioncentremaybetimeconsuming.

(iii) Complicated fixtures may be required for positioning of jobs and tools. This may increasethecost ofproduction.

4. CombinationTypeofLayout:

Now days in pure state any one form of layouts discussed above is rarely found. Thereforegenerally the layouts used in industries are the compromise of the above mentioned layouts.Every layout has got certain advantages and limitations therefore, industries would not liketouseany type oflayoutassuch.

Flexibility is a very important factor, so layout should be such which can be moulded accordingto the requirements of industry, without much investment. If the good features of all types oflayouts are connected, a compromise solution can be obtained which will be more economicalandflexible.

PrinciplesofPlant Layout:

AccordingtoMuthertherearesixbasicprinciplesof"bestlayout".

Theseare:

(i) PrincipleofOverall Integration:

According to this principle the best layout is one which provides integration of productionfacilities like men, machinery, raw materials, supporting activities and any other such factorswhichresult in thebest compromise.

(ii) PrincipleofMinimumDistance:

Accordingtothis principlethemovements ofmenandmaterialsshould be minimized.

(iii) PrincipleofFlow:

According to Muther, the best layout is one which arranges the work station for each operationprocessin same orderorsequencethatforms treats or assemblesthe materials.

(iv) PrincipleofCubicSpaceUtilization:

According to this, the best layout utilizes cubic space i.e. space available both in vertical andhorizontaldirections is most economicallyand effectively utilized.

(v) PrincipleofSatisfactionandSafety:

According to this principle best layoutis one which provides satisfaction and safety to allworkersconcerned.

(vi) PrincipleofFlexibility:

In automotive and other allied industries where models of products change after sometime theprincipleofflexibilityprovidesadoptionandrearrangementataminimumcostandleastinconvenience.

Advantagesof a Good Plant Layout:

TheadvantagesexpressedbyMallickandGandeauareasfollows:Tothe Worker:

(i) Reducestheeffortoftheworker.

(ii) Reducesthe numberofhandlings.

(iii) Extendstheprocessofspecialization.

(iv) Permitsworkingatoptimum conditionsbyeliminatingcongestions.

(v) Producesbetterworkingconditionsbyeliminatingcongestions.

(vi) Reducesthenumberofaccidents.

(vii) Providesbetteremployeeservicefacilities/conditions.

(viii) Providesbasisforhigherearningforemployees.

InLabourCost:
(i) Increasestheoutputperman-hour.

(ii) Reducessetuptimeinvolved.

(iii) Reducesthenumberofoperationsorsomeoperationsmaybecombined.

(iv) Reducesthenumber ofhandlers.Thus reducinglabourcost.

(v) Reducesthelength ofhauls.

(vi) Reduceslostmotionsbetweenoperations.

(vii) Convertsoperatorinto a producerinstead ofahandlerbyeliminatingthe variousunnecessarymovements.

InOtherManufacturingCosts:
(i) Reducesthecostofexpensivesupplies.

(ii) Decreasesmaintenancecosts.

(iii) Decreasestoolreplacement costs.

(iv) Effects asavinginpowerloads.

(v) Decreasesspoilageandscrap.Thuswasteisminimized

(v)Eliminates some ofthewaste in raw material consumption.

(vii) Improvesthequalityoftheproductbydecreasing handling.

(viii) Providesbettercostcontrol.

IntheManufacturingCycle:
(i) Shortensthemovesbetweenwork-stations.

(ii) Reducesthemanufacturingcycleineachdepartment.

(iii) Reducesthelengthofthetravelbytheproductforcompletion.

(iv) Reducestheoveralltimeofmanufacturingtheproduct.

InProductionControl:
(i) Facilitatesreceipts, shipmentsand delivery ofinputs andfinishedgoods.

(ii) Providesadequate andconvenientstoragefacilities.

(iii) Permitsthemaximumpossibleoutputwithsameinput.

(iv) Pacesproduction&determinesproductionflow.

(v) Makesproductiontimepredictable.

(vi) Makesschedulinganddispatchingautomatic.

(vii) Setsupproductioncentre&permitsstraightlinelayoutbyproductsformassproduction.

(viii) Permitslayout byprocess forjob ordermanufacturing.

(ix) Movesworkinprocessbymostdirectlines.

(x) Reducesthenumberoflostormishandledpartsleadingtowasteminimization.

(xi) Reducesthepaperwork forproductioncontrol& reducesthenumber ofstockchasers.Thusreducesproduction controlexpenses.

InSupervision:

(i) Tendstoeasetheburdenofsupervision.

(ii) Determinesthesupervisorycontrol.

(iii) Reducesthecostofsupervisionprocess.

(iv) Reducescostof piececounts.

(v) Decreasesthe amountof inspectioninvolved.

InCapitalInvestment:

(i) Holdspermanentinvestmentatitsminimumlevel.

(ii) Keepstheplantfrombecomingobsoletebeforeitiswornout.

(iii) Reducestheinvestment inmachineryandequipmentby

(a) Increasingtheproductionpermachine.

(b) Utilizingidlemachinetime.

(c) Reducingthenumberof operationspermachine.

(iv) Maintainsaproperbalanceofdepartments.

(v) Eliminateswastedaisle space.

(vi) Reducesthecapitalinvestmentbyproperspaceutilizationofmaterialhandlingequipmentrequired.

(vii) Reducestheinventorylevelofworkinprocessandoffinishedproduct.

METHODSOFPRODUCTION

JOBPRODUCTION

Job Productionis used when a product is produced with the labor of one or few workers and israrelyusedforbulkandlargescaleproduction.Itismainlyusedforone-offproductsorprototypes (hence also known as Prototype Production), as it is inefficient; however, quality isgreatly enhanced with job production compared to other methods. Individual wedding cakes andmade-to-measure suits are examples of job production. New small firms often use job productionbefore they get a chance or have the means to expand. Job Production is highly motivating forworkers because it gives the workers an opportunity to produce the whole product and take pridein it.

BATCHRPDUCTION

Batch production is the method used to produce or process any product in groups or batcheswhere the products in the batch go through the whole production process together. An examplewould be when a bakery produces each different type of bread separately andeach product(inthis case, bread) is not produced continuously. Batch production is used in many different waysand is most suited to when there is a need for a quality/quantity balance. This technique isprobably the most commonly used method for organizing manufacture and promotes specialistlabor, as very often batch production involves a small number of persons. Batch productionoccurs when many similar items are produced together. Each batch goes through one stage of theproductionbeforemoving onto nextstage.

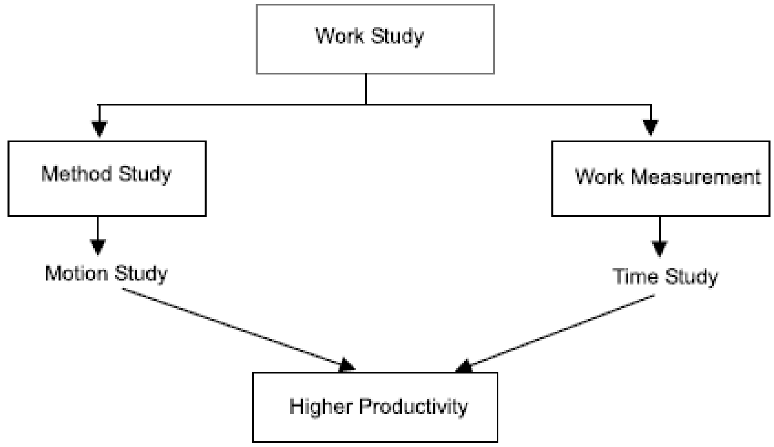
MASSPRODUCTION

Mass production is the manufacture of large quantities of standardized products, frequentlyusing assembly line or automation technology. **Mass production** refers to the **production** of alargenumberof similarproducts efficiently.

WORKSTUDY

"**Work study** is a generic term for those techniques, method study and work measurement whichareused intheexaminationofhuman workin allits contexts.And whichlead systematically to the investigation of all the factors which affect the efficiency and economy of the situation beingreviewed,in order to effect improvement."

Frameworkofworkstudy



AdvantagesofWorkStudy

Followingaretheadvantagesof workstudy:

1. Ithelpstoachievethesmoothproduction flowwithminimuminterruptions.
2. Ithelpsto reducethecost of theproduct by eliminating waste and unnecessaryoperations.
3. Betterworker-managementrelations.
4. Meetsthedeliverycommitment.
5. Reductioninrejectionsandscrapandhigherutilizationofresourcesoftheorganization.
6. Helpstoachievebetterworkingconditions.
7. Betterworkplacelayout.
8. Improvesupontheexistingprocessormethods andhelpsinstandardizationandsimplification.
9. Helpstoestablishthestandardtimeforanoperationorjobwhichhasgotapplicationinmanpow erplanning, productionplanning.

TypesofWorkStudy:

1. Method Study:

AccordingtoILO,methodstudyis**"thesystematicrecording,analysisandcriticalexaminationofexi stingandproposedwaysofdoingworkandthedevelopmentandapplication of easier and more effective method".** In short, it is a systematic procedure toanalysethework to eliminate unnecessary operations.

Objectives:

Theobjectivesofmethodstudyare:

(i) Itimprovestheproperutilisationofmanpower,machineandmaterials;

(ii) Italsoimprovesthefactorylayout,workplace,etc.;

(iii) Italsoimprovestheprocessandprocedure;

(iv) Itdevelopsbetterphysicalworkingenvironment;

(v) Itreducesundesirablefatigue.

Steps:

Thestepsofmethodstudyare:

(i) Atfirstselecttheproperworkwhicharetobestudied;

(ii) Recordallthefactsofexisting method;

(iii) Examinethefacts verycritically;

(iv) Developthemostpractical,economic,and effectivemethod;

(v) Installthemethod andthesameshouldbemaintained.

2. TimeAnd MotionStudy:

According to ILO, Time Study means **"a technique for determining as accurately as possiblefrom a limited number of observations the time necessary to carry out a given activity at adifferent standard of performance".** In other words, "time study is the art of observing andrecording time required to do each detailed element of an individual operation." Practically, itstudiesthe time taken on eachelement of ajob.

Motionstudy,ontheotherhand,is thestudyofthebodymotionusedinperforminganoperation, with the thought of improving the operation by eliminating unnecessary motion andsimplifying necessary motion and thus establishing the most favourable motion sequence formaximumefficiency.

So, in short, 'Time Study' means the determination of standard time that is taken by a worker ofaverage ability under normal working conditions for performing a job. But 'Motion Study'determines the correct method of doing a jobtoavoid wasteful movements, for which theworkers areunnecessarilytired.

Steps:

1. TimeandMotionstudieseliminatewastefulmovements;

2. Theyexaminetheproposedmethodcriticallyand determinethe mosteffectiveone;

3. Theydetermine foreachelementhavingastop-watch;

4. Theyrecord allthe parts ofa job which aredoneby theexistingmethod;

5. Theyinstallthemethodasstandardone;

6. Theycritically observetheworkerswho areengaged withthework;

7. Theyassesstheproperspeedoftheoperator who isworking.

STATISTICALQUALITYCONTROLTHROUGHCONTROLCHARTS

Statistical Quality Control (SQC) is the term used to describe the set of statisticaltools used by quality professionals. SQC is used to analyze the quality problemsand solve them.
Statisticalqualitycontrolreferstotheuseofstatisticalmethodsinthemonitoringand maintainingof the qualityofproductsand services.
AllthetoolsofSQCarehelpfulinevaluatingthequalityofservices.SQCusesdifferenttoolsto analyzequalityproblem.

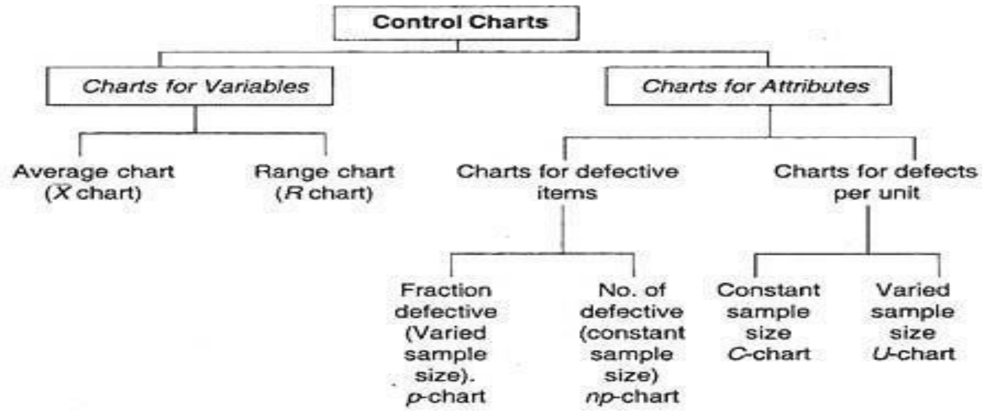
1) DescriptiveStatistics
2) StatisticalProcessControl(SPC)
3) AcceptanceSampling

DescriptiveStatisticsinvolvesdescribingqualitycharacteristicsandrelationships.SPC involvesinspectrandomsampleofoutput fromprocessforcharacteristic.
AcceptanceSamplinginvolvebatchsamplingbyinspection.
Improsys'sstrategicapproachtoproblemsmakeusunderstandtherootcausesofproblems and helps our customer to come up with a long lasting and effectivesolution.
Withourexpertiseinunderstandingthebusinessanditsallaspectsweprovidesolutions that will satisfy our customers deeply. Improsys has successfullyimplementedthequality controlsolutions in variousorganizations.

ObjectiveofStatisticalQualityControl

Quality Control is very important for a every company. Quality control includes service qualitygiven to customer, company management leadership, commitment of management, continuousimprovement, fast response, actions based on facts, employee participation and a quality drivenculture.
The main objectives of the quality control module are to control of material reception, internalrejections, clients, claims, providers and evaluations of the same corrective actions are related totheirfollow-up.Thesesystemsandmethodsguideallqualityactivities.Thedevelopmentanduse of performance indicators is linked, directly or indirectly, to customer requirements andsatisfaction,and tomanagement.

TYPESOFQUALITYCONTROLCHARTS



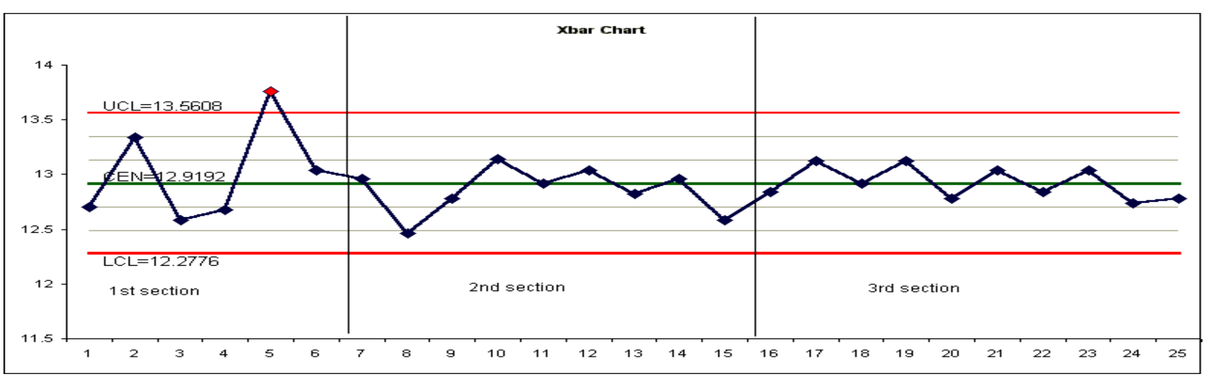
XBARCHART

In industrial statistics, the **X-bar chart** is a type of Shewhartcontrol chart that is used to monitorthe arithmetic means of successive samples of constant size, n. This type of control chart is usedfor characteristics that can be measured on a continuous scale, such as weight, temperature,thickness etc. For example, one might take a sample of 5 shafts from production every hour,measure the diameter of each, and then plot, for each sample, the average of the five diametervalues onthechart.

For the purposes of control limit calculation, the sample means are assumed to be normallydistributed,an assumption justified by the Central Limit Theorem.

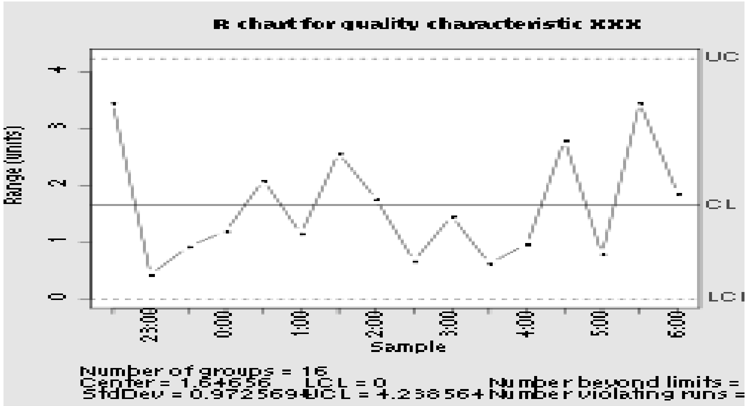
TheX-bar chart is alwaysused in conjunction withavariation chart suchas the and R

chartor and schart.The R-chart shows sample ranges (difference between thelargest andthe smallest values in the sample), while the s-chart shows the samples'standard deviation. TheR-chart was preferred in times when calculations were performed manually, as the range is fareasier to calculate than the standard deviation; with the advent of computers, ease of calculationceased to be an issue, and the s-chart is preferred these days, as it is statistically more meaningfuland efficient. Depending on the type of variation chart used, the average sample range or theaveragesamplestandarddeviationisused toderive theX-barchart's controllimits.



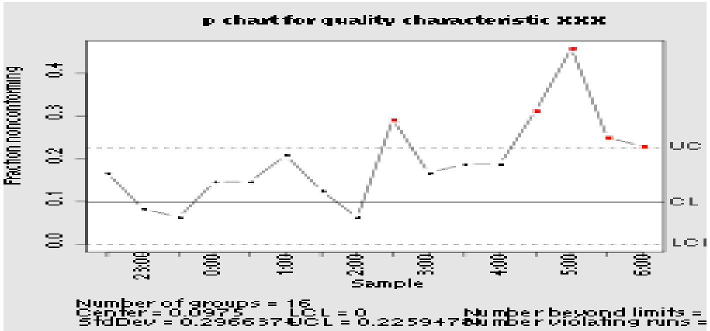
RCHART

An X-bar and **R** (range) **chart** is a pair of control **charts** used with processes that have asubgroup size of two or more. The standard **chart** for variables data, X-bar and **R** **charts**helpdetermineif aprocess isstableandpredictable.



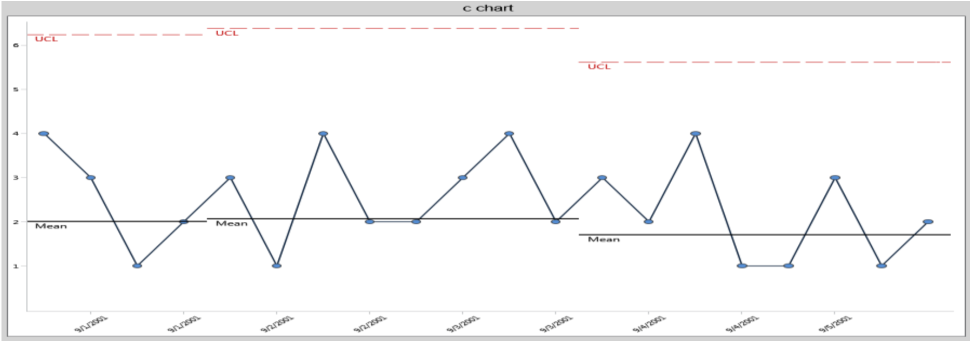
PCHART

In statistical quality control, the **p-chart** is a type of control**chart**used to monitor the proportionof nonconforming units in a sample, where the sample proportion nonconforming is defined astheratio of thenumberof nonconforming units tothesamplesize, n.



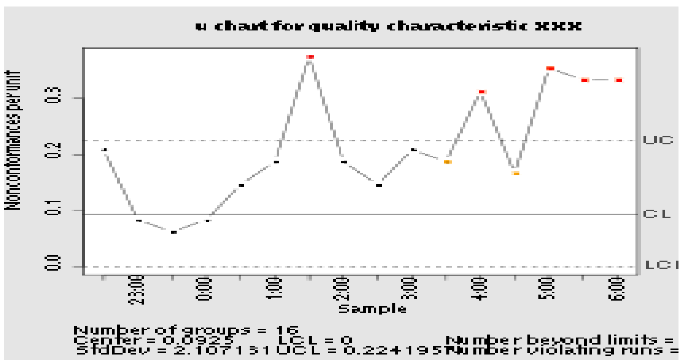
CCHART

A **c-chart** is an attributes **control chart** used with data collected in subgroups that are the samesize. **C-charts** show how the process, measured by the number of nonconformities per item orgroupofitems, changesover time.Nonconformities aredefects oroccurrences foundin the sampled subgroup.



UCHART

A **u-chart** is an attributes control **chart** used with datacollectedinsubgroupsof varyingsizes. **U-charts** show how the process, measured by the number of nonconformities per item orgroup of items, changes over time. Nonconformities are defects or occurrences found in thesampledsubgroup.



<u>**OBJECTIVESOF INVENTORYMANAGEMENT**</u>

<u>**Inventory**</u>**:**Itdefinedasacomprehensivelistofmovableitemswhicharerequired for manufacturing the products and to maintain the plant facilities inworkingconditions.

InventoryManagement

A manufacturing company requires many types of material to produce any goods or service. If acompany does not get the required material as needed than the production system gets disturbedandfailstoproduceandsalerequiredquantityofproductsontime.Theoverstockofinventoryis unsuitable due to the large amount of investment on it as well as other cost associated with it.On the other hand, the lower stock inventory might create the problem of shortage resulting innthe disturbance on production. Therefore, inventory management includes the requirement ofdifferent types of inventory, period of stock and cost associate on it. Inventory is the stock thatfirm maintains to meet its future requirement for production and selling. The basis reason forholding inventory is to keep up the production activities unhampered. Inventories are a part ofcurrentassets,whichareusedwithinoneyear.

Inanormalcoursesofbusinessoperationmanufacturingorganizationsmaintainstheinventoryofrawmaterials,work-in-progress, finished goods, spare parts, suppliers etc. in case of manufacturing concern, inventories link theproductionand sales. Tading organizations areunsold goodsi.e. finished goods.

Hence,inventoriesmaybedefinedasthecombinationofrawmaterials,work-in-progress,finished goods and other suppliers required for the smooth operation and sales of an sales of anorganization. Managing the stock at lowest cost without compromising on the production andsalesactivities is called inventory management.

OBJECTIVESOF INVENTROYMANAGEMENT

1. To supply the required materials continuously: there should be a continuous available ofmaterials in the factory or finished goods for trade. The main objective of inventory managementintomaintainrequiredinventorysothatproduction andsalesprocessrunsmoothly.

2. To minimize the risk of under and over stocking of material: if a company keeps inventorywithout proper analysis, there will be a chance of overstocking, which will increase the cost ofcarryingtheinventoryorunderstockingofinventorythatcreateprobleminsmoothoperationofa business. So one of the main objectives of the inventory management is to minimize the riskcaused due to under and over stocking of inventory.

3. Tomaintainsystematicrecordofinventory:managementneedsdifferentinformationregarding inventory for planning and decision-making. A systematic recodes of inventory helpsprovides such information to the management. It also assists to evaluate the current inventorymanagement policy.

4. To reduce losses, damages and misappropriation of materials:inventory managementaims to reduce or remove the losses and misappropriate of materials. This is done by maintainingtheproperstocks of materialswith utmostcare.

5. To minimize the cost associated with inventory: the proper maintenance of the informationregarding inventory helps to make decisions like whether to take discounts or not, the size oforder to be placed, when to order etc. the total cost associated with inventory may be minimizedbyanalyzingthelotsizetobeacquired,theofferofdiscountonvariablelotsizeandthetimingof order. Suchanalysishelpstoreducethe unnecessary inventoryininventories.

6. To make stability in price: an effective inventory management system minimizes the effectsofregularpricefluctuation.Thisisturnhelps togainthe stabilityissellingprice.

NEEDFORINVENTORYCONTROL

Inventory Control: The systematic location, storage and recording of goods insuchawaythedesireddegreeofservicecanbemadetotheoperatingshopsatminimum ultimatecost.

ObjectivesofInventory Control:

1. To support the production departments with materials of the right quality in the rightquantity,attherighttimeand therightprice, andfromtherightsupplier
2. To minimize investments in the materials by ensuring economies ofstorageand orderingcosts

3. Toavoidaccumulationofworkinprocess

4. Toensureeconomyofcosts byprocessingeconomicorderquantities

5. Tomaintainadequateinventoriesattherequiredsalesoutletstomeetthemarketneedspromptly,thusavoidingbothexcessivestocksorshortagesatany giventime

6. Tocontributedirectlytotheoverallprofitabilityoftheenterprise

Functionsofinventorycontrol:

* Todeveloppolicies,plansandstandardsessentialtoachievetheobjectivesTobuildupalogicalandworkableplan oforganizationfordoingthejobsatisfactory
* Todevelopprocedureand methodsthatwillproducethedesiredresultseconomically
* Toprovidethenecessaryphysicalfacilities
* Tomaintainoverallcontrolbycheckingresultsandtakingcorrectiveactions.

ECONOMICORDERQUANTITY(EOQ)

Economic Order Quantity (EOQ): Economic order quantity is defined that quantity of materials,which can be ordered at one time to minimize the cost of ordering and carrying the stocks. Inotherwords, it refers to sizeof each order that keeps thetotal cost low.

DetermineEOQ:

Step1:

TotalOrdering costper year= No. oforders placedper year xordering costperOrder

=(A/S) x O

A=Annual demand

S=Sizeofeachorder(unitsperorder)O=

Orderingcostperorder

Step2:

Total Carrying cost per year = Average inventory level x Carrying cost peryear=(S/2)xC

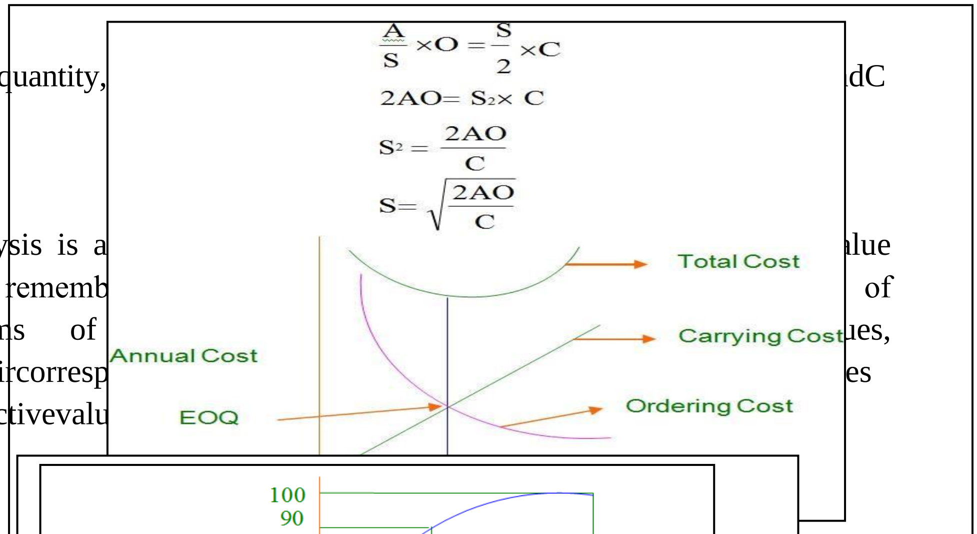
A=Annual demand

S=Sizeofeachorder(unitsperorder)C=

Carryingcostperunit

Step3:

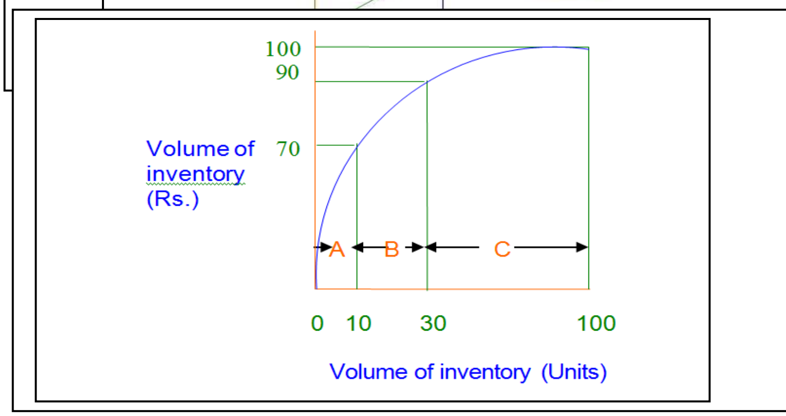
EOQis onewherethe totalordering isequal to totalcarrying cost



WhereSistheEconomicorderquantity, dC
isthecarryingcostperunit

ABCANALYSIS

ABC Analysis: ABC analysis is a lue andquantities. It ismore rememb of inventory.Here all items of ues, showingquantityheldandtheircorresp es A,BandCbasedontheirrespectivevalu



A - Refers to high alueitem
vB - Refers to medium value item
C-Refersto lowvalue item

Acategorycomprisesofinventory,whichisverycostlyandvaluable.Normally 70% of the funds are tied up in such costly stocks, which would bearound 10% of the total volume of stocks.Becausethestocks in thiscategoryareverycostly,theserequirestrictmonitoringonaday-to-daybasis.
Bcategorycomprisesofinventory,whichisless costly.Twentypercent of

the funds are tied up in such stocks and these accounts for over 20% of thevolume of stocks. These items require monitoring on a weekly or fortnightlybasis.

C category consists of such stocks, which are of least cost. Volume-wise, they form 70% of thetotal stocks but value-wise, they do not cost morethan 10% of the investment in the stocks.Thiscategoryofstocks canbemonitoredonamonthlyorbi-monthlybasis.

Thefollowingtablesummarizesthe conceptof ABCanalysis;

Category	Value (%)	Volume (%)	Desired Degree of Control
A	70	10	STRICT
B	20	20	MODERATE
C	10	70	LOW

MARKETING

MANAGEMENT2.9.MEANING

OFMARKETING

Marketing: Marketingas a social process by which individuals and groups obtain what theyneed and want through creating,offeringexchanging products and services of value withothers.

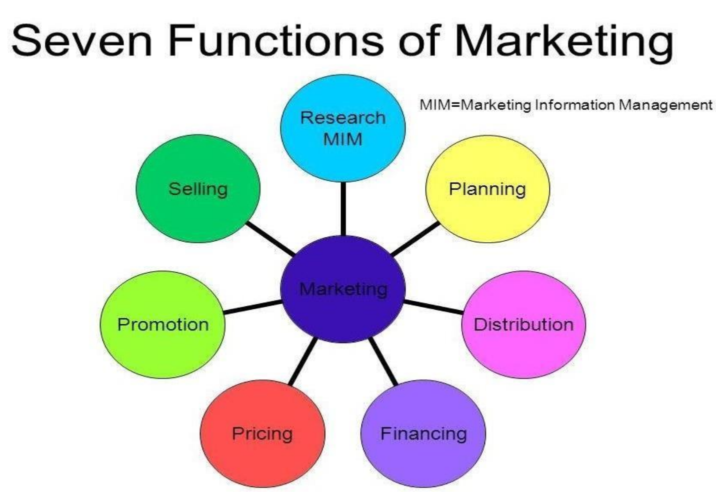
NATUREOFMARKETING MANAGEMENT

TheNatureof Marketing(or Modernmarketing)maybestudied underthe followingpoints:

1. **Human activity:**Originally, the term marketing is a human activity under which human needsaresatisfied by humanefforts.It'sahumanactionforhumansatisfaction.
2. **Consumer-oriented:**A business exist to satisfy human needs, hence business must find outwhat the desire of customer (or consumer) and thereby produce goods & services as per theneeds of the customer. Thus, only those goods should be produce that satisfy consumer needsandat a reasonableprofittothemanufacturer (orproducer).
3. **Art as well as science**: In the technological arena, marketing is the art and science of choosingtargetmarketsandsatisfyingcustomersthroughcreating,delivering,andcommunicatingsup erior customer value. It is a technique of making the goods available at right time, rightplace,into right hands, rightquality,inthe right formand at rightprice.
4. **Exchange Process:**All marketing activities revolve around commercial exchange process. Theexchange process implies transactions between buyer and seller. It also involves exchange oftechnology,exchangeofinformation and exchangeofideas.

5. **Starts and ends with customers:**Marketing is consumer oriented and it is crucial toknowwhat the actual demand of consumer is. This is possible only when required information relatedto the goods and services is collected from the customer. Thus, it isthe starting of marketingand the marketing end as soon as those goods and services reach into the safe hands of thecustomer.
6. **CreationofUtilities:**Marketingcreatesfourcomponentsofutilitiesviz.time,place,possession and form. The form utility refers to the product or service a company offers to theircustomers. The place utility refers to the availability of a product or service in a location i.e.Easier for customers. By time utility, a company can ensure that products and services areavailable when customers need them. The possession utility gives customers ownership of aproductor serviceandenablesthemtoderivebenefits intheirownbusiness.
7. **Goal oriented:**Marketing seeks to achieve benefits for both buyers and sellers by satisfyinghuman needs. The ultimate goal of marketingis togenerate profits through the satisfaction ofthecustomer.
8. **Guiding element of business:**Modern Marketing is the heart of industrial activity that tellswhat,when,how toproduce.Itiscapableofguidingandcontrollingbusiness.
9. **System of Interacting Business Activities:**Marketing is the system through which a businessenterprise, institution or organization interacts with the customers with the objective to earnprofit, satisfy customers and manage relationship. It is the performance ofbusiness activitiesthatdirect theflowofgoods and servicesfrom producerto consumeroruser.
10. **Marketing is a dynamic processe.** series of interrelated functions: Marketing is a complex,continuousandinterrelatedprocess.Itinvolvescontinuousplanning,implementationandco ntrol.

FUNCTIONSOFMARKETINGMANAGEMENT



Buying: Buyinginvolvesboththemarketingandthecustomers.Themarketingmanager mustknowabut thetypeofcustomers, theirconsuming habits demandsand buying pattern

Selling: Itcreatesademandfor aproductsellingfunctioninvolves.

1. Productplanninganddevelopment
2. Findingout or locatingbuyers
3. Demandcreationthroughsalesmanship,advertisingandsalespromotion
4. Negotiation of terms of sales such as price, quantity and quality -

etc.**Transporting**: It involves thecreation ofplace utility.Inorder tohavevaluegoods must first be transported from the place they are produced to the placewheretheyareneeded.

Storage: It concerned with storingfinishedproductsproperlywithoutanydamage, untilthey are dispatched to the customers it is also concerned to thecustomersitisalsoconcernedwith maintaining stock of raw materials withmaintaining stock of raw materials, components etc. tomeet productionschedules.

Standardization and grouping: These two functions are supplementary and complementaryto each other. A standard is a measure of fixed value. The standard could be based on colour,weight, quality, and number of items, price, or anyotherparameter.Both domestic andexport markets rely extensively on this function. Gradingisthe process of sortingthe goods.The price varies with the grade of the goods. This function enables the marketer to fix a uniformprice for a given grade of the goods. It further promotes good understanding between the buyerandtheseller.

Finance: Finance is the life blood of business value of goods is expressed is money and itdonated by price to be paid by buyer to seller credit is necessary in marketing it plays allimportantrole in retail tradeparticularlyin thesales of costlyconsumer goods.

Marketing research: Themarketing personnelmust study the trends inmarketdemand,supplypricesandrelatedmarketinformation.Theknowledgeaboutthelatestmarketinformation may help the firm to reduce risk loss in purchasing, in pricing, in forecasting marketdemandandinfacingcompetitioninthemarket.

MARKETINGMIX

MarketingMix: Itreferstothecombinationoffourbasicelements,viz.,product,price,promotionand the place,known asthe four P'sofmarketing.

Product Mix: It is used to describe the assortment of different product types (product lines)andtheirvarieties(productdepth).Inaddition,differenttangibleandintangiblefeaturesoftheproductalsoformtheproductmix.

PriceMix: Pricemix referstothe decisions relatingtothe pricechargedfortheproduct,serviceoridea.

PromotionMix: Referstotheactivitiesrelatingtopromotionoftheproduct,serviceoridea.

PlaceMix:

Placeorphysicaldistributionmixreferstotheactivitiesthatareinvolvedintransferringownershiptoconsumersattherighttimeandprice.

CHANNELSOF DISTRIBUTION

Type of Channels of Distribution: Channels of distribution refer to the waysandmeansofreachingthecustomerthroughtheintermediariessuchaswholesalers,retailers,andotheragencies,ifany.

LEVEL–1 Manufacturer-consumer:

This isadirectmarketing channel wherethe manufacturer contactsthecustomerdirectlywithoutinvolving middlemen orintermediaries. Themanufacturersofindustrial goods suchasaeroplanes,turbo-engines,ships,andotherhigh-valuecapitalgoodsmostlyfollowthisroute.However, consumer product manufacturers also through Internet, mail order operations, anddoor-to-doorsellingarefollowingthismethod.Itiscommonsighttofindtherepresentativesofthemanufacturersgoingfromhousetohousetoselltheirproducts,whicharenormallyusedinthehouseholds.

LEVEL–2Manufacturer-wholesaler- consumer:

This channel is primarily used in the case of industrialgoodsand high-value consumerdurable products. The wholesaler, who may also be called as distributor in this channel, carriesout the functions of retailing to large customers who may in themselves be the manufacturersalso.Thewholesalersinthischannelbuygoodsfrommanymanufacturers,stock,andsubsequently,sellthemthroughinternetordirectlytothecustomersinawidergeographicalarea.Anexampleoftheuseofthismethodcanbeobservedinthecomputerhardwareindustry.

LEVEL–3Manufacturer-retailer- consumer:

Here, the large retailing chains, including supermarkets,use this channel tobuy productsinlarge quantities from manufacturers at a very competitive price and sell thesameto theultimate consumers. As the retailers enjoy large discounts in this process, they share this benefitwiththeircustomersbykeepingtheirproductscompetitivelypriced.Theconsumerspatronage this channel because they can buy in small quantities from a wide variety at lowerprices.

LEVEL–4Manufacturer- wholesaler-retailer- consumer:

This isa chain widely followed for fast moving consumer goods, which are likely to havemassmarkets.Whentheconsumersarelargein number, widely dispersedgeographically, and products are of low value,thischannel is favoured. Manufacturerswould find it prohibitively expensive to set up their own outlets in such circumstances. Formanufacturersofconsumergoodssuchas hosiery,food items, confectionery, clothes,andreadymadegarments,cosmetics,andsoon,intermediariesareindispensableinthedistributionchain.

ADVERTISEMENT AND SALES

PROMOTIONADVERTISEMENT(OR)

A

D

V

E

R

T

ISING

Advertising is an audio or visual form of marketing communication that employs an openlysponsored, non-personal message to promote or sell a product, service or idea.[1]:465 Sponsors ofadvertising are typically businesses wishing to promote their products or services.

Advertising isdifferentiatedfrompublicrelationsin thatanadvertiserpaysforandhascontroloverthemessage.Itdiffersfrompersonalsellinginthatthemessa geisnon-personal,i.e.,notdirectedtoaparticularindividual.[1]:661,672Advertisingiscommunicated throughvariousmass media,[2]including traditional media such as newspapers, magazines, television, radio, outdooradvertising or direct mail; and new media such as search results, blogs, social media, websites ortextmessages.Theactualpresentationofthemessage in a mediumis referredto asan**advertisement** or "**ad**" or**advert**forshort.

Commercial ads often seek to generate increased consumption of their products or servicesthrough "branding", which associates a product name or image with certain qualities in the mindsof consumers. On the other hand, ads that intend to elicit an immediate sale are known as direct-response advertising.Non-commercial entities that advertise more than consumer products orservicesincludepoliticalparties,interestgroups,religiousorganizationsandgovernmentalagencies. Non-profit organizations may use free modes of persuasion, such as a public serviceannouncement.Advertisingmayalsobeused toreassureemployeesorshareholdersthatacompanyis viable orsuccessful.

Typesofadvertising

- **Newspaper**.**Newspaper**advertisingcanpromoteyourbusinesstoa widerangeofcustomers....
- **Magazine**.Advertisinginaspecialist **magazine**canreachyour**targetmarket**quicklyandeasily....
- **Radio**....
- **Television**....
- **Directories**. ...
- **Outdoor**and **transit**....
- **Directmail**,cataloguesandleaflets....
- **Online.**

SALESPROMOTION

Sales promotion is the process of persuading a potential customer to buy the product. **Salespromotion** is designed to be used as a short-term tactic to boost **sales** – it is rarely suitable as amethodofbuildinglong-term customerloyalty.Some**sales promotions**areaimed atconsumers.

Sales promotions can be directed at either thecustomer, sales staff, or distribution channelmembers(suchasretailers).Salespromotionstargetedattheconsumerarecalled**consumersales promotions**. Sales promotions targeted at retailers and wholesale are called **trade salespromotions**.

Sales promotion includes several communications activities that attempt to provide added valueor incentives to consumers, wholesalers, retailers, or other organizational customers to stimulateimmediatesales.Theseeffortscanattempttostimulateproductinterest,trial,orpurchase.Examples of devices used in sales promotion include coupons, samples, premiums, point-of-purchase (POP) displays, contests, rebates,andsweepstakes.

Salespromotionisimplementedtoattractnewcustomers,toholdpresentcustomers,tocounteract competition, and to take advantageof opportunities that are revealed by marketresearch. Itismadeupofactivities,bothoutsideandinsideactivities,toenhance companysales.

Outside sales promotion activities include advertising, publicity, public relations activities, andspecial sales events. Inside sales promotion activities include window displays, product andpromotionalmaterialdisplayandpromotionalprogramssuch aspremiumawardsandcontests.[1]

Sale promotions often come in the form of discounts. Discounts impact the way consumers thinkand behave when shopping. The type of savings and its location can affect the way consumersview a product and affect their purchase decision.[2]The two most common discounts are
pricediscounts(“onsaleitems”)andbonuspacks(“bulkitems”).[2]Pricediscountsarethereductionof an original sale by a certain percentage while bonus packs are deals in which the consumerreceivesmorefortheoriginalprice.[2]Manycompaniespresentdifferentformsofdiscountsina dvertisements, hoping to convinceconsumers tobuy theirproducts.

Consumersalespromotion types

Consumer sales promotions are short term techniques designed to achieve short term objectives,such as to stimulate a purchase, encourage store traffic or simply to build excitement for aproductor brand. Traditional sales promotions techniques include:

- **Pricedeal:**Atemporary reduction intheprice,suchas50%off.
- **Loyal Reward Program:** Consumers collect points, miles, or credits for purchases andredeemthemforrewards.
- **Cents-off deal:** Offers a brand at a lower price. Price reduction may be a percentage markedonthepackage.
- **Price-pack/Bonus packs deal:** The packaging offers a consumer a certain percentage moreof the product for the same price (for example, 25 percent extra). This is another type of deal“in which customers are offered more of the product for the same price”.[2]For example, asales company may offer their consumers a bonus packin which they can receive twoproducts for the price of one. In these scenarios, this bonus pack is framed as a gain becausebuyers believe that they are obtaining a free product.[2] The purchase of a bonus pack,however, is not alwaysbeneficialfor the consumer. Sometimes consumers willend upspending money on an item they would not normally buy had it not been in a bonus pack. Asa result, items bought in a bonus pack are often wasted and is viewed as a “loss” for theconsumer.
- **Coupons:**coupons havebecome astandard mechanism forsalespromotions.
- **Lossleader:**thepriceofapopularproductistemporarilyreducedbelowcostinordertostimulate other profitablesales
- **Free-standinginsert(FSI):**Acouponbookletisinsertedintothelocalnewspaperfordelivery.
- **Checkoutdispensers:**Oncheckoutthe customerisgivenacouponbased onproductspurchased.
- **Mobilecouponing:** Coupons areavailableon amobilephone. Consumersshowtheofferonamobilephonetoasalespersonforredemption.
- **Onlineinteractivepromotiongame:**Consumersplayaninteractivegameassociated

withthepromotedproduct.

- **Rebates:** Consumersareofferedmoneybackifthereceiptandbarcodearemailedtotheproducer.

MARKETINGSTRATEGIES

Marketing strategy is a long-term, forward-looking approach to planning with the fundamentalgoal achieving a sustainable competitive advantage.[1]Strategic planning involves an analysis ofthe company's strategicinitialsituationpriorto theformulation,evaluation andselectionof market-orientedcompetitive position that contributes to the company's goals and marketingobjectives.[2]

Strategic marketing, as a distinct field of study emerged in the 1970s, and built on strategicmanagement that preceded it. Marketing strategy highlights the role of marketing as a linkbetweenthe organisationand its customers.

At its most basic level, strategic marketing addresses three deceptively simple questions: (1)Where are we now? (2) Where are we going? and (3) Howare we going to get there? Inattemptingtoanswerthesequestions,strategicplannersrequiresophisticatedskillsinbothresearchandanalysis.

10MARKETINGSTRATEGIES

1. Usesocialmedia.

Youcan'tignoresocialmedia.That'swherealltheso-calledmagicishappening.Somebusinesses have been built solely on the backs of social media. It can be intimidating at first.Sure. But as you build momentum, you'll find posting on social media to get easier and easierovertime.

2. Createvideotutorials.

One of the most effective ways to get the word out on your business is to create video tutorials.Teach people something useful. Walk them through it.Hold their hands. Step-by-step tutorialsare all the rage. The better you are at this, and the more value you provide, the quicker you canboostyourvisibility, andultimately,yoursales.

3. Startbloggingnow.

Sure, you could start a blog. If you don't have a blog for your business, then you need to start oneimmediately. But you don't just have to blog on your own blog. Most people find bloggingmundane because they lack the visibility. The truth is that your blog is going to be like a barrendesertunless you knowwhat you'redoing.

4. Understandsearchengineoptimization.

This is an area of marketing that I'm incredibly passionate about. But it's also an area that manypeople are deathly frightened by. Yes, SEO can be frightening. But it can also be powerful. Andwhenyou learn to leverageit and you learn SEO theright way,the sky truly isthelimit.

5. Leverageinfluencers.

Want to get the word out there and boost your visibility on social media without taking years tobuild the audience? Then you should certainly leverage influencers. But the key is to find theright influencer. You don't have to go with influencers with millions of followers. You could optformicro-influencers with tens ofthousands or even ahundredthousand followers.

6. Buildagreatleadmagnet.

So much effectiveness in marketing really does boil down to creating a great lead magnet. I'vefound that the right lead magnet presented to the right audience can have explosive results. Thebest way to do this is if you can identify the right pain points and present a solution in your leadmagnet,then you'rewell on yourway.

7. UseFacebookadswithre-targeting.

One of the most powerful methods you can use to market just about anything these days areFacebook ads. With Facebook, you can reach a very specific audience and you can do it veryeasily. You can target by interest, age, relationships status, geographic location, and so muchmuchmore.

8. UseLinkedIn the rightway.

Do you have a video on your LinkedIn profile? Did you know that you can easily add one? Whynot take the time to introduce yourself and your business. Link that to your profile description.This is an easy way to passively market your business, and when it's done right, it can lead toshockingresults.

9. Createanaffiliate program.

Most people don't understand the power of affiliate marketing. Affiliates can provide massivefuel for growth. But approaching the right partners isn't always that easy. You have to have goodconversionif you want thebiggeraffiliateto takeyou seriously.

10. UseEmailMarketingSequences

Partofanygoodsalesfunnelisgoingtobeanemailmarketingsequence.Thesearetheautomatedmessages thatgo out tousers oncetheysubscribe toyourlist. Useyouremail sequence to build a relationship with the subscriber. Be authentic and transparent. And conveyyourjourney.

PRODUCTLIFECYCLE

Product life-cycle management (**PLM**) is the succession of strategies by business managementas a product goes through its life-cycle. The conditions in which a product is sold (advertising,saturation)changesover timeand mustbemanagedasit movesthroughitssuccessionofstages.

The concept of product life cycle (PLC) concerns the life of a product in the market with respecttobusiness/commercialcostsandsalesmeasures.Theproductlifecycleproceedsthroughmultiple phases, involves many professional disciplines, and requires many skills, tools andprocesses. PLC management makes the following three assumptions: Products have a limited lifeandthus everyproduct has alifecycle.

- Product sales pass through distinct stages, each posing different challenges, opportunities,andproblems totheseller.
- Productsrequiredifferentmarketing,financing,manufacturing,purchasing,andhumanresourcestrategies ineach lifecyclestage.

Once the product is designed and put into the market, the offering should be managed efficientlyfor the buyers to get value from it. Before entering into any market complete analysis is carriedout by the industry for both external and internal factors including the laws and regulations,environment, economics, cultural values and market needs. Product life cycle is guanine conceptand this term ‘product life cycle’ is associated with every product that exists, however, due to alimited shelf life the product has to expire. From the business perspective, as a good business, theproduct needs to be sold before it finishes its life. In terms of profitability, expiry may jolt theoverall profitability of the business therefore there are few strategies, which are practiced toensurethat the product is sold within thedefined period ofmaturity.

Characteristicsof the ProductLifeCycle StagesandMarketingImplications

The PLC describes the four key stages that a product is likely to experience between its launchand its disappearance from the market. The characteristics of the product life cycle stages arediscussedbelow.

1. IntroductionStage

When a product is launched on the market, its sales will begin to grow slowly and profit, if any,will be rather small. This can be attributed to the lead time whichis required for marketingefforts to take effect. At this stage, the product is new and untested, which implicates thatpotential customers may be unwilling or reluctant to purchase it. A second reason for rather lowprofitability at the introduction stage is that the company is unlikely to be making full use of itsproduction capacity. As a result, it will be unable to benefit from the economies of scalethat areassociated with higher levels of production. The low profitability doesalso come from the needtorecoverdevelopmentandlaunchcosts.Themainpriorityofthefirmattheintroductionstageis to generate widespread awareness of the product in its target segment and to stimulate trial.Thisisespeciallythecasefornew-to-the-worldproducts,whicharetrulyinnovativebynature.In this case, primary demand will first have to be established. The company should focus itsmarketing activities on those buyers who are readiest to buy: innovators, which are usually to befoundwithinthehigher-incomegroups.This behaviourwasevidentforinstancewhenthemanufacturers of the first smartphones targeted B2B customers when the products were firstintroducedto themarket.

There are various marketing strategies that can be used for introducing a new product to themarket. Two pricing strategies are available. The choice between the two strategies depends onthenatureof theproductand the level ofcompetition:

2.GrowthStage

If the product meets existing market needs or stimulates previously untapped needs, it will enterthe growth stage. In this stage, sales will usually lift off. This point is called the take-off point.Profits are generated as sales revenues increase faster than costs. But competitors will also havehad time to assess the product, predict its impact on the market and potentially respond with asimilar or improved version ofthe offering. As a result, the total size ofthe market tends togrow, and the new competitors can increase their sales by attracting new customers rather thanundercutting each other on price. An increase in the number of distribution outlets tends to go inhand withthis.

3.MaturityStage

When a the sales growth of the product slows down, the maturity stage is reached. During thisstage,thereisatendencyforcompaniestocapturecustomersfromtheircompetitorsbyundercutting each other on prices and increasing promotional efforts. As competitive rivalryintensifies,theweakercompetitorsareforcedoutofthemarket.Thispointisknownasthe shake-out point. Thus, only the strongest players remain to dominate the more stable market.The maturity stage does usually last longer than the previous stages, but also poses the strongestchallenges to the marketing: the firm will try to prevent the sales to decline, while maintainingprofitability.Theproblematthisstageisheavypricecompetitionandresultingincreasedmarketingexpenditurefrom allcompetitorsinorderto retain brandloyalty.

Certainly, there are some famous brands and products that are still in the maturity stage afterthirty years and more. For instance, consider Mars’ bars or Coca-Cola. Although these productshave changes only very little since their launch, they are still highly successful or even moresuccessfulthanever.Otherproducts survivebyevolving tomeet changingconsumerneeds.

During the maturity stage, the firm can choose from a number of alternative strategies to ensurethe future success of the product. These strategies range from innovating the market (marketdevelopment) over modifying the product (product development) to altering the marketing mix(marketinginnovation).Thesestrategies arediscussed in moredetail here.

4.DeclineStage

Ifthecharacteristicsoftheproductlifecyclestagesandtheirmarketingimplicationsareunderstood properly, the product may have made it to the final stage in the PLC: the declinestage. Usually, the firm will have tried to keep the product as long as possible in the maturitystage.However,once the salesofa productstarttofallor profitabilitycanno furtherbemaintained, the decline stage is reached. This does often happen as a result of the market entry ofsubstituteproducts whichsatisfy customerneeds better thanthe previousproduct.

UNIT– 3

HUMANRESOURCE MANAGEMENT

HumanResourceManagement:Humanresource management is the process of managingthehumanresourcesofanorganizationintunewiththevisionofthetopmanagement.

FUNCTIONSOFHRM

OperativeFunctions:

The operative functions are those tasks or duties which are specifically entrusted to the humanresourceorpersonneldepartment.Theseareconcernedwithemployment,development,compensation,integration and maintenanceof personnel of theorganisation.

Theoperativefunctionsofhumanresourceorpersonneldepartmentarediscussedbelow:

1. Employment:

The first operative function of the human resource of personnel department is the employment ofproper kind and number of persons necessary to achieve the objectives of the organisation. Thisinvolvesrecruitment, selection, placement,etc.of the personnel.

Beforetheseprocessesareperformed,itisbettertodeterminethemanpowerrequirementsbothin terms of number and quality of the personnel. Recruitment and selection cover the sources ofsupply of labour and the devices designed to select the right type of people for various jobs.Inductionandplacementofpersonnelfortheirbetterperformancealsocomeundertheemployment orprocurementfunction.

2. Development:

Training and development of personnel is a follow up of the employment function. It is a duty ofmanagement to train each employee property to develop technical skills for the job for which hehasbeen employedand alsoto develop him forthehigher jobs in theorganisation.

Proper development of personnel is necessary to increase their skills in doing their jobs and insatisfyingtheirgrowth need.

For this purpose, the personnel departments will device appropriate training programs. There areseveral on- the-job and off-the-job methods available for training purposes. A good trainingprogram should include a mixture of both types of methods. It is important to point out thatpersonnel department arranges for training not only of new employees but also of old employeesto updatetheirknowledgein theuseof latest techniques.

3. Compensation:

This function is concerned with the determination of adequate and equitable remuneration of theemployees in the organisation of their contribution to the organisational goals. The personnel canbecompensated both in terms ofmonetary as wellas non-monetaryrewards.

Factors which must be borne in mind while fixing the remuneration of personnel are their basicneeds,requirementsofjobs,legalprovisionsregardingminimumwages,capacityoftheorganisation to pay, wage level afforded by competitors etc. For fixing the wage levels, thepersonnel department can make use of certain techniques like job evaluation and performanceappraisal.

4. Maintenance(WorkingConditionsandWelfare):

Merely appointment and training of people is not sufficient; they must be provided with goodworking,conditionssothattheymayliketheirworkandworkplaceandmaintaintheirefficiency. Workingconditionscertainlyinfluence themotivationandmoraleoftheemployees.

These include measures taken for health, safety, and comfort of the workforce. The personneldepartment also provides for various welfare services which relate to the physical and socialwell-being of the employees. These may include provision of cafeteria, rest rooms, counseling,groupinsurance, education for childrenof employees, recreational facilities,etc.

5. Motivation:

Employees work in the organisation for the satisfaction of their needs. In many of the cases, it isfound that they do not contribute towards the organisational goals as much as they can. Thishappens because employees are not adequatelymotivated. The humanresourcemanager helpsthe various departmental managers to design a system of financial and non-financial rewards tomotivatetheemployees.

<u>HUMANRESOURCEPLANNING(HRP)</u>

HumanResourcePlanningisasystematicprocessofforecastingboththeprospectivedemandfor and supply of manpower, and employment of skills with the objectives of the organization. Itcan also be termed as the method of reviewing the manpower necessities to ensure that right kindofskills ismadeavailabletotheorganization.

The main purpose of HRP is to set the goals and objectives of the company. In other words, it isto have the precise number of employees, with their skills matching the requirements of theorganization, so that the organization can move towards its goals. Chief objectives of HumanResourcePlanning areasfollows:

- Guaranteeamplesupplyofresources,wheneverthereisaneedforit.
- Makesurethatthe currentmanpowerinthecompanyisbeingusedproperly.
- Toforeseethepotentialrequirementsofmanpower atvariousskilllevels.
- Evaluateexcessorscarcity ofresourcesthatareavailableatagiven pointoftime.
- Predicttheimpactoftechnologicalchangesontheresourcesaswellasonthekindofjobstheydo.
- Managetheresourcesthatarealreadyemployed intheorganization.
- Ensurethatthereisaleadtimeavailable topickandtrainanysupplementary humanresource.

<u>NeedforHumanResourcePlanning</u>

Theneed ofHRP may arisebecauseof thefollowing reasons:

1. In India, unemployment is a grave concern. Scarcity of manpower and that too with therequiredskill sets and competence, has given riseforneed of HumanResourcePlanning.
2. It comes handy for smooth and continuous supply of workers when a huge number ofemployees is retiring, or leaving the company or maybe they are incapable ofworking duetopsychological or physicalailments.
3. There is a needfor Human Resource Planning when thereis an increase in employeeturnover, which is obvious. Some examples of this turnover are promotions, marriages, endofcontract,etc.
4. Technological changes lead to a chain of changes in the organization, right from skill setsproduct methods and administration techniques. These changes lead to an overall change inthe number of employees required and with entirely different skill set. It is here that theHumanResource Planning helps theorganization deal withthe necessarychanges.
5. HumanResourcePlanningisrequiredtomeet therequirementsofdiversificationandgrowthof acompany.
6. There is a need for Human Resource Planning in downsizing the resources when there is ashortage of manpower. Similarly, in case of excess resources, it helpsin redeploying theminotherprojects of thecompany.

Importanceof HumanResourcePlanning

Aftertheneedfor HRP,itis apttodiscuss theimportanceof it.Afew are mentionedbelow.

- Itgivesthe companytherightkindof workforceattherighttimeframeandinrightfigures.
- Instrikingabalancebetweendemand-forand supply-ofresources,HRPhelpsintheoptimumusageof resources andalsoinreducing thelaborcost.
- Cautiouslyforecastingthefuturehelpstosupervisemanpower inabetterway,thuspitfallscanbeavoided.

- Ithelpstheorganizationtodevelopasuccessionplanforallitsemployees.Inthisway,itcreatesaw ay forinternalpromotions.
- Itcompelstheorganizationtoevaluatetheweaknessesandstrengthsofpersonneltherebymakin gthe managementto takeremedialmeasures.
- Theorganizationasawholeisbenefitedwhenitcomestoincreaseinproductivity,profit,skills,et c., thus giving anedgeover its competitors.

HRPPROCESS

In anyHumanResource Planningmodelthereare threekeyelementswhichthemanagementshouldadhereto:

1. **Forecasting recruitment needs**: There are a number of ways in forecasting your businessneeds,toknowtheexactnumberofemployeesrequiredtorunthebusiness.Factorstobe

considered are the economical situation ofany given country, internal and external factorsofan organization and thedemand for theproducts.

2. **Evaluate Supply**: In estimating this, there are two aspects, one is the evaluation of theinternal resources and the other is the prospective or external resources. Among the two,external factors require extra care, these include education, unemployment rate and law thatis in existence. Evaluating these factors very closely will help the organization in filling therightresources atthe right timewith the right skillset.
3. **Supplyanddemandbalance**:ThiselementofHumanResourcePlanningisveryimportant, as striking a balance between these two forces will help the organization inunderstanding if there is shortage or excess of employees available in a particular group. Italsohelpsinunderstanding astotheneedoffull timeorparttime needsoftheorganization.

JOBEVALUATION

A **job evaluation** is asystematicwayof determiningthevalue/worthofa job in relation toother jobsin an organization. It triestomake a systematic comparisonbetween jobs to assess their relative worth for the purpose of establishing a rational pay structure.By Abhinavyadav Job evaluation needs to be differentiated from job analysis. Job analysis is asystematic way of gathering information about a job. Every job evaluation method requires atleast some basic job analysis in order to provide factual information about the jobs concerned.Thus, job evaluation begins with job analysis and ends at that point where the worth of a job isascertainedfor achievingpay equitybetweenjobsanddifferentroles.

PROCESSOFJOBEVALUATION

Theprocess ofjob evaluationinvolves thefollowingsteps:

- **Gaining acceptance**: Before undertaking job evaluation, top management must explain theaims and uses of the programme to managers, emphasizing the benefits. Employees andunions may be consulted, depending on the legal and employee relations environment andcompany culture. To elaborate the program further, presentations could be made to explaintheinputs, process and outputs/benefits of jobevaluation.
- **Creating job evaluation committee**: It is not possible for a single person to evaluate all thekey jobs in an organization. Often a job evaluation committee consisting of experiencedemployees,union representativesandHR expertsiscreatedto set theballrolling.
- **Finding the jobs to be evaluated**: Every job need not be evaluated. This may be too taxingand costly. Certain key jobs in each department may be identified. While picking up the jobs,caremustbetakentoensurethattheyrepresentthetypeofworkperformedinthatdepartment,atv ariouslevels.
- **Analysingandpreparingjobdescription**:Thisrequiresthepreparationofajobdescription and also an analysis of job specifications for successful performance. See jobanalysis.
- **Selecting the method of evaluation**: The method of evaluating jobs must be identified,keepingthejobfactorsaswellasorganisationaldemandsinmind.Selectingamethodalso

involvesconsiderationofcompanyculture,andthecapacityofthecompensationandbenefitsfunction orjob evaluationcommittee.

- **Evaluating jobs**: The relative worth of various jobs in an organisation may be determined byapplying the job evaluation method. The method may consider the "whole job" by ranking aset of jobs, or by comparing each job to a general level description. Factor-based methodsrequire consideration of the level of various compensable factors (criteria) such as level andbreadth of responsibility, knowledge and skill required, complexity, impact, accountability,working conditions, etc. These factor comparisons can be one with or without numericalscoring. If there is numerical scoring, weights can be assigned to each such factor and scoresare associated with different levels of each factor, so that a total score is determined for thejob.All methods result inan assigned gradelevel.

Non-analyticalJob EvaluationMethods

1. **RankingMethod:**

This is the simplest and an inexpensive job evaluation method, wherein the jobs are ranked fromhe highest to the lowest on the basis of their importance in the organization. In this method, theoverall job is compared with the other set of jobs and then is given a rank on the basis of itscontentand complexity in performing it.

Here the job is not broken into the factors, an overall analysis of the job is done. The mainadvantage of the ranking method is, it is very easy to understand and is least expensive. Buthowever it is not free from the limitations, it is subjective in nature due to which employees mayfeeloffended,and also, itmay not be fruitfulin thecaseofbig organizations.

2. **JobGradingMethod:**

Also known a**s Job-Classification Method.**Under this method the job grades or classes arepredeterminedand theneach jobis assigned to theseand is evaluated accordingly.

For Example Class, I, comprise of the managerial level people under which sub-classification isdone on the basis of the job roles such as office manager, department managers, departmentalsupervisor,etc.

The advantage of this method is that it is less subjective as compared to the raking method and isacceptable tothe employees. And also, the entire jobis compared against the other jobs and isnot broken into factors. The major limitation of this method is that the jobs may differ withrespect to their content and the complexity and by placing all under one category the results maybeoverestimated orunderestimated.

AnalyticalJob EvaluationMethods

1. **Factor-Comparison Method:**

Under this method, the job is evaluated, and the ranks are given on the basis of a series of factorsViz.Mentaleffort,physicaleffort,skillsrequiredsupervisoryresponsibilities,workingconditions, and other relevant factors. These factors are assumed to be constant for each set ofjobs. Thus, each job is compared against each other on this basis and is ranked accordingly.Theadvantage of this method is that it is consistent and less subjective, thus appreciable by all. Buthoweverit is the most complex and an expensivemethod.

2. **Point-RankingMethod:**

Under this method, each job's key factor is identified and then the subfactors are determined.Thesesub-factorsarethen assigned the pointsby its importance.

For example, the key factor to perform a job is skills, and then it can be further classified intosub-factorssuchastrainingrequired,communicationskills,socialskills,persuasionskills,etc.

The point ranking method is less subjective and is an error free as the rater sees the job from allthe perspectives. But however it is a complex method and is time-consuming since the points andwagescale has to bedecided foreach factorandthesub factors.

<u>RECRUITMENTANDSELECTION</u>

<u>RECRUITMENT</u>

Recruitment(hiring)referstotheoverallprocessofattracting,shortlisting,selectingandappointingsuitablecandidatesfor<u>jobs</u>(eitherpermanentortemporary)withinanorganization.[1] Recruitment can also refer to processes involved in choosing individuals forunpaid roles. Managers, human resource generalists and recruitment specialists may be taskedwith carrying out recruitment, but in some cases public-sector employment agencies, commercialrecruitmentagencies, or specialist searchconsultancies areusedtoundertakeparts ofthe process.Internet-basedtechnologiestosupportallaspectsofrecruitmenthavebecomewidespread.

Jobanalysis

In situations where multiple new jobs are created and recruited for the first time or vacancies arethereorthenatureinsuchdocumentsasjobdescriptionsandjobspecifications.Often,acompany already has job descriptions for existing positions. Where already drawn up, thesedocumentsmayrequirereviewandupdatingtoreflectcurrentrequirements.Priortotherecruitment stage,a person specificationshould befinalized.[3]

Sourcing

Sourcingis the use of one or more strategies to attract or identify candidates to fill job vacancies.It may involve internal and/or external recruitment advertising, using appropriate media, such asjob portals,local or national newspapers, social media (such as LinkedIn or RiteSite), businessmedia,specialistrecruitmentmedia,professionalpublications,windowadvertisements,jobcenters,or inavariety ofways viathe internet.

Alternatively, employers may use recruitment consultancies or agenciesto find otherwise scarcecandidates—who, in many cases, may be content in the current positions and are not activelylooking to move. This initial research for candidates—also called name generation—producescontact information for potential candidates, whom the recruiter can then discreetly contact andscreen.

Screeningandselection

Various psychological tests can assess a variety of KSAOs, including literacy. Assessments arealso available to measure physical ability. Recruiters and agencies may use applicant trackingsystems to filter candidates, along with software tools for psychometric testingand performance-based assessment. In many countries, employers are legally mandated to ensure their screeningandselection processesmeetequalopportunity and ethical standards.

Employers are likely to recognize the value of candidates who encompass soft skills such asinterpersonal or team leadership. Many companies, including multinational organizations andthose that recruit from a range of nationalities, are also often concerned about whether candidatefits the prevailing company culture. Companies and recruitment agencies are now turning tovideo screening as a way to notice these skills without the need to invite the candidates inphysical. Screening as a practice for hiring has undergone continual change over the years andoftenorganizationsareusingvideotomaintaintheaforementionedstandardstheysetforthemselves andthe industry.

SELECTION

Theprocessof identifyingthemostsuitablepersonsfortheorganizationiscalledselection. Selection is also called a negative function because at a stage the applications arescreenedandshort-listed based ontheselection criteria.Themainpurposeofselection isto choosetherightpersonfortherightjob.Thejobanalysis,jobdescription,andjobspecifications are carried out before the position is advertised. These provide adequate insightabout nature of the job, its description, and its specifications, and further focus on what type ofpersonistobeselectedforagivenposition.Thesesimplifytheprocessofselection

Selectionprocessinvolvesthefollowingstages:

1. Initialscreening/Shortlisting
2. Comprehensiveapplication/biodatascreening
3. Aptitudeorwrittenrests
4. Groupdiscussion
5. Personalinterviews
6. Groupdiscussion
7. Personalinterviews
8. Medicalexamination
9. Employmentofferletter

PLACEMENTANDINDUCTION

PLACEMENT

Placement is a process of assigning a specific job to each of the selected candidates. It involvesassigning a specific rank and responsibility to an individual. It implies matching the requirementsofajob with the qualifications of thecandidate.

SignificanceofPlacement

Thesignificancesofplacement areasfollows:-

* Itimproves employeemorale.

* Ithelpsinreducingemployeeturnover.

* Ithelpsinreducingabsenteeism.

* Ithelpsinreducingaccidentrates.

* Itavoidsmisfitbetweenthecandidateandthejob.

* Ithelpsthecandidateto workasperthepredeterminedobjectivesoftheorganization.

INDUCTION

Onceanemployeeisselectedandplacedonanappropriatejob,theprocessoffamiliarizinghimwiththejob and theorganization is known as induction.

Induction is the process of receiving and welcoming an employee when he first joins thecompanyandgivinghimbasicinformationheneedstosettledownquicklyandhappilyandstarswork.

Objectives
Inductionisdesignedtoachievefollowingobjectives:-

* Tohelpthenewcomertoovercomehisshyness andovercomehisshynessnervousnessinmeetingnew peopleinanewenvironment.

* Togivenewcomernecessaryinformationsuchas locationofacafé, restperiodetc.

* Tobuildnewemployeeconfidenceintheorganization.

* Ithelpsinreducinglaborturnoverandabsenteeism.

* Itreducesconfusionand developshealthyrelationsintheorganization.

* Toensurethat thenew comerdo notform false impression andnegativeattitudetowardstheorganization.

* Todevelopamongthenewcomerasenseofbelongingandloyalty totheorganization.

<u>WAGEANDSALARYADMINISTRATION</u>

Wage and salary administration is a collection of practices and procedures used for planning anddistributingcompany-widecompensationprogramsforemployees.Thesepracticesincludeemployees at all levels and are usually handled by the accounting department of a company.Wage andsalaryadministrationproceduresusuallyinvolveactivities suchascalculatingthe numberofhoursworkedinordertodeterminecompensation,administeringemploymentbenefits, and answering payroll questions from employees. At the majority of companies andorganizations, wages are usually dispersed to all employees on a specific date. The workers incharge of salary administration may also be charged with ensuring that the company adheres tofederaland local compensationlaws.

Objectives

The main objective of wage and salary administration is to establish and maintain an equitablewage and salary system. This is so because only a properly developed compensation systemenablesanemployertoattract,obtain,retainandmotivatepeopleofrequiredcalibreandqualification in his/her organisation. These objectives can be seen in more orderly manner fromthepointofviewoftheorganisation,itsindividualemployeesandcollectively.Thereareoutlinedand discussedsubsequently:

OrganizationalObjectives:

The compensation system should be duly aligned with the organisational need and should also beflexibleenough to modification in response to change.

Performanceobjectives:

1. Enableanorganisationtohavethe quantityand qualityofstaffitrequires.

2. Retaintheemployeesintheorganisation.

3. Motivateemployeesforgoodperformance forfurtherimprovementinperformance.

4. Maintainequityandfairness incompensationforsimilarjobs.

Principlesofwageand salaryadministration:

Themainprinciplesthatgovernwageandsalaryfixation arethree:

1. ExternalEquity

2. InternalEquity

3. IndividualWorth.

1. ExternalEquity:

This principle acknowledges that factors/variables external to organisation influence levels ofcompensation in an organisation. These variables are such as demand and supply of labour, themarket rate, etc. If these variables are not kept into consideration while fixing wage and salarylevels,thesemay beinsufficient to attract andretain employees intheorganisation. The principles of external equity ensure that jobs are fairly compensated in comparison tosimilarjobsinthe labourmarket.

2. InternalEquity:

Organisations have various jobs which are relative in value term. In other words, the values ofvarious jobs in an organisation are comparative. Within your own Department, pay levels of theteachers (Professor, Reader, and Lecturer) are different as per the perceived or real differencesbetweenthe values ofjobs they perform.

This relative worth of jobs is ascertained by job evaluation. Thus, an ideal compensation systemshould establish and maintain appropriate differentials based on relative values of jobs. In otherwords,thecompensationsystem should ensurethat moredifficultjobs shouldbepaid more.

3. IndividualWorth:

According to this principle, an individual should be paid as per his/her performance. Thus, thecompensation system, as far as possible, enables the individual to be rewarded according to hiscontributionto organisation.

Alternatively speaking, this principle ensures that each individual's pay is fair in comparison toothers doing the same/similar jobs, i.e., 'equal payfor equal work'. In sum and substance, asound compensation system should encompass factors like adequacy of wages, social balance,supplyand demand,faircomparison, equalpay for equalworkandwork

TRAININGANDDEVELOPMENT

Traininganddevelopment

Training: Training is short-term process of utilizing systematic and organizedprocedurebywhichthestaffacquiresspecifictechnicalknowledgeandfunctionalskills foradefinite purpose.Thefocusof training isthe jobortask.

TrainingNeeds:

- Highturnoveramongthenewrecruits
- Increaseinwastageofmaterials
- Increaseinthenumberof rejectedunitsofproduction
- Increaseinthenumberofcustomercomplaints
- Increaseintheaccidentrate
- Reducedproductivitylevels
- Increase in machine

breakdownsMethodsofTraining:Therearetwomethodsoft

raining

A. On-thejobtraining

B. Off-thejob training

A) On-the job training: It is designed to make the employees immediately productive.It islearning by physically doing the work. The focus here is to provide specific skills in a realsituation.Thesemethodsinclude:

1) Job instruction training: This is a method used for such jobs which can be performed withrelativelylowskill.Here,thetraineessystematicallyacquireskillsbyfollowingroutineinstructionsinkey processesfrom aqualifiedinstructor.

2) Experiential learning: This is a modern approach tothe learning process. This method ismore .used for training the senior executives. It is a technique, which empowers the manager-trainee with the freedom of choice to act upon andthecapacitytoinitiate,rather than simplyrespond,tocircumstances.

3) Demonstration: Here, the work procedures are demonstrated to the trainees. Each of thetrainees is asked to carry out the work, on a sample basis, based on his/her observation andunderstandingofthedemonstration.

4) Apprenticetraining:Thosewhoareselectedtoworkintheshopflooraretrainedasapprenticesinthefactoryfor abriefperiodrangingfromthreemonthstooneyear,depending upon the complexity of the training. Those who show good progress in this trainingare likely to be absorbed in the same organization. Those who complete apprentice training arelikelytogetgood jobsoutsidealso.

B) Off-the-job training methods: provide a relatively broad idea relating to a given job or task.Thesearemeantfordevelopinganunderstandingofgeneralprinciples,providingbackground knowledge, or generating an awareness of comparative ideas and practice. Thesemethodsinclude:

1) Lectures/talks and class room instructions: These techniques are designed to communicatespecific interpersonal, technical, orproblem-solvingskills. Here, the trainer can maintain atight control over learning. However, this method restricts the trainee's freedom to develophis/herown approachestolearning.

2) Conferences: Conferences refer to get-together oftheexpertsfrom different areas ofagiven topic. These experts present their views based on their work experience and researchresults. When employees participate in such events they get a feel of the real world. They mayalsoget motivatedto performbetter.

3) Seminars:Seminarsareheldperiodicallybytheprofessionalorganisationsforthebenefit ofallthe practicing managers by taking into consideration the recent advances in a specialized area.Participationinsuchseminarsenablestheexecutivestogetexposedtotherecentdevelopmentsinthe areaof theirinterest.

4) Teamdiscussions:Thistechniquedevelopsteamspiritamongtheexecutivesfromdifferent departments.It also enables themto understandand appreciate each other's problems.Itreinforcesafeelingofunityamongthosewhowork towardscommongoals.

5) Casestudy:Thisisa predominant technique followed even in premiermanagement institutes. This technique helps toprovide an understanding of what hasgonewronginaparticularcase, such asDelhiCloth Mills(DCM). Similarly, what arethefactors

responsible for the success of organizations such as Reliance or Hindustan Lever. Case studytechnique is a very good method oflearning the principles andconcepts.However, thismethod has one weakness. The circumstances you are likely to face in your life may be verydifferent from the cases you have analyzed earlier! Case studies help to enhance the analytical &decisionmakingskills

6) Role-playing: The participants are assigned roles and are asked to react to oneanother,astheywoulddointheirmanagerialjobs.Theserolesareeventuallyexchanged.

In other words, each participant will get a turn to play alltheroles. For instance, the role-playing in a grievance-handling situation involves two players: In the first step, the workerpresents his grievance to the personnel manager. In the secondstep, theworker plays the roleof the personnel manager while the personnel manager plays the role of the worker.Role-playingallows participants to understand problemsof eachother.

Development: Developmentisanactivityaimedatcareergrowthratherthanimmediateperformance. Employee development is the process, which helps him or her to understand andinterpretknowledgeratherthanteachingaspecificsetoffunctionalskills.Development,therefore,focuses moreon employee'spersonal growth in thenearfuture.

PERFORMANCEAPPRAISAL

Performance Appraisal: Performance appraisal is the process of measuring and evaluating theperformance or accomplishments, including behaviour, of an employee on the job front for agiven period. The purpose is to assess the worth and value of a person to the organization. It isalso meant for assessinghis/herpotentialforfuturedevelopmentinanobjectivemanner.Whyappraisetheperformance:

1. Toassesstheemployee'spresentlevelofperformance
2. Toidentifythestrengthsorweaknessesofindividualemployee
3. Toprovidefeedbacktotheemployeesothathecanimprovehis/herperformance
4. To provide an objective basis for rewarding the employees for theirperformance
5. Tomotivatethoseemployeeswhoperform
6. Tocheckandpunishthose employeeswho failtoperform
7. Toidentifythegapsinperformance,andthus,assesstraininganddevelopmentneeds
8. Toidentifytheemployee'spotentialtoperform
9. Toprovideadatabaseforevolvingsuccessionstrategies

StepsinperformanceAppraisal:

1. Createsetupperformancestandards
2. Mutuallysetidentifiableandmeasurable

3. Measurepresentlevelofperformance
4. Compareandappraisepresentlevelofperformancewithstandard
5. Discusstheappraisalwithemployee
6. Identifyandinitiatethecorrectiveaction

PerformanceAppraisalMethods:TraditionalandModernMethods!

Each method of performance appraisal has its strengths and weaknesses may be suitable for oneorganisation and non-suitable for another one. As such, there is no single appraisal methodacceptedandused byall organisationstomeasure theiremployees'performance.

All the methods of appraisal devised so far have been classified differently by different authors.While DeCenzo and Robbins'^ have classified appraisal methods into three categories: absolutemethods, relative methods and objective methods; Aswathappa has classified these into twocategoriespast-orientedand future-oriented.

Inthediscussionthatfollows,eachmethodunderbothcategorieswillbedescribedbriefly.

TraditionalMethods:

RankingMethod:

Itistheoldestandsimplestformalsystematicmethodofperformanceappraisalinwhichemployee is compared with all others for the purpose of placing order of worth. The employeesareranked from the highest to the lowest orfromthe best to the worst.

In doing this the employee who is the highest on the characteristic being measured and also theone who is L lowest, are indicated. Then, the next highest and the next lowest between nexthighest and lowest until all the employees to be rated have been ranked. Thus, if there are tenemployeesto be appraised, therewill betenranksfrom 1 to 10.

However,the greatestlimitationsofthis appraisalmethodarethat:

(i) Itdoesnottellthathow much betterorworseoneisthananother,

(ii) Thetaskofranking individualsisdifficult whenalargenumberofemployees arerated,and

(iii) It is very difficult to compare one individual with others having varying behavioural traits.To remedy these defects, the paired comparison method of performance appraisal has beenevolved.

PairedComparison:
In this method, each employee is compared with other employees on one- on one basis, usuallybased on one trait only. The rater is provided with a bunch of slips each coining pair ofnames,the rater puts a tick mark against the employee whom he insiders the better of the two. Thenumber of times this employee is compared as better with others determines his or her finalranking.

Thenumberofpossiblepairsforagivennumberofemployeesisascertainedbythefollowing formula:
N(N-1)/2

Where N = the total number of employees to be evaluated. Let this be exemplified with animaginaryexample.

Ifthe followingfive teachershavetobeevaluatedbythe ViceChanceller ofaUniversity:

(K),Mohapatra(MRaul(R),Venkat(V),andBarman(B),theaboveformulagives5(5-1)/2or10pairs.

Theseare:
Thus, the pairs so ascertained give the maximum possible permutations and combinations. Thenumber of times a worker is considered better makes his/her score. Such scores are determinedforeachworkerandhe/sheisrankedaccordingtohis/herscore.Oneobviousdisadvantageoft his method is that the method can become unwieldy when large numbers of employees are beingcompared.

GradingMethod:
In this method, certain categories of worth are established in advance and carefully defined.Therecanbethreecategoriesestablishedforemployees:outstanding,satisfactoryandunsatisfa ctory.Therecanbemorethanthreegrades.Employeeperformanceiscomparedwith

grade definitions. The employee is, then, allocated to the grade that best describes his or herperformance.

Such type of grading is done is Semester pattern of examinations and in the selection of acandidate in the public service sector. One of the major drawbacks of this method is that the ratermayrate most of theemployeeson thehighersideoftheir performance.

ForcedDistributionMethod:
This method was evolved by Tiffen to eliminate the central tendency of rating most of theemployees at a higher end of the scale. The method assumes that employees' performance levelconfirms to a normal statistical distribution i.e., 10,20,40,20 and 10 per cent. This is useful forrating a large number of employees' job performance and promo ability. It tends to eliminate orreducebias.

Itisalsohighlysimpletounderstandandeasytoapplyin appraisingtheperformanceofemployees in organisations. It suffer from the drawback that improve similarly, no single gradewouldrise in aratings.

Forced-ChoiceMethod:
The forced-choice method is developed by J. P. Guilford. It contains a series of groups ofstatements, and rater rates how effectively a statement describes each individual being evaluated.Commonmethod offorced-choicemethodcontains twostatements, bothpositiveandnegative.

Examplesofpositivestatementsare:
1. Givesgood andclear instructions tothesubordinates.

2. Canbedependedupontocompleteanyjobassigned.

Apairof negative statements maybeasfollows:
1. Makespromisesbeyondhislimittokeepthese.

2. Inclinestofavoursomeemployees.

Each statement carries a score or weight, which is not made known to the rater. The humanresource section does rating for all sets of statements— both positive and negative. The finalrating is done on the basis of all sets of statements. Thus, employee rating in this manner makesthe method more objective. The only problem associated with this method is that the actualconstructing of severalevaluative statements also called 'forced-choice scales', takes a lot oftimeandeffort.

Check-ListMethod:
The basic purpose of utilizing check-list method is to ease the evaluation burden upon the rater.In this method, a series of statements, i.e., questions with their answers in 'yes' or 'no'

arepreparedbytheHRdepartment(seeFigure28-2).Thecheck-listis,then,presentedtotherater to tick appropriate answers relevant to the appraisee. Each question carries a weight-age inrelationshipto theirimportance.

When the check-list is completed, it is sent to the HR department to prepare the finalscoresforall appraises based on all questions. While preparing questions an attempt is made to determinethe degree of consistency of the rater by asking the same question twice but in a different manner(see,numbers 3and 6 inFigure28-2).

However, one of the disadvantages of the check-list method is that it is difficult to assemble,analyseandweighanumberofstatementsaboutemployeecharacteristicsandcontributionsFrom a cost stand point also, this method may be inefficient particularly if there are a number ofjob categories in the organisation, because a check-list of questions must be prepared for eachcategoryofjob.Itwillinvolvealotof money,timeandefforts.

CriticalIncidentsMethod:

In this method, the rater focuses his or her attention on those key or critical behaviours that makethe difference between performing a job in a noteworthy manner (effectively or ineffectively).Therearethreesteps involved in appraising employees using this method.

First, a list of noteworthy (good or bad) on-the-job behaviour of specific incidents is prepared.Second, a group of experts then assigns weightage or score to these incidents, depending upontheir degree of desirability to perform a job. Third, finally a check-list indicating incidents thatdescribe workers as “good” or “bad” is constructed. Then, the check-list is given to the rater forevaluatingtheworkers.

The basic idea behind this rating is to apprise the workers who can perform their jobs effectivelyin critical situations. This is so because most people work alike in normal situation. The strengthof critical incident method is that it focuses on behaviours and, thus, judge’s performance ratherthanpersonalities.

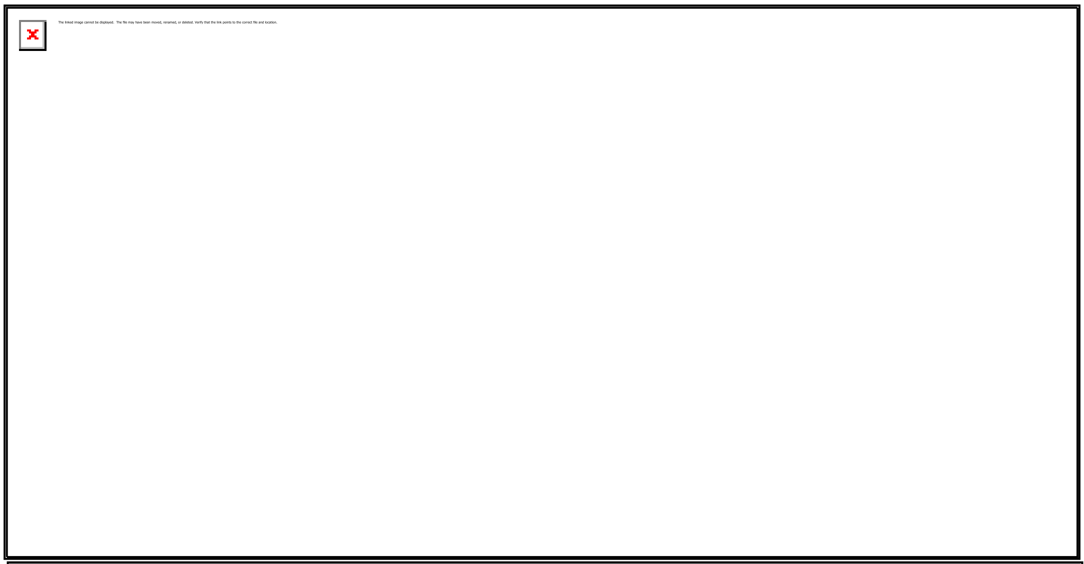
Its drawbacks are to regularly write down the critical incidents which become time-consumingand burdensome for evaluators, i.e., managers. Generally, negative incidents are positive ones. Itis rater’s inference that determines which incidents are critical to job performance. Hence, themethodis subject to all thelimitations relating tosubjectivejudgments.

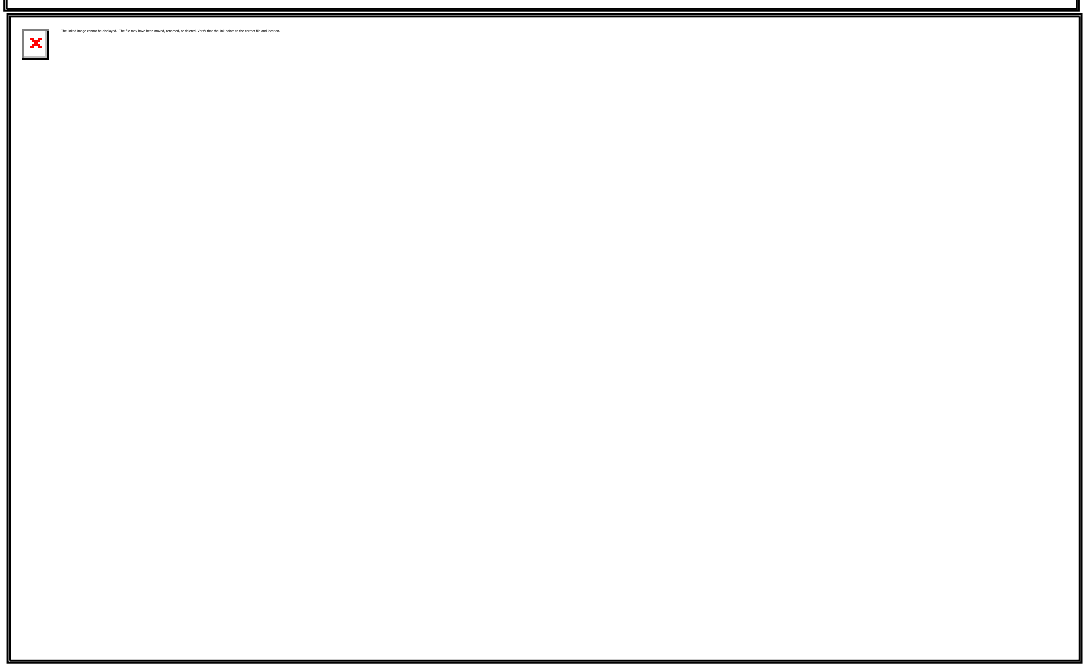
GraphicRatingScaleMethod:

The graphic rating scale is one of the most popular and simplest techniques for appraisingperformance. It is also known as linear rating scale. In this method, the printed appraisal form isusedto appraiseeachemployee.

Theformliststraits(suchasqualityandreliability)andarangeofjobperformancecharacteristics (from unsatisfactory to outstanding) for each trait. The rating is done on the basisofpoints on thecontinuum. Thecommon practiceis to followfive points scale.

The rater rates each appraisee by checking the score thatbest describeshis or her performancefor each trait all assigned values for the traits are then totaled. Figure28-3shows a typicalgraphicratingscale.





This method is good for measuring various job behaviours of an employee. However, it is alsosubjected to rater's bias while rating employee's behaviour at job. Occurrence of ambiguity indesign-mg thegraphic scaleresultsinbias inappraising employee'sperformance.

EssayMethod:

Essay method is the simplest one among various appraisal methods available. In this method, therater writes a narrative description on an employee's strengths, weaknesses, past performance,potential and suggestions for improvement. Its positive point is that it is simple in use. It does notrequirecomplex formatsand extensive/specifictraining to completeit.

However, essay method, like other methods, is not free from drawbacks. In the absence of anyprescribed structure, the essays are likely to vary widely in terms of length and content. And, ofcourse, the quality of appraisal dependsmoreupon rater's writing skill than the appraiser'sactuallevel ofperformance.

Moreover, because the essays are descriptive, the method provides only qualitative informationabout the employee. In the absence of quantitative data, the evaluation suffers from subjectivityproblem.Nonetheless,theessaymethodisagoodstartandisbeneficialalsoifusedinconjunctionwith otherappraisal methods.

Field ReviewMethod:

When there is a reason to suspect rater's biasedness or his or her rating appears to be quite higherthan others, these are neutralised with the help of a review process. The review process is usuallyconductedby thepersonnel officer in theHR department.

Thereviewprocessinvolvesthefollowingactivities:

(a) Identifyareas ofinter-raterdisagreement.

(b) Helpthegrouparriveataconsensus.

(c) Ensurethat each raterconceives ofthestandard similarity.

However, the process is a time-consuming one. The supervisors generally resent what theyconsiderthestaff interference. Hence, the methodisnot widely used.

ConfidentialReport:

ItisthetraditionalwayofappraisingemployeesmainlyintheGovernmentDepartments.Evaluation is made by the immediate boss or supervisor for giving effect to promotion andtransfer. Usually a structured format is devised to collect information on employee's strengthweakness,intelligence, attitude,character, attendance,discipline,etc.report.

ModernMethods:

ManagementbyObjectives(MBO):

Mostofthetraditionalmethodsofperformanceappraisalaresubjecttotheantagonisticjudgments of the raters. It was to overcome this problem; Peter F. Drucker propounded a newconcept,namely, management by objectives (MBO)way back in 1954 in hisbook.

ThePracticeofmanagement.TheconceptofMBOaswasconceived byDrucker,canbedescribed as a “process whereby the superiorand subordinate managers of an organizationjointly identify its common goals, define each individual’s major areas of responsibility in termsof results expected of him and use these measures as guides for operating the unit and assessingthecontribution of each itsmembers”.

In other words, stripped to its essentials, MBO requires the manager to goals with each employeeandthen periodically discuss his or her progresstoward thesegoals.

In fact, MBO is not only a method of performance evaluation. It is viewed by the Practicingmanagersand pedagogues asa philosophy ofmanagerialpracticebecause .t .samethod bywh.chmanagers andsubordinates plan,organise,communicate, controland debate.

An MBO programme consists of four main steps: goal setting, performance standard, comparison, and periodic review. In goal-setting, goals are set which each individual, s to attain. Thesuperior and subordinate jointly establish these goals. The goals refer to the desired outcome tobeachieved by each individual employee.

In performance standards, the standards are set for the employees as per the previously arrangedtime period. When the employees start performing their jobs, they come to know what is to bedone,what has been done, and what remains to bedone.

In the third step the actual level of goals attained are compared with the goals agreed upon. Thisenablestheevaluatortofindoutthereasonsvariationbetweentheactualandstandardperformance of the employees. Such a comparison helps devise training needs for increasingemployees’ performance it can also explore the conditions having their bearings on employees’performancebut over which theemployees haveno control.

Finally, in the periodic review step, corrective measure is initiated when actual performancedeviates from the slandered established in the first step-goal-setting stage. Consistent with theMBO philosophy periodic progress reviews are conducted in a constructive rather than punitivemanner.

The purpose of conducting reviews is not to degrade the performer but to aid in his/her futureperformance. From a motivational point of view, this would be representative of McGregor’stheories.

Figure 28.4 present the MBO method of performance appraisal presently used by an engineeringgianti.e., Larsenand Turbro Limited.

Limitation ofMBO:
MBOisnotapanacea,curefor allorganisationalproblems.

Aswithothermethods,italsosuffersfromsomelimitationsascataloguedbelow:
(i) SettingUn-measurableObjectives:
OneoftheproblemsMBOsuffersfromisunclearandun-measurableobjectivessetforattainment.Anobjectivesuchas“willdoabetterjoboftraining”isuselessasitisun-measurable. Instead, “well have four subordinates promoted during the year” is a clear andmeasurableobjective.

(ii) Time-consuming:
The activities involved in an MBO programme such as setting goals, measuring progress, andprovidingfeedback can takeagreat deal of time.

(iii) TugofWar:
Setting objectives with the subordinates sometimes turns into a tug of war in the sense that themanager pushes for higher quotas and the subordinates push for lower ones. As such, goals so setarelikely to beunrealistic.

(iv) LackofTrust:
MBO is likely to be ineffective in an environment where management has little trust in itsemployees. Or say, management makes decisions autocratically and relies heavily on externalcontrols.

BehaviourallyAnchoredRatingScales(BARS):
Theproblemofjudgmentalperformanceevaluationinherentinthetraditionalmethodsofperformance evaluation led to some organisations to go for objective evaluation by developing atechnique known as “Behaviourally Anchored Rating Scales (BARS)” around 1960s. BARS aredescriptionsofvariousdegrees ofbehaviourwithregard to aspecificperformancedimension.

It combines the benefits of narratives, critical incidents, and quantified ratings by anchoring aquantifiedscalewithspecificbehaviouralexamplesofgoodorpoorperformance.Theproponents of BARS claim that it offers better and more equitable appraisals than do the othertechniquesofperformanceappraisal wediscussedso far.

DevelopingBARStypicallyinvolvesfivesteps:
1. GeneratingCriticalIncidents:
Critical incidents (or say, behaviours) are those which are essential for the performance ofthejobeffectivelyPersonswhoareknowledgeableofthejobinquestion(jobholdersand/orsupervisors)areaskedtodescribespecificcriticalincidentsofeffectiveandineffective performance. These critical incidents may be described in a few short sentences or phrases usingthe terminology.

2. DevelopingPerformanceDimensions:

The critical incidentsare then clustered into a smaller set of performance dimensions, usuallyfiveto ten.Eachcluster,orsay,dimensionisthendefined.

3. ReallocatingIncidents:

Various critical incidents are reallocated dimensions by another group of people who also knowthe job in question. Various critical incidents so reallocated to original dimensions are clusteredintovariouscategories,witheachclustershowingsimilarcriticalincidents.Thosecriticalincid entsareretained whichmeet 50to 80%of agreementwiththecluster as classifiedin step2.

4. Scaling Incidents:

The same second group as in step 3 rates the behaviour described in each incident in terms ofeffectiveness or ineffectiveness on the appropriate dimension by using seven to nine points scale.Then, average effectiveness ratings for each incident are determined to decide which incidentswillbeincluded in thefinal anchored scales.

5. DevelopingFinalBARSInstrument:

A subset of the incidents (usually six or seven per cluster) is used as a behavioural anchor for thefinal performance dimensions. Finally, a BARS instrument with vertical scales is drawn to beusedforperformanceappraisal, asinFigure27-5.

HowBARSisdevelopedcanbe exemplifiedwithanexampleofgrocerycheckoutclerksworkinginalargegrocerychain.

A number of critical incidents involved in checking out of grocery can be clustered intosevenperformancedimensions:

1. KnowledgeandJudgment

2. Conscientiousness

3. SkillinHumanRelations

4. SkillinOperationofRegister

5. SkillinBagging

6. OrganisationalAbilityofCheckstandWork

7. SkillinMonetaryTransactions

8. ObservationalAbility

Now, a BARS for one of these performance dimensions, namely, “knowledge and judgment” canbe developed, as in Figure 28-5. Notice how the typical BARS isbehaviourally anchored withspecificcritical incidents.

BARS method of performance appraisal is considered better than the traditional ones because itprovidesadvantageslikeamoreaccurategauge,clearerstandards,betterfeedback,andconsistencyin evaluation. However, BARS isnotfreefrom limitations.

The research on BARS indicates that it too suffers from distortions inherent in most rating scales.Theresearchstudyconcludedthat“itisclearthat researchonBARStodatedoesnotsupportthe regarding scale independence In short, while BARS may outperform conventionalratingtechniques,it isclearthat theyarenot a panaceaforobtaininghighinterraterreliability”

AssessmentCentres:
The introduction of the concept of assessment centres as a method of performance method istraced back in 1930s in the Germany used to appraise its army officers. The concept graduallyspreadto theUS and theUKin 1940s and to theBritain in 1960s.

The concept, then, traversed from the army to business arena during 1960s. The concept ofassessment centre is, of course, of a recent origin in India. In India, Crompton Greaves, Eicher,HindustanLeverandModiXeroxhaveadoptedthis technique ofperformanceevaluation.

In business field, assessment centres are mainly used for evaluating executive or supervisorypotential. By definition, an assessment centre is a central location where managers come togethertoparticipateinwell-designedsimulatedexercises.Theyareassessedbyseniormanagerssupplementedby the psychologists and the HR specialists for2-3 days.

Assessee is asked toparticipate in in-basket exercises,work groups,simulations, androleplayingwhichareessentialforsuccessfulperformanceofactualjob.Havingrecordedtheassessee’sbehaviour the raters meet to discuss their pooled information and observations and,based on it, they give their assessment about the assesee. At the end of the process, feedback intermsof strengths andweaknessesisalso providedto theassesees.

The distinct advantages the assessment centres provide include more accurate evaluation, mini-mumbiasedness,rightselectionandpromotionofexecutives,andsoon.Nonetheless,thetechniqueofassessmentcentresisalsoplaguedbycertainlimitationsand problems.Thetechnique is relatively costly and time consuming, causes suffocation to the solid performers,discouragestothepoorperformers(rejected),breedsunhealthycompetitionamongtheassessees,and bears adverseeffectson those not selected forassessment.

360–DegreeAppraisal:

Yet another method used to appraise the employee's performance is 360 – degree appraisal. Thismethod was first developed and formally used by General Electric Company of USA in 1992.Then, it travelled to other countries including India. In India, companies like Reliance Industries,Wipro Corporation, Infosys Technologies, Thermax, Thomas Cook etc., have been using thismethodfor appraisingthe performance of theiremployees.Thisfeedbackbasedmethodisgenerallyusedforascertainingtrainingand developmentrequirements,ratherthanforpayincreases.

Under 360 – degree appraisal, performance information such as employee's skills, abilities andbehaviours, is collected "all around" an employee, i.e., from his/her supervisors, subordinates,peersandevencustomers and clients.

In other worlds, in 360-degree feedback appraisal system, an employee is appraised by hissupervisor, subordinates, peers, and customers with whom he interacts in the course of his jobperformance.Alltheseappraisersprovideinformationorfeedbackonanemployeebycompletingsurvey questionnaires designedforthis purpose.

Allinformationsogatheredisthencompiledthroughthecomputerizedsystemto prepareindividualized reports. These reports are presented to me employees being rated. They then meetme appraiser—be it one's superior, subordinates or peers—and share the information they feel aspertinentand usefulfordeveloping aself-improvement plan.

In 360 – degree feedback, performance appraisal being based on feedback "all around", an em-ployee is likely to be more correct and realistic. Nonetheless, like other traditional methods, thismethod is also subject to suffer from the subjectivity on the part of the appraiser. For example,while supervisor may penalise the employee by providing negative feedback, a peer, beinginfluencedby 'giveand takefeeling' may givearavereview on his/her colleague.

CostAccountingMethod:

This method evaluates an employee's performance from the monetary benefits the employeeyields to his/her organisation. This is ascertained by establishing a relationship between the costsinvolvedinretaining theemployee, andthe benefitsanorganisation derives from Him/her.

While evaluating an employee's performance under this method, the following factors arealsotaken into consideration:

1. Unitwiseaveragevalueofproductionorservice.

2. Qualityofproduct produced or servicerendered.

3. Overheadcostincurred.

4. Accidents,damages,errors,spoilage, wastagecausedthroughunusual wearandtear.

5. Humanrelationshipwithothers.

6. Costofthetimesupervisorspent inappraisingtheemployee.

EMPLOYEESGRIEVANCES

Definition:EmployeeGrievance

Employee grievance refers to the dissatisfaction of an employee with what he expects from thecompany and its management. A company or employer is expected to provide an employee witha safe working environment, realistic job preview, adequate compensation, respect etc. However,employee grievance is caused when there is a gap between what the employee expects and whatherecceivesfrom theemployer.

Employee grievances may or may not be justified. However, they need to be tackled adequatelybecause they not only lower the motivation and performance of the employee but also affects thework environment. Employee grievances if left unchecked can lead to large disputes within thecompany.Any company must haveaproper channel foremployeegrievanceredressal.

Employee Grievance should be handled in a proper and well defined manner. If an employeereports a matter relatedto a policy or somethinghe or she is not happy with or wants tocomplaintagainst, aframework definedinpolicy should beused.

TypicalStepsinEmployeeGrievanceHandling:

1. Employeegrievanceshouldbesubmittedinaproperchannel

2. Thesupervisorof theemployeeshould beinformed and spoken to

3. A review committee should examine the grievance for its validity and

against the company'spolicy

4. Resolutionshouldbeprovidedifthegrievanceisvalid

5. If the employee grievance is not resolved there should be a further body where it can beappealed.

CausesofGrievances:

Grievancesmayoccur dueto anumberofreasons:

1. Economic:

Employees may demand for individual wage adjustments. They may feel that they are paid lesswhen compared to others. For example, late bonus, payments, adjustments to overtime pay,perceivedinequalitiesin treatment,claims forequalpay,andappealsagainstperformance-relatedpayawards.

2. Workenvironment:

It may be undesirable or unsatisfactory conditions of work. For example, light, space, heat, orpoor physical conditions of workplace, defective tools and equipment, poor quality of material,unfairrules,and lack ofrecognition.

3. Supervision:

Itmaybeobjectionstothegeneralmethodsofsupervisionrelatedtotheattitudesofthesupervisor towards the employee such as perceived notions of bias, favouritism, nepotism, casteaffiliationsand regional feelings.

4. Organizationalchange:

Anychangeintheorganizationalpoliciescanresultingrievances.Forexample,theimplementationof revised company policies or newworking practices.

5. Employeerelations:

Employeesareunabletoadjustwiththeircolleagues,sufferfromfeelingsofneglectandvictimizationandbecomeanobjectofridiculeandhumiliation,orotherinter-employeedisputes.

6. Miscellaneous:

These may be issues relating to certain violations in respect of promotions, safety methods,transfer,disciplinary rules, fines,granting leaves, medicalfacilities, etc.

EffectsofGrievance:

Grievances, if not identified and redressed, may adversely affect workers, managers, and theorganization.

Theeffectsare thefollowing:

1. Ontheproduction:

a. Lowqualityofproduction

b. Lowproductivity

c. Increaseinthewastageofmaterial,spoilage/leakageofmachinery

d. Increaseinthecostofproductionper unit

2. On theemployees:
a. Increaseintherateofabsenteeismandturnover

b. Reductioninthelevelofcommitment,sincerityandpunctuality

c. Increaseintheincidenceofaccidents

d. Reductioninthelevelofemployee morale.

3. On themanagers:
a. Strainedsuperior-subordinate relations.

b. Increaseinthedegreeof supervisionandcontrol.

c. Increaseinindisciplinecases

d. Increaseinunrestandtherebymachinerytomaintainindustrialpeace

NeedforaFormalProceduretoHandleGrievances:
Agrievancehandlingsystemservesasanoutletforemployeefrustrations,discontents,andgripes like a pressure release value on a steam boiler. Employees do not have to keep theirfrustrationsbottled up until eventually discontentcauses explosion.Theexistenceofaneffectivegrievanceprocedurereducestheneedofarbitraryactionbysupervisors because supervisors know that the employees are able to protect such behavior andmake protests to be heard by higher management. The very fact that employees have a right to beheard and are actually heard helps to improve morale. In view of all these, every organizationshouldhaveaclear-cut procedureforgrievancehandling.