

MID-I

Magame

* Management : Management is the process of planning, organizing, leading, and controlling resources to achieve goals efficiently and effectively. is called management.

Functions of Management

1. planning

- planning is defined as the process of choosing goals and determining strategies to achieve goals perfectly.
- setting objectives and goals.
- developing strategies and action plans.
- Identifying resources.

2. organizing

- organizing involves assigning tasks & grouping tasks to departments.
- It is process of grouping the work to.
- Allocating resources (human, financial etc.)
- defining roles and responsibilities.

3. staffing

- > staffing means filling the positions needed in the organization by appointing qualified persons for the job.
- > Recruit, Recruiting and training employees.
- > Developing talent and skills.

4. Directing

- > Directing means managing managers, managing workers.
- > motivating and influencing employees.
- > communicating effectively.
- 5. motivating

-> motivation is a managerial function to inspire and encourage people.

-> motivation is the key to success.

6. Controlling

-> Controlling is the monitoring performance and progress.

-> Taking correct actions.

7. communication

-> It means transfer of information and understanding the person-to-person.

-> communication lead to sharing of information.

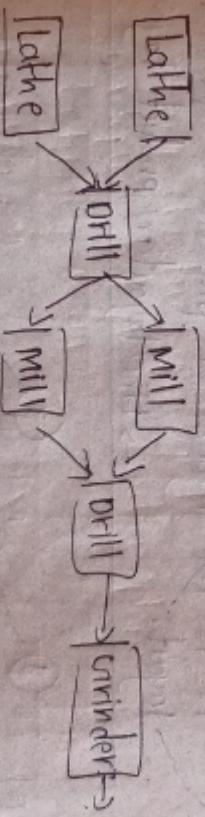
* plant layout

Def.: plant layout refer to the physical arrangement of equipment, machinery and facilities within a manufacturing facility to productivity and safety in called plant layout.

Types of plant layout

1. product layout

- > product layout is also known as line layout.
- > product layout preferred for continuous production.



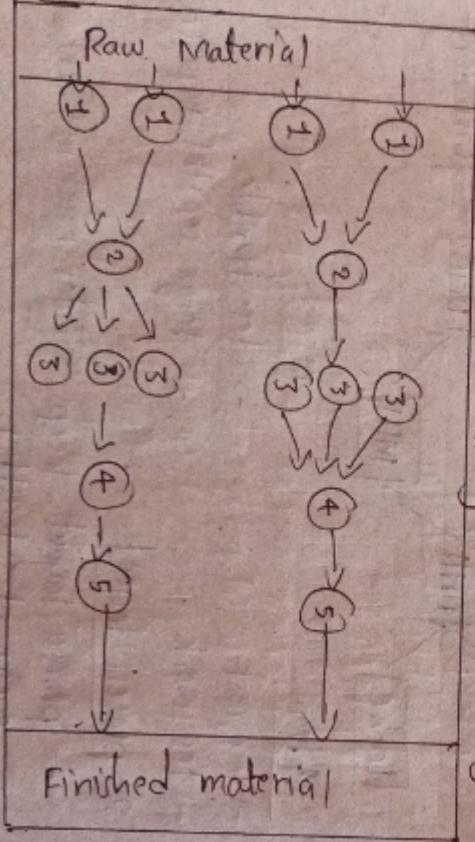
Advantages

- > low cost
- > less work.
- > large capital required

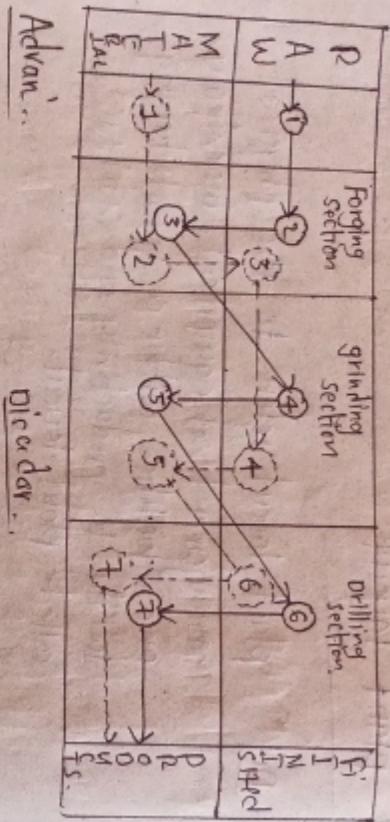
2. process layout

- > process layout keeps similar machines or equipments together.
- > All lathe at one place and all milling at one place.

process layout



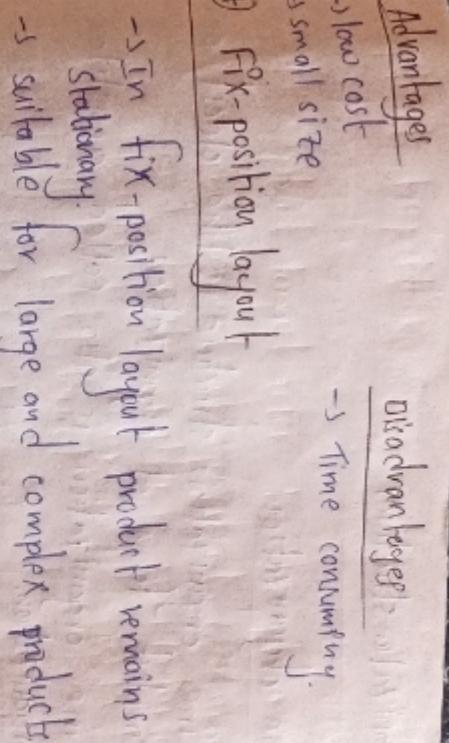
3. combination layout:
- combination layout combines the advantages of both process and product layout.
 - It is the hybrid of process and product layout.
 - Line layout (or) product layout.



Advantages

- Better utilization.
- Easy to operate.
- Need more space.

Disadvantages



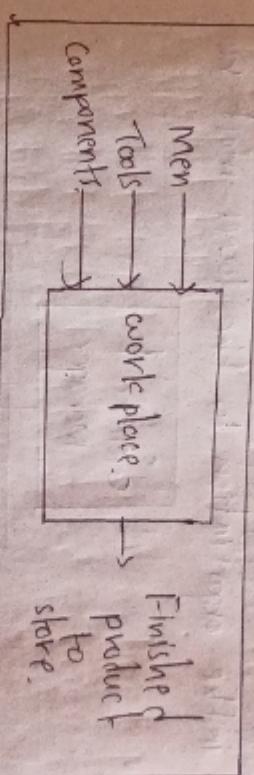
Advantages

- low cost
- small size

Disadvantages

- Time consuming.
- In fix-position layout product remains stationary.
- suitable for large and complex products.

④ Fix-position layout



Advantages

- low cost
- flexible

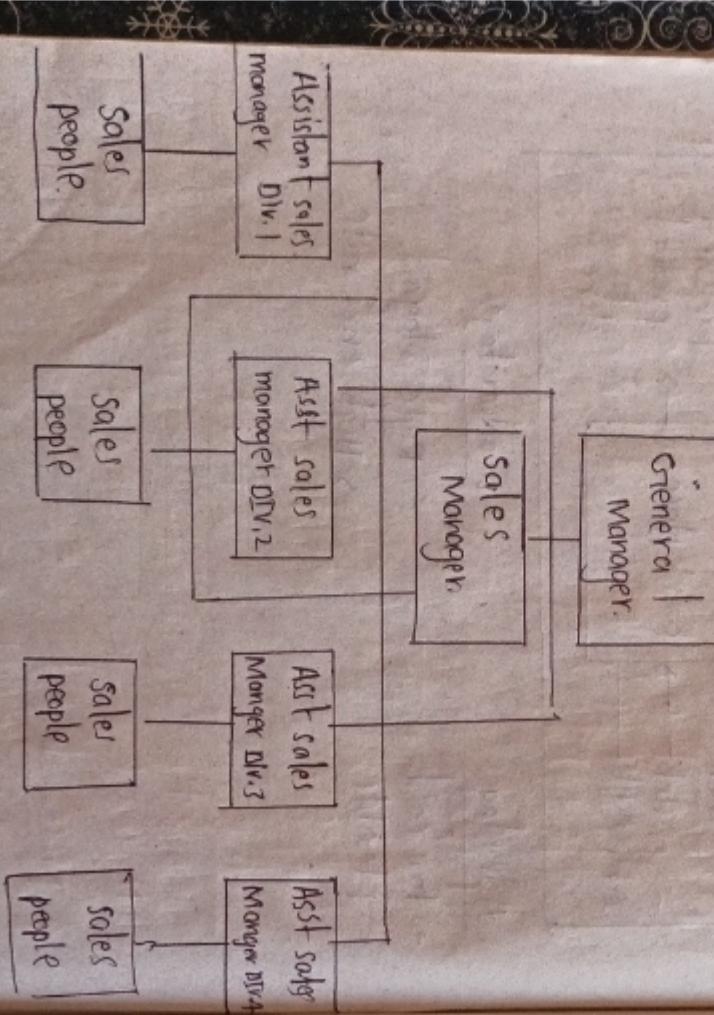
Disadvantages

- rigid layout
- High error rate.

Organization structures

1. Line organization

- Line organization structure is the oldest and simplest form of organization.
- Line organization is also called as military organization.
- Authority flows from the top-most person in the organization to the lower-most rung.

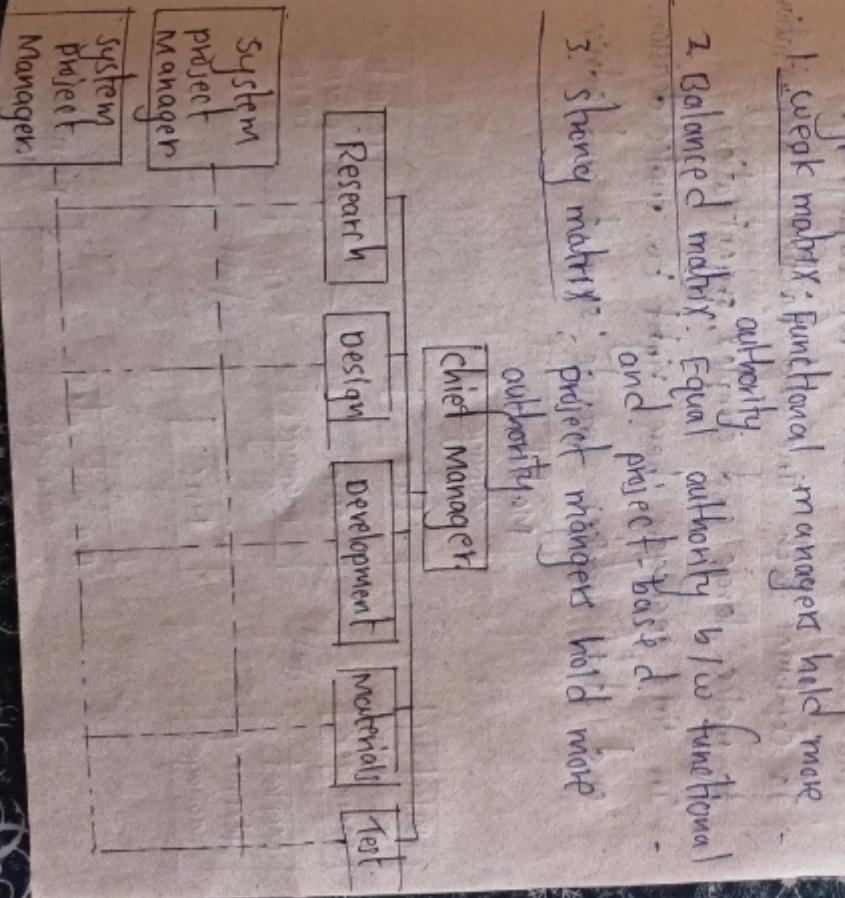


Advantages

- Simple to work
- Economical and effective
- Clear accountability
- Fast decision making

2. Matrix organizational structure

- Matrix organizational structure is a combination of functional and project based structures.
- It is a hybrid design.
- Dual reporting relationships.
- Types:
 - 1. weak matrix: functional managers hold more authority
 - 2. balanced matrix: Equal authority b/w functional and project-based
 - 3. strong matrix: project managers hold more authority



Disadvantages

- Inflexible
- Limited coordination b/w department

Advantages

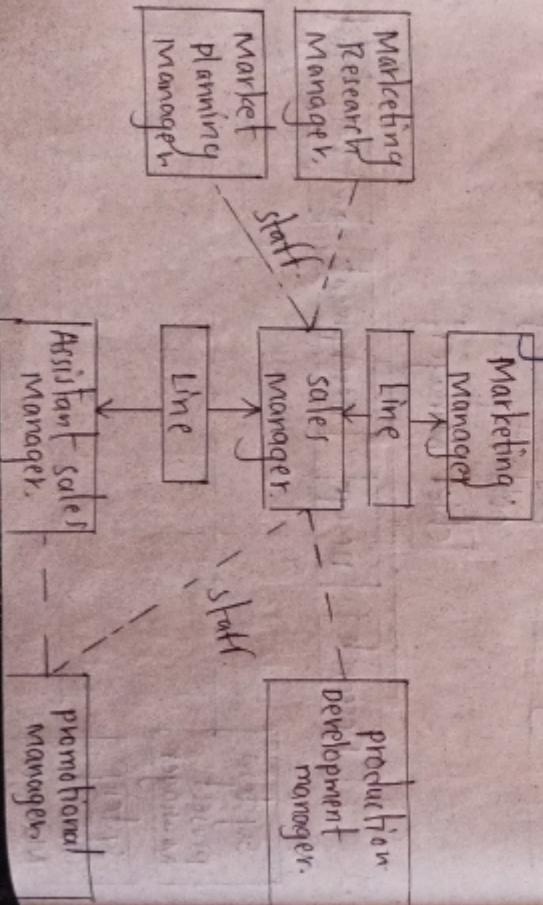
- > Flexible.
- > Efficient
- > Better project management

Disadvantages

- > Complexity & confusion
- > power struggles b/w managers.
- > There is a planned specialization

(3) Line and staff organization

- > A line-staff organization is a structure that distributes work responsibilities from upper management to lower-level management.
- > Managers establish standards for the quality of the work and deadlines for employees.
- > It combines both line and functional organizations to make large and complex organization.
- > In line managers have right to make decisions and staff manager provide support and advice.



line organization

line & staff organization

- | | |
|---|--|
| -> Suitable for small organization. | -> Suitable for large organizations |
| -> cost is economical | -> cost is expensive. |
| -> Here expert advice is absent. | -> Here expert advice is present |
| -> There is no possibility of misunderstanding. | -> There is a possibility of misunderstanding. |
| -> discipline - very strict | -> discipline - loosed. |
| -> unity of command - present | -> unity of command - less present. |

(4) Functional organization structure

- > A functional organization structure is a team structure that groups employees into different department based on areas of expertise.
- > This is most commonly used in structure.
- > It is used especially in larger companies.

Advantages

- > Growth and expansion
- > Staff becomes ineffective

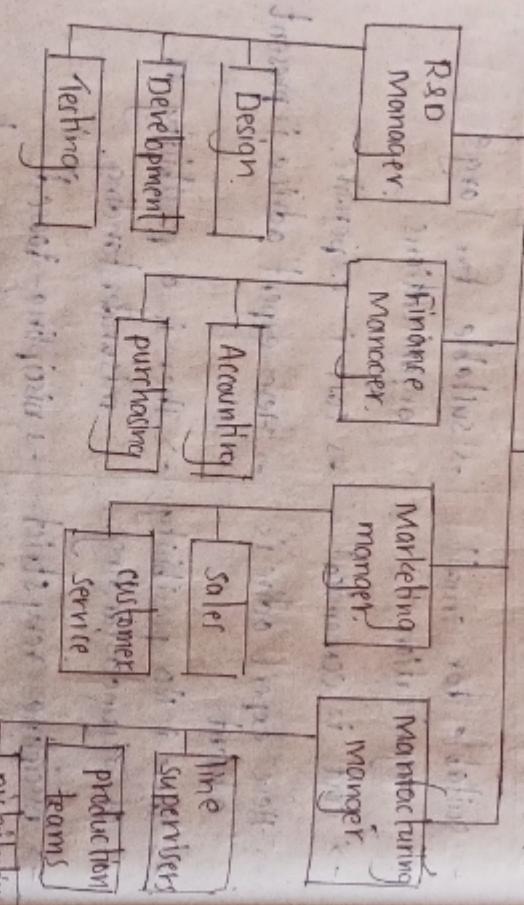
Disadvantages

- > There is a planned specialization

→ under functional organization structure, employee are classified into according to their function

→ It is headed by functional manager.

president



→ This chart shows the role hierarchy:

⇒ Each department have separate manager.

Advantages

Disadvantages

- Effective staff management
- knowledge sharing.
- poor communication b/w units.

⑤ project organization structure

→ project organizational structure is an essential tool for determining the hierarchy

of a people, their function, workflow and reporting system

- A project organization structure helps how an organization carry out its operations.
- This structure leads by project manager.
- The project manager have full authority over project tasks.
- This structure creates strong communication b/w team members.

Executive officer

Project A Manager

Project B Manager

Project C Manager

- project staff A
- project staff B
- project staff C

Advantages

- > Happy customers
- > Deadline strict
- > Working smarter
- > Better team work
- > conflict

⑥ Committee organisation structure

-> A committee organizational structure is a way of organizing authority and responsibility with a group of people.

-> The typical committee structure includes

- o chairperson

- o vice chairperson

- o secretary

- o treasurer

-> Committee can be made of employees, volunteers, board members.

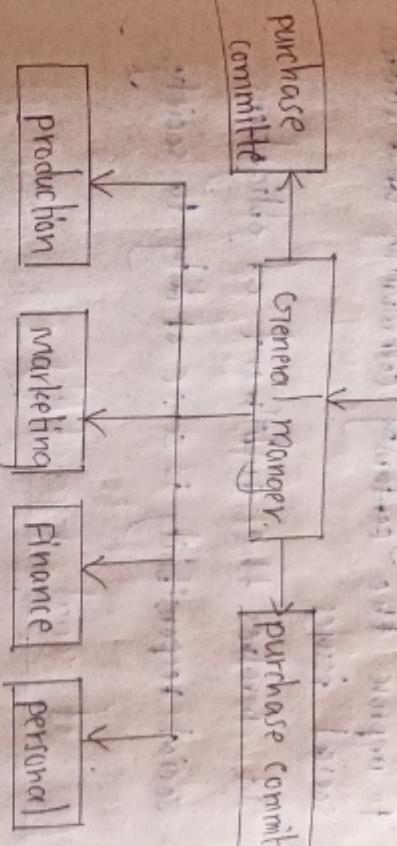
-> A basic structure of committee consist of chairperson, secretary and 8 to 20 other members.

disadvantages

Finance Committee

BOD

Executive committee



Advantages

disadvantages

- > shared responsibility
- > Time consuming
- > Flexibility

*Social Responsibility of Management :-

- > Social responsibility management is the process of organizing and overseeing efforts to improve the community and address social issues.
- > It involves the fulfillment of obligations.
- > Social responsibility is sense of duty to society.

Types of social responsibility

1. Economic Responsibility

- > Every business is engaged in economic activities.
- > Economic responsibility refers to the practice of making financial decisions based on a commitment to doing good.

2. Legal Responsibility

- > legal responsibility in management science refers to the obligation of businesses and their managers to follow laws and rules.

- > A company should protect the environment.

3. Ethical Responsibility

- > This type of responsibility expects a certain type of behaviour (or) conduct from the company.

- > This behaviour may not be conducted by law.

4. Discretionary Responsibility

- > It prevents investment of charitable funds into speculative activities.
- > They help them by providing a charitable contribution, education activities etc.
- o Some responsibilities for different interest groups
- o Responsibility towards shareholders.
- o " " " workers.
- o " " " consumers
- o " " " Government and community

Advantages:

- o Sustainability
- o Burden on consumers
- o Lack of social skills

* Management as Science

Management is a considered science because it has an organised body of knowledge.

Definition of science in management

"Science is a systematic body of knowledge of data concerning a selected field of study that contains general facts."

→ "Science is the study and knowledge about the physical world."

○ Features of management as science

→ Management as science is characterized by the main features.

1 Universally acceptance principles

→ These principles represents basic truth about a particular field of enquiry.

→ These principles may be applied in all situations, at all times & at all places.

2 Experimentation & observation

→ Scientific principles are derived through experimentation & observation.

→ Management principles are also based on scientific theory & observation

3 cause and effect relationship

→ principles of science lay down cause and effect relationships. b/w various variables.

* Management as Art

→ Management is considered an art because it involves creativity, intuition, and personal judgement.

Def of Art in "Management"

"Art refers to the application of knowledge and skill to get desired result."

○ Features of management as an Art

creativity

1 creativity : managers use creativity to find new ways to solve problems.

2 practice : managers improve their skills through practice.

3 goal-oriented : management is goal-oriented

4 personal judgement : managers use personal judgement to make decisions.

* Management is both science and art

-> Management is science as well as an art.

-> Management combines features of both science and art.

-> It is considered as science, because it has an organised body of knowledge. It is considered as art because creativity, intuition, and personal judgement.

-> Science and Art are mutually exist in management.

* Schools of Management Thought

o Taylor's Scientific Theory (or) Scientific Theory

-> History of Management

-> Taylor's scientific theory of management

-> Taylor's scientific theory of management focuses on individual efficiency and productivity.

-> The father of this theory was Frederick Winslow Taylor.

-> Taylor's scientific theory is also called as Scientific Theory of management.

-> Taylor's scientific theory is often referred to as "Taylorism".

-> Taylor believed that workers would be more motivated to work if they were paid different rates on their performance.

-> Taylor's theory is based on four principles.

o Scientific method : use the scientific method to determine the most efficient way to complete a task.

o Assign workers based on skills : Match workers to tasks based on their skills and abilities.

o Monitor performance : observe workers' performance and provide instructions and training when needed.

o Divide workloads : divide workloads b/w workers and managers can plan.

* Henry Fayol's 4 principles of management

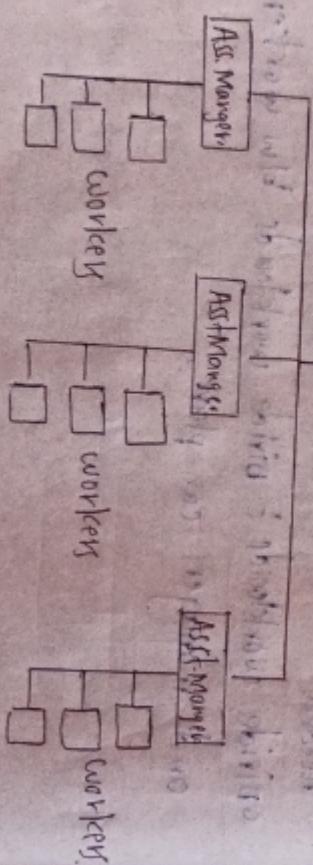
→ Henry Fayol was born in 1841 in France. He graduated in mining engineering after that he joined in french coal company as a engineer.

- o Henry Fayol's 14 principles

The work being done at different individual division of work. It refers to dividing

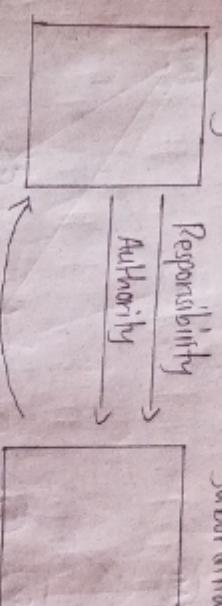
→ Fawcet recommended that work could be divided as per workers skills, abilities, qualification,

→ Division of work.



2. Authority and responsibility

- According to this principle, there should be a proper balance between authority and responsibility.
→ Authority is the duty, which subordinate is expected to perform.

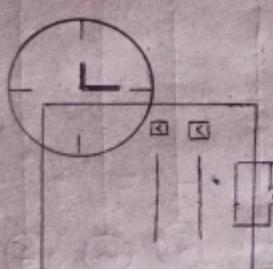


三

→ Discipline refers to obedience to the rules and regulations of the organization.

\Rightarrow discipline
of management

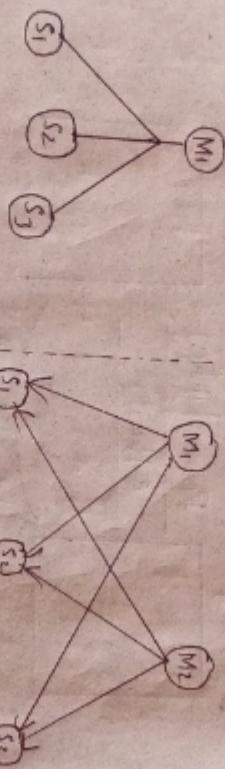
Every employee must and should be disciplined to work effectively and efficiently.



4. Unity of command

→ According to this principle, each subordinate should receive orders and be accountable to only one superior.

→ If any employee gets orders from two superiors at same time, then unity of command is violated.



M₁, M₂ - managers

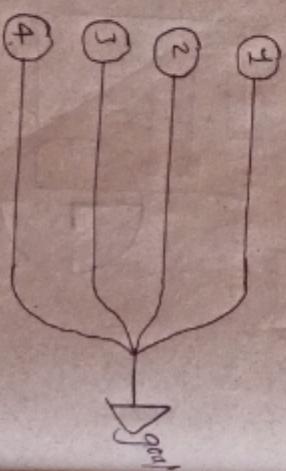
S₁, S₂, S₃ - subordinates

5. Unity of direction

→ Unity of direction is a management principle that states that group of activities with same goal should have one leader and one plan.

→ It improves efficiency

→ It reduces conflict.



6. Subordination of individual interest to general interest

→ According to this principle, organization doesn't need individual interest, it needs general interest.

→ It is the duty of manager to reconcile how a manager must sacrifice his interest.

Individual Interest

General Interest

⑦ Remuneration of employees

① ② ③ ④
⑤ ⑥ ⑦

→ According to this principle remuneration should be fair and satisfactory for both employer and organization.

→ If an organization earns higher profits, then it should share some of its profits with employees.

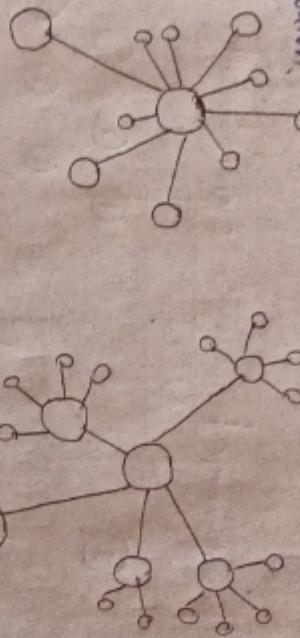


(8) centralization and decentralization

Centralization refers to the concentration of authority at the top level and decentralization means distribution at all levels of management.

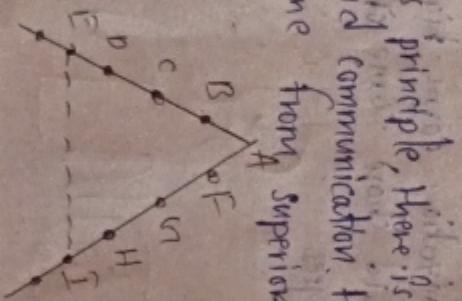
→ Acc. to this principle there should be proper balance b/w centralization and decentralization.

proper balance b/w centralization and decentralization.



(9) scalar chain

→ Acc. to this principle, there is a scalar chain of authority and communication that moves in a straight line from superior to lower subordinate.



(10) order

→ Acc. to this principle, there should be a proper place for everything and everyone.

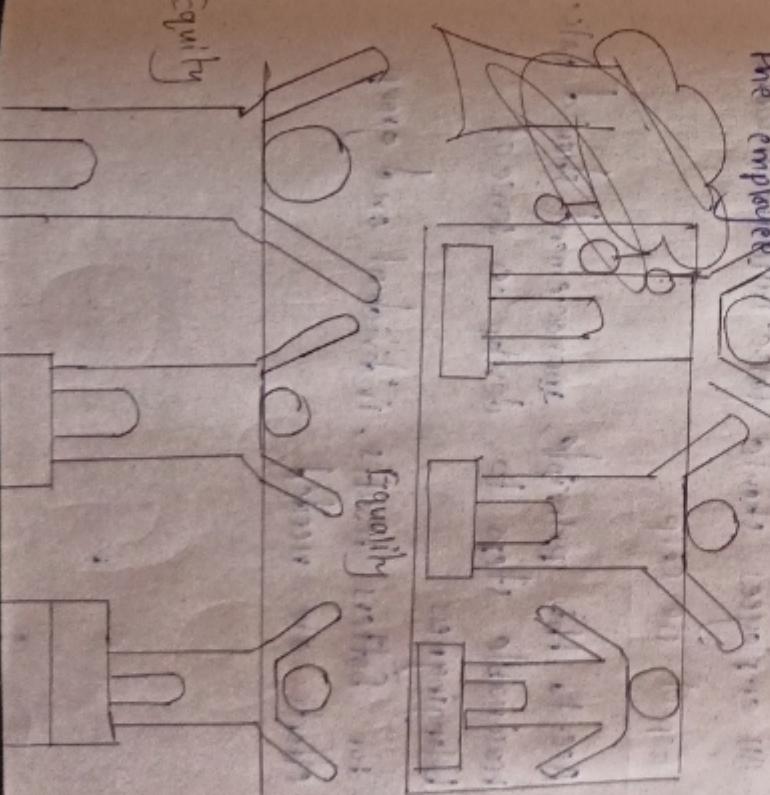
→ Henry Fayol types of orders

- o Material order
- o Social order

(11) Equity

→ According to this principle, there should not be any discrimination among employees based on religion, caste, language, nationality etc.

→ Equity improves satisfaction and motivation of the employee.



12. stability of personnel

- According to this principle, there should be proper effort to achieve stability and continuity of employment.
- workers are encouraged to improve their quality of work.

(3) Initiative

- Acc. to this principle, workers should encourage and should be given an opportunity to initiate.
- All employees should take initiative to work.

(4) Esprit de corps

- Acc. to this principle, management should take reasonable steps to develop a sense of belongingness.
- for better results, individual and group efforts are needed.

X system Theory of management

- Ludwig von and others introduced system theory of management in 1968.
- General System Theory; foundations, development, applications.

- A system is independent group of items/ individuals.

- we all are in a system.

- Components of system Theory of management.

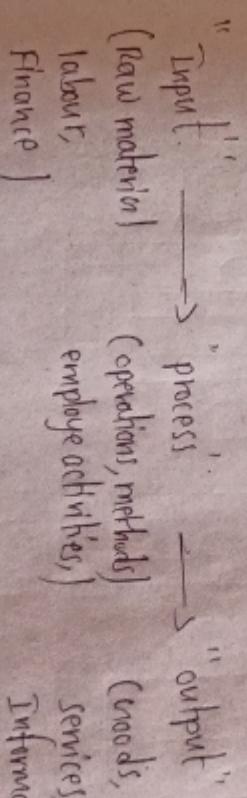
- o Input

- o process

- o output

- o Feedback

- o Environment



Environment

Feedback

(consumer, competitors, government, supplier)

→ Types of system

- open system interacts with its environment dynamically
- closed system is opposite to open system

Advantages

Disadvantages

- dynamic nature → lack of precision
- unified focus → subjectivity

unit - 2

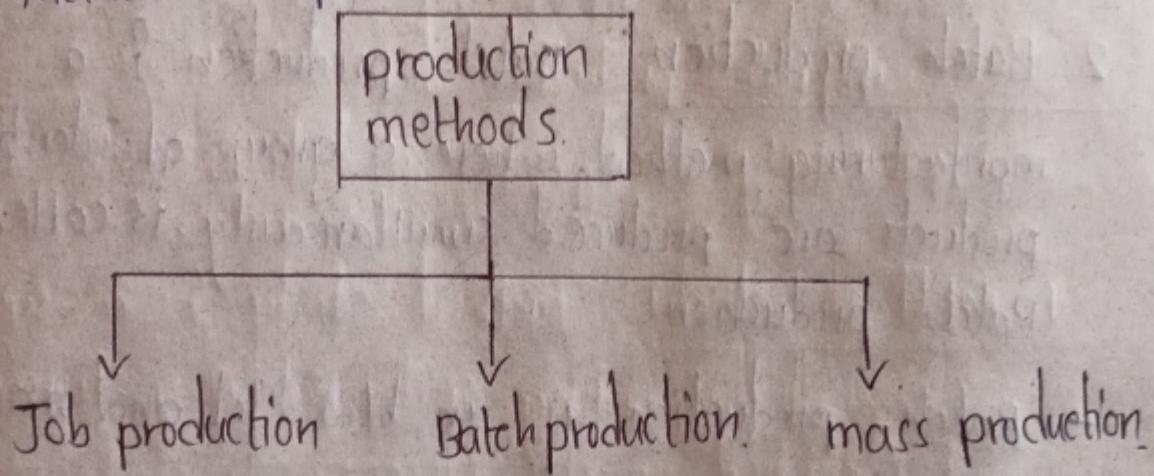
* production methods

productivity : productivity is defined as the

rate at which the goods and services are produced. is called productivity.

→ It refers to the relationship between input and outputs.

→ methods of production.



1. Job production : Job production is a manufacturing process that involves producing single product (or) products for a specific customer is called job production.

→ Job production is also known as one-off production.

→ product is made as per customer requirements.

→ Job production is typically used for unique products.

→ Job production requires skilled labour such as technicians, craftsmen etc.

→ Job production requires long lead time.

Advantages

- It ensures high quality
- more flexible
- Increases customer satisfaction
- High cost of production
- slow production

Disadvantages

using assembly automation technology is called mass production.

→ Mass production is the industrial technique to produce large quantity of similar products.

→ Mass production focuses on low cost production.

Advantages

- cost savings
- Expanded market.
- High initial investment
- Decreased quality
- Work study

Disadvantages

2. Batch production:

Batch production is a manufacturing method, where a group of identical products are produced simultaneously, it is called Batch production.

→ Batch production is in between job and mass productions.

→ Batch production is bigger than job production.

Advantages

- Low unit cost.
- Flexibility

3. Mass production:

Def. Mass production is the manufacturing method, where large quantity of standard product manufactured.

Disadvantages

X work study:
Def. work study is the one of the most important management technique, which is employed to improved activities in production is called work study.

Work
Study



-> work study is classified into two types

- o Method study
- o work measurement
- > method study and work measurement are used to examine human work.
- > The main objectives of work study are:
- c Increase productivity
- o Improve worker safety
- o Reduce manufacturing cost
- o Improve production flow.
- > work study is typically used to increase output.

- 1 Method study: Method study is a systematic process of recording and analyzing current and planned work processes to create more efficient and simpler processes.
- > The goal of method study is to determine best way to perform a task.
- > Method study increases productivity and efficiency.
- > It increases quality.
-
2. Work Measurement: Work measurement is a process that determines how long it takes to complete a task or work is called measurement.
- > It involves observing and analyzing work process.
 - > work measurement can help businesses:
 - o Improve efficiency
 - o " planning and control"
 - o set standards
 - > procedure for work measurement:-
 - 1 Select
 - 2 Record
 - 3 Examine
 - 4 Measure
 - 5 Compile
- > Techniques of work measurement
1. Time Study
 2. Synthesis from standard data
 3. PNTs
 4. Analytical Estimating
 5. Work Sampling.

* Statistical quality control

- > Def SQC is a methodology that uses statistical methods to monitor and improve the quality of products or services is called SQC.
- > SQC used in manufacturing, food and pharmaceuticals.
- > SQC is the set of statistical tools used by quality professionals.
- > SQC methods
 - o Acceptance sampling
 - o Statistical process control
 - o Tree diagrams

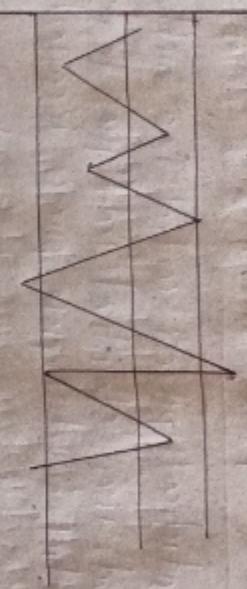
⑤ Acceptance sampling

- > Acceptance sampling is an important field of statistical quality control that was popularized by Dodge and Romig.
- > originally applied by U.S military during world war - II.

* Statistical process control

- > Statistical process control is a methodology that uses statistical techniques to monitor, control, and improve process is called SPC.
- > SPC reduces waste and cost.
- > SPC increases product quality.
- > SPC help to determine the amount of variation.
- o Tree diagrams
 - > A tree diagram is a visual tool used in SPC to identify, organize, and display the various factors. It is called tree diagram.
 - > Tree diagram identify root causes of problems
 - > Types of tree diagram
 - o Cause-and-Effect Tree diagram
 - o Decision Tree diagram
 - o Fault Tree diagram
 - o Event tree diagram
 - > components of tree diagram
 - o Root Node
 - o Branches
 - o Sub-branches
 - o Leaves

X Deming's contribution to quality

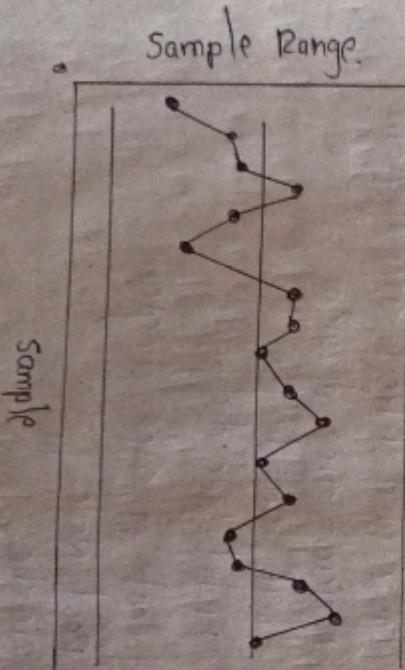


→ X-bar chart of strength

sample mean



→ X-bar chart of strength



Sample Range.

o Sample

→ P chart of strength

Sample

- W. Edwards Deming defined quality as meeting customer expectations.
- He believed that quality was the responsibility of top management.
- Deming's contribution to quality included:
 - o Total quality management
 - o Statistical quality control
 - o Quality is continuous improvement process
- * Deming's 14 points of management
 - o Create constancy of purpose.
 - o Adopt the new philosophy
 - o Cease dependence on inspection
 - o Use single supplier for one item
 - o Analyze the total cost of item, not just the initial cost.
 - o Improve constantly and forever.
 - o Institute training and education.
 - o Institute leadership.
 - o Drive out fear.
 - o Breakdown barriers.
 - o Eliminate slogans.
 - o Eliminate quotas, numerical.

* Material Management

Material

Materials refer to the input into the production process, it may be raw materials, finished goods, spare parts, components, lubricating oil, cleaning materials, called material.

Material management :- Material management is a systematic approach to planning, organizing and controlling the flow of materials from raw materials to finished goods is called material management.

Objectives

The following are five primary objectives of material management.

4. Right material

Right material is the first objective of material management, suitable materials are available for production.

→ By ensuring that the right materials are available, companies can minimize the risk of production delays.

2. Right time

Second objective of material management is to ensure that the right materials are available at right time.

3. Right amount

Third objective of material management is to ensure that right amount of materials are available for production, it reduces the company's risks of stock shortages.

4. Right price

The fourth objective of material management is to ensure that materials are purchased at right price.

5. Right sources

The fifth objective of material management is to ensure that materials are sourced from the right sources, materials are purchased from approved suppliers only.

6. Cost reduction

One of the objectives of material management is to reduce the cost of materials.

→ cost reduction can be achieved through effective planning, procurement, storage etc.

7. Improved quality

Another objective of material management is to improve the quality of materials and products.

→ Improved quality of products satisfies customer.

8. Timely delivery

Another objective of material management is to timely delivery of materials and products.

→ timely delivery is critical to any business, but it improves production and efficiency.

* 0 Types of material management

→ There are different types of material management.

1. Inventory management

Inventory management is the process of overseeing a company's inventory including the production, ordering, storing and selling of products.

→ The goal of inventory management is maintaining right amount of inventory on hand.

2. purchasing management

Purchasing management is the process of managing the buying of goods and services from suppliers and vendors for a company. It is called P.M.

3. warehouse management; warehouse management

Is the process of overseeing day-to-day operations of a warehouse including receiving, storing, packing, and shipping products. It is called W.M.

4. Material requirement planning management:-

MRP management ~~helps~~ is a system for calculating the materials and components needed to manufacture a product. It is called MRP management.

5. Transportation management

Transportation management is the process of planning and executing the movement of goods from one location to another. It is called Transportation management.

* Inventory Techniques

Def: Inventory techniques are methods and strategies for managing a company's inventory. It is called I.T.

→ Inventory techniques can help businesses:

- o Reduce costs
- o Satisfy customers
- o Improve cash flow

→ Inventory techniques are classified into two types

- o ABC Analysis
- o Economic Order Quantity

* ABC Analysis

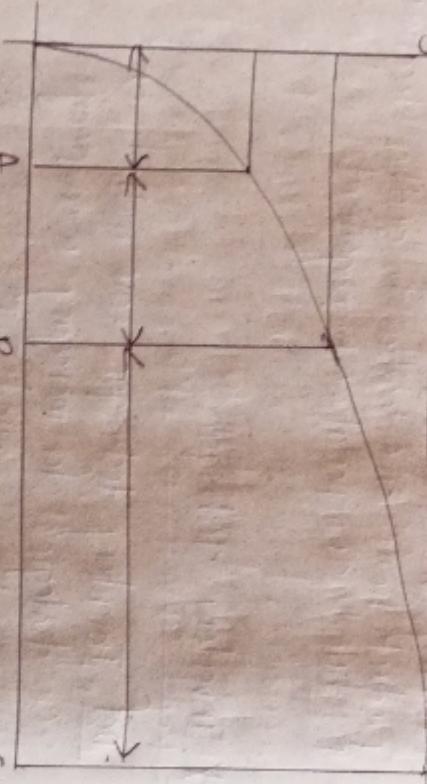
ABC analysis is a inventory technique used to manage inventory by dividing items into three categories (A, B and C) based on their importance and value.

→ "A" items are most valuable and require close attention.

- "B" items moderate valuable but still important

- "C" items are least valuable.

→ graph



→ Above figure shows volume of inventory

A - refers to high value item.

B - medium value item.

C - low value item.

→ The following table summarizes the concept of ABC analysis.

Category	Value (%)	Volume (%)	Desired degree of control
A	70	10	strict
B	20	20	moderate
C	10	70	low

Advantages

Disadvantages

- cost efficiency

- resource optimization

- complex setup
- potential neglect

Economic order quantity

Def: EOQ is a mathematical formula used to determine the optimal quantity of inventory to order at one time it's called Economic order quantity.

The ideal order quantity to minimize inventory costs like holding, shortage, and other costs is called EOQ.

→ Formula = $\sqrt{\frac{2 \times \text{Annual demand} \times \text{Ordering cost}}{\text{Holding cost}}}$

→ EOQ avoids overspending and excess inventory.

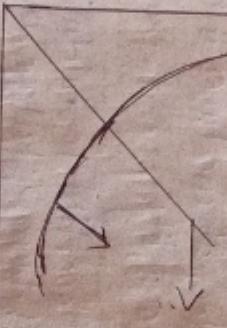
→ Inventory cost can be classified into two types

1. Inventory ordering cost
2. Inventory carrying cost.

1. Inventory ordering cost (oc)

Def: Inventory ordering costs are the expenses a company incurs when placing and receiving an order for inventory. It is called Ioc.

- > These costs are also called as setup costs.



* purchase procedure :

Def: The purchase procedure is a series of steps a company goes through to purchase the goods and services from suppliers to operate its business. It is called purchase procedure.

- > Purchase procedure is key part of company's operations.

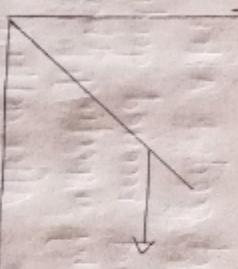
-> The purchase procedure typically includes following steps:

- o Identify needs: Determine what the business needs in terms of goods or services.

2. Inventory carrying costs

Def: Inventory carrying costs are the expenses associated with storing, maintaining over a period of time.

- > There costs are also called as holding costs.



- o Find suppliers: Research best suppliers and compare them based on price, delivery time, etc.
- o place an order: After finding best supplier, place order at them for daily supply.
- o place a purchase order: The business places purchase order with the supplier.

o Receive and inspect goods: After receiving the goods, ensure that received goods are damaged (or) undamaged by inspecting them.

o Pay the supplier: After getting goods from Supplier, pay the amount agreed upon.

→ The purchase procedure can vary from business to business.

X Storage management:

Def: Storage management is the process of receiving, storing, and managing material for production is called storage management.

o Storing materials: Storing materials like chemicals together and away from react materials.

o Labelling and dating: Labelling and dating

The all materials labelling include company name, ingredient, price, scsi approved logo, expiring date etc.

Q Functions of storage management:

→ warehouse design and layout.

→ Material handling and equipment management.

-> inventory tracking and monitoring
-> storage capacity planning

o Types of storage:

→ warehouse storage.

→ distribution centers

→ container storage.

→ Automated storage.

o Storage management Techniques:

→ First-In-First-Out (FIFO)

→ Last-In-First-Out (LIFO)

→ storage by area

→ Random storage

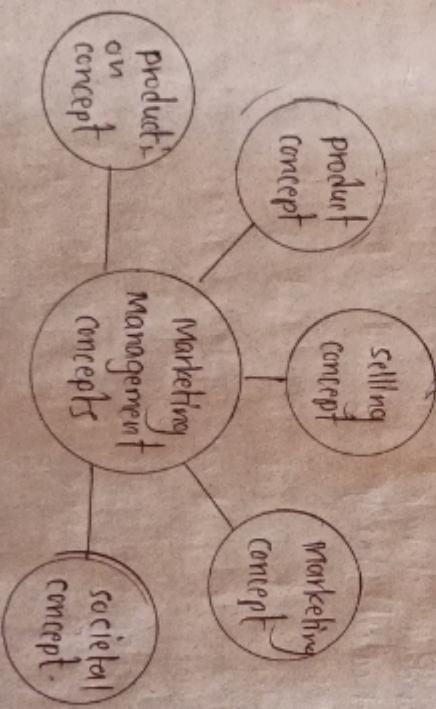
→ Dedicated storage.

* Marketing Management:

o Marketing management It is the process of planning, organizing, and controlling marketing activities to achieve organizational goals, is called marketing management.

* Marketing management concepts (or) philosophies

Def: Marketing management concepts are fundamental approaches that guide marketing decisions, strategies, actions, goals, is called M.M.C.



1 production concept:

- Some organizations believe that they can sell products easily if they are inexpensive.
- Hence organizations follow production concept.

2. product concept:

- product concept is a management philosophy that increases the development and improvement of product, quality, features and performance to satisfy customers. It is called product concept.
- For example Apple uses product concept, focuses quality of its products, which makes them costly.

3. selling concept:

- The selling concept is a management philosophy that emphasizes aggressive selling to customers to buy existing products, and focusing on increasing revenue. It is called selling concept.
- The sale of product depends on buyers manipulation.

- Some organizations believe that they can sell products easily if they are inexpensive.
- Hence organizations follow production concept.

4. Marketing concept

- > The marketing concept is a customer-centric management philosophy that emphasize understanding and meeting customer needs, wants and to achieve organizational goals.
- > It's goal is to satisfy customer better than their competition
- > Identifying market understanding the needs
- > developing the products
- > satisfying the needs of customers
- > perform above things at a profit

5. Societal concept:

- > The societal concept is a marketing strategy that consider the social, ethical, aspects of marketing in addition to needs of customer and organization profits.
- > It is an extension of marketing concept.
- > It consider long-term welfare of society.

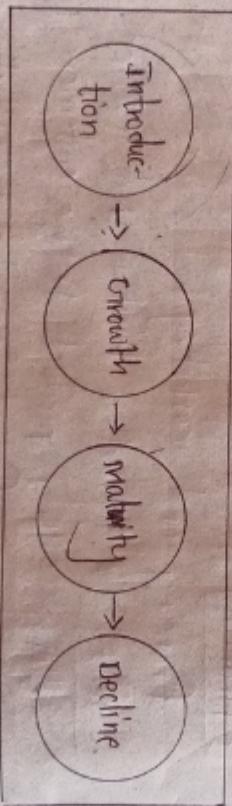
X Functions of marketing

- > Marketing functions are tasks that perform to move products from producer to consumer by some of key functions of marketing.
- > o promotion: A marketing function that involves promoting a product or service.
- > o product management: A marketing function that involves product planning and developing products.
- > o pricing: A marketing function that involves planning and developing products, setting a price for a product.
- > o financing: A marketing function that involves financing and marketing.
- > o selling: A marketing function that involves selling products to the customer.
- > o marketing info. management: A marketing function that involves managing market information.
- > o distribution: A marketing function that involves distributing products or services.
- > o customer service and relationship: A marketing function that involves after providing sales, build long-term relationship with customer.

* Marketing strategies based on product life cycle

product life cycle:- The product life cycle is a marketing concept that describes the stages a product goes from its introduction to its withdrawal from the market is called PLC.

- > It serves as a tool for business.
- > stages of product life cycle.



- > Above figure shows product life cycle flow.
- > The PLC tracks product's journey from introduction to decline.

- o Introduction:- The introduction signifies the entry of a product into the market.
- > In introduction stage introduces product to the consumers.

o growth

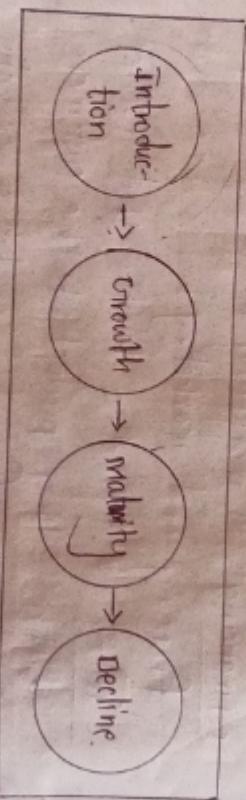
- > In growth stage consumer aware of product's quality, quantity and performance.
- > In growth stage company expand their market by scaling up production and distribution.
- > A successful product only enters into growth stage.
- > In this stage sales are rapidly increases.
- Maturity:- The maturity stage represents the peak of sales and market penetration for the product.
- > competition is very heavy in this stage.

- > High Research and development costs.
- > limited distribution.
- > product launch, slow sales growth, high marketing costs.

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- > The PLC tracks product's journey from introduction to decline.

- > Introduction: The introduction signifies the entry of a product into the market.
- > introduction state introduces product to the consumers.

-> High Research and development costs
-> limited distribution.

-> product launch, slow sales growth, high marketing costs.
-> introduction stage is starting point of business, so company should attracters and advertisements to consumers.

o growth

-> in growth stage, consumers aware of product's quality, quantity and performance.
-> in growth stage company expand their market by scaling up production and distribution.

-> A successful product only enters into growth stage.

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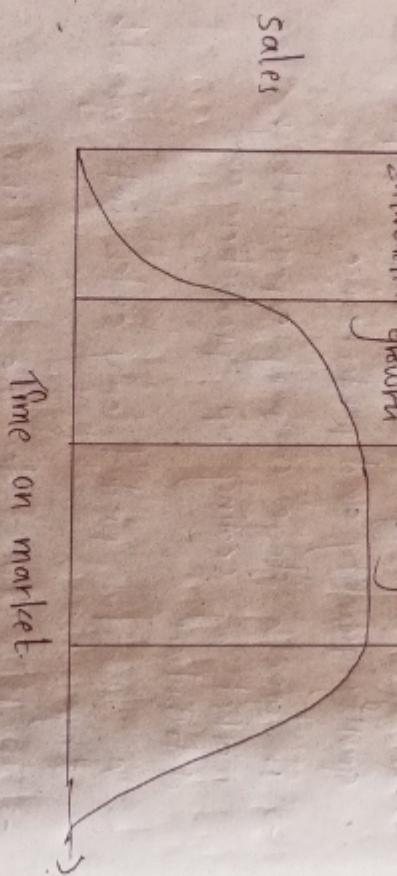
Decline

In the decline, sales of the product start to decrease due to changing consumer preferences.

- Here companies must to decide either discontinuing the product or continue selling.

- Some companies ^{choose to} extend the product life cycle.

↳ Some companies ^{choose to} extend the product life cycle.



Product life cycle stages example on Apple

o Introduction during the year from 2007 to 2008

Apple introduced iPhone, to create awareness and excitement on their products, Apple

Invested heavily in marketing,

o Growth during the year 2009 to 2012

iPhone experienced growth, Apple expanded its range of offerings by introducing

models like iPhone 3G, 4, and 4S.

Maturity By 2013, iPhone had reached maturity as it faced competition from Android-based smartphones. The market became saturated with smartphones. The iPhone series including, 5, 6, 7, 8 are introduced.

Decline

In 2019 onwards, iPhone entered decline stage where it faced obstacles like market saturation and rise of competitors. To tackle this Apple adjusted price, and introduced affordable iPhone SE.

* Marketing mix

It is defined as mixture of several ideas and plans followed by a marketing to promote a particular product for brand. It called marketing mix.

o Elements of marketing mix

The elements of marketing mix are called 4Ps of marketing.

4Ps of marketing

- 4Ps are
- o product
- o price
- o place
- o promotion

product

goods manufactured by organizations to end users are called products

-> product is of two types

1. Tangible products
2. Intangible products

Tangible	Intangible
-> They are physical in nature.	-> They are abstract in nature.
-> They have scrap value.	-> They have no scrap value.
-> convertible into cash	-> cannot be converted into cash.
-> Total value can be determined	-> Total value cannot be determined.
-> High chance of destruction.	-> less chance of destruction.
-> They are depreciated	-> They are amortized.

promotion

promotion refers to various strategies and ideas implemented by marketers to make end-users aware of their brand

<u>price</u>
The money which a buyer pay for a product is called price.

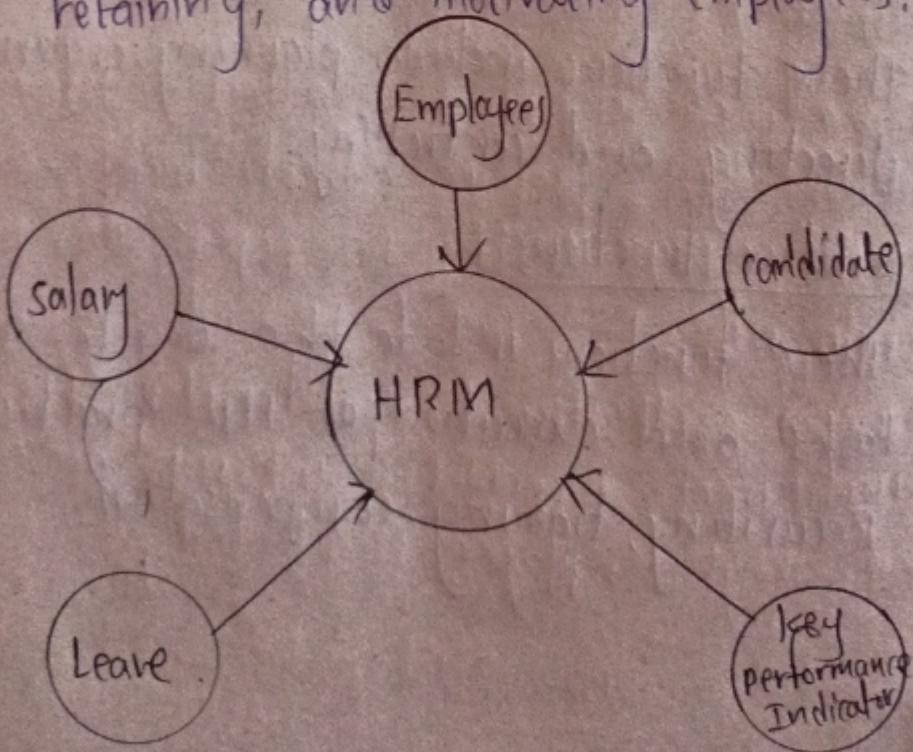
<u>place</u>
place refer to location where the products are available can be sold or purchased.

Unit - 3

* Human Resource Management :

Def: Human Resource management is also known as function of management concerned with hiring, motivating, and maintaining people in an organization. Is called HRM.

- HRM - Human Resource Management.
- HRM focuses on people in the organisation.
- HRM not confined to business only, but also applicable to government, education, health etc.
- HRM includes recruiting, hiring, training, retaining, and motivating employees.



→ Above tree diagram show structure of HRM.

-> It consist of Employees, candidate, key performance indicator, leave, salary etc.

c) Functions of HRM

- o Industrial relations
- o Compensation and benefit.
- o Employee education
- o Selection of employees
- o manpower planning.
- o Managerial and operative functions

→ The main functions of HRM are managerial and operative functions.

d) Managerial functions

→ These functions include planning, organizing, directing and controlling.

e) Operative functions

→ These functions include the day-to-day tasks and execution of HR practices.

-> Recruiting, training, compensation.

o HR manager A Human Resource manager

→ Is a professional who leads an organization's HR department and is responsible for managing the company employee's. is called HR manager.

f) HR manager

→ HR manager serves as bridge between HR manager and employee management.

g) HR Manager

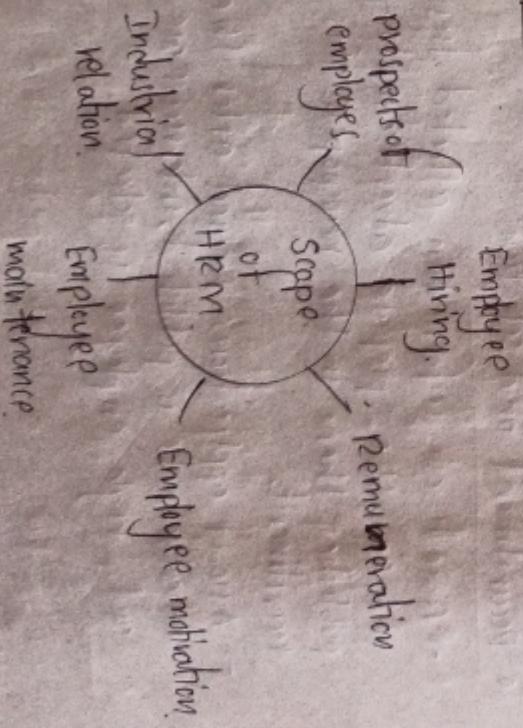
→ HR Manager can

- o Recruiting and hiring
- o Training and onboarding
- o Employee issues

o Consulting

o Negotiating

h) Scope of HRM.



o Evolution of HRM

HRM is evolved from basic personnel management that supports organisational goals.

o Human Resource planning (HRP)

Human resource planning involves is a process that involves analysing and planning for an organization's human resource needs. → HRP is an important investment for business.

o Job analysis

Job analysis gives a detailed explanation about each and every job in the company.

o Recruitment and selection

→ Based on information collected from job analysis, we prepare advertisements and publishes them in the newspaper. This is recruitment.

→ A no. of applications received after the advertisement is published, interviews are conducted and right employee is selected.

o Orientation and Induction

Once the employee have been selected an induction and orientation program is conducted. This another important area of Human Resource management.

o Training and Development

Every employee goes under training program which helps him to put up a better performance on the job. → Training is also conducted to existing staff, installed refresher training.

→ Training and development are one area in HRM.

* on the job and off the training methods

Training Training It is a process by which the skills, talents, and capabilities of the employees of an organization are increased.

→ Training is not only required for freshers but also for existing staff.

on-the job methods

Apprenticeship program

Coaching

Internship training

Job rotation

Training methods

Conferences
Films
case study
Computer modelling
Vestibule training
Programmed instruction

→ Training methods are classified into two types. They are;

- on the job training
- off-the job training
- on the job training method

○ Apprenticeship program

This program places the trainee under the guidance of well trained personnel.

→ This is for obtain skills and knowledge at high levels.

○ Coaching : In this method, the trainer

who is known as coach guides and instructs the trainee.

off-the job methods

Conferences

Films

case study

Computer modelling

Vestibule training

Programmed instruction

- Internship training : It is the co-operation of educational institutions and business firms.
 - Job rotation : Job rotation involves shifting trainees from one job to another.
 - (or) from one department to another.
- This helps trainee to gain knowledge in all parts of organization.

○ OFF THE JOB TRAINING METHODS

○ Conferences : A conference is a gathering of people to share information, discuss topic over something.

→ It is a professional event where people from different backgrounds, industries, on fields gather at one place.

○ Films : Films supply information and shows a definite display of skills that are not easily represented by other techniques.

○ case study : case study is a teaching technique that involves employees to analyze real-

situations to develop and evaluate solutions

o Computer modelling

- > It encourages the work environment by developing a computer program.
- > This saves organization from making mistakes

o Vestibule Training

- > Vestibule Training is a type of training that involves creating a simulated work environment for employees to practice job related tasks and skills.

o programmed instruction

- > In this method, the information is divided into meaningful units, these units are arranged in a proper way to from simple to complex.

on the job training

on the job training

- > It is provided at work place

- > It is provided at out-of-work place

- > It is less costly.

- > It is expensive training

- > It consumes less time.

- > It consumes more time.

- > It is used where jobs are simple.

- > It is used where jobs are complex.

- > It disturbs work schedule.

- > It does not disturb work schedule.

- > The no. of employees trained is less.

- > The no. of employees trained is more.

- > It is practical approach

- > It is theoretical approach

- > Learning by performing

- > Learning by acquiring knowledge

* performance appraisal concept

- o management by objectives A modern method where employees are rated on how they achieve a set of goals.
- o 360 - degree Appraisal It is a method where multiple parties / stakeholders are involved in evaluating performance.
- > it is a multi-source feedback.
- > it is a multi-source feedback.
- > immediate supervisor, customer, peers, team members, self etc.
- o confidential reports It is a method mainly used in government organizations for promoting and transferring employees.
- o ranking It is a traditional method where employees are ranked.
- o comparison It is a traditional method where employees are compared to each other.
- o checklist : It is a method where managers are given a set of questions to ask.
- o essay evaluation It is a traditional method for performance appraisal.
-> also known as "free form method".

o management by objectives A modern method

where employees are rated on how they achieve a set of goals.

o 360 - degree Appraisal

It is a method where

multiple parties / stakeholders are involved in evaluating performance.

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o essay evaluation It is a traditional method for performance appraisal.

-> This type of evaluation lists (quality and reliability).

X wage and salary Administration

Def: wage and salary administration is the process of managing employee compensation including setting salaries, wages, benefits, and incentives, is called wage administration.

-> The goal of wage and salary administration is establish fair and competitive compensation

Salary

salary is defined as the money an employee gets paid for their work regularly.

-> it is a fixed paycheck, that comes in monthly.

-> many professionals like office workers, managers, often fall under the salary payment.

wages: wages are the money you earn for the work you put in at work

-> It is unlike a fixed month salary

Salary wages

-> Fixed periodic payment

-> Typically monthly

-> steady regardless of hours worked.

-> paid at specialized intervals

-> It is fixed in nature

-> paid to skilled employees.

-> It is based on working performance.

-> variable payment based on hours.

-> often weekly or biweekly.

-> fluctuates with hours worked.

-> paid daily, weekly, monthly

-> It is variable in nature

-> paid to semi-skilled and unskilled employees.

-> It is based on working hours.

-> It has paid holidays.

-> For example you worked certain hours you will get money accordingly to worked hours.

-> wage could be hourly, daily or tackle included.

-> The more you work, the more you earn.

* Employee Induction

Def. Employee induction is an onboarding process that helps new employees to adjust their new roles and workplace in HRM. It is called Employee induction.

o Employee induction programs

- o orientation
- o workplace tour
- o Health and safety
- o Employment contract
- o Company policies
- o Job role
- o Training needs
- o Team Introduction

* Placement

Employee placement in Human

Employee placement management is a process of assigning employees to roles that match their skills, potential and the company's needs. It is called placement.

when placing employees, it is important to ensure that a proper match is made between employee and position.

- > It improves employee morale.
- > It helps in reducing accident rates
- > It avoid mismatched candidate and the job
- > It helps in reducing absenteeism

unit - 4

* strategic management

Def: strategic management is the process of defining and implementing an organization's strategies to achieve its goals, is called strategic management.

Meaning Strategic management is a continuous process that involves planning, implementing and evaluating a company's actions to achieve its long term goals.

* setting of vision - mission - goals

o vision (The dream) :-

- setting up a vision for a company is considered to be a very important step of strategic management.
- vision gives direction to the company.
- vision act as reference point in the future.
- vision defines company's direction, purpose, and long-term goals.

-> A strategic vision should be clear, inspiring, realistic..

-> The vision is also known as The dream

-> Here are some vision statements

- o peace on earth.
- o education for all

- o Healthy children.

o Mission (The what and why)

-> A mission statement is a key part of strategic management.

-> mission - focus on single strategic thrust.

-> It reflects organization of values, beliefs, and philosophy.

-> Mission describes the company's products, market, and technological needs.

-> This is also called as "overall objective".

-> mission is also known as purpose.

-> mission statements are similar to vision statement, but they are more "action-oriented" than vision statements.

-> principles about mission

- o Conserve
- o outcome-oriented
- o Inclusive

o Goal :

-> goal setting is a critical component of strategic planning

-> During goal setting organizations must consider vision and mission.

-> setting strategic goal

o consider your mission and vision

o Make goals smart.

o communicate goals with employees

o Evaluate progress

o use goal tracking technology

-> Strategic goals: Increasing revenue, increasing market share, increasing employee retention etc.

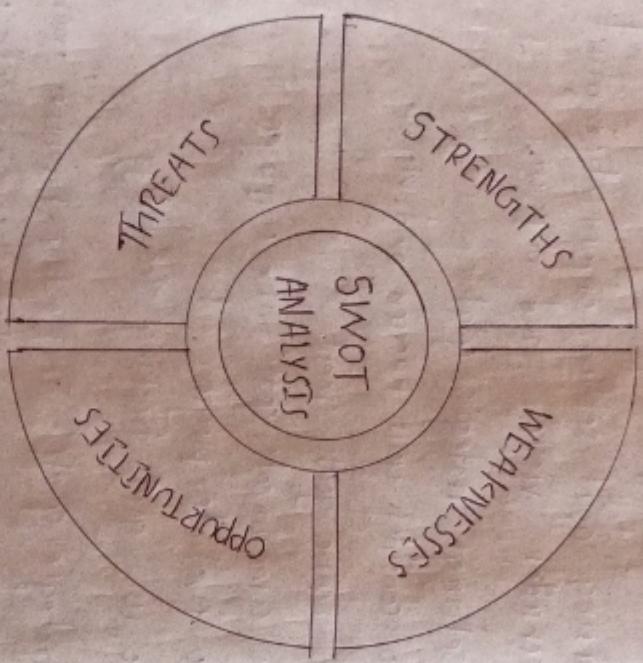
X SWOT Analysis

Def: SWOT analysis is a strategic planning technique used to identify and evaluate the strengths, weaknesses, opportunities, and threats of an organization. It is called SWOT analysis.

-> SWOT stands for strengths, weaknesses, opportunities, and threats.

- SWOT analysis is a framework for organization's strengths, weaknesses, opportunities, and threats

- o External factors
 - > opportunities and threats refer to the external factors.
- o Components of SWOT Analysis



- Block diagram shows overview of SWOT Analysis
- A SWOT Analysis is a planning process that helps your company overcome challenges.
- o Internal factors
 - > strengths and weaknesses refers to internal factors.

- o Strengths
 - strengths can be as your business superpower.
 - strength is a positive internal characteristic of a company that helps to achieve goals.
 - strength is the one of the four components in SWOT analysis.
 - A strength is a resource (or) capacity.
 - strengths can be
 - o A motivated team
 - o physical strength
 - o good communication skills
 - o strong brand image.
- o Weaknesses
 - weaknesses ; weaknesses can be as your business limitations.
 - A weakness is an internal limitation that prevents a company from performing its best.
 - weakness prevents company growth.

-> weaknesses can be:

- o weak brand
- o lack of capital
- o limited product range
- o insufficient systems/tools/etc.

o opportunities

- > opportunity is a favorable situation in the organization's environment
- > opportunity is a favorable external factor that helps an organization to improve its business performance
- > opportunities can result from a company's existing strengths and weaknesses

o Threats:

- > threats are external factors that may produce negative impact on an organization
- > threats harm a company, products, and profitability
- > threats include:
 - o competition
 - o environmental conditions
 - o economic
 - o supply chain

Strengths

-> weaknesses

-> self-motivated

-> Nervousness during interviews

-> disciplined

-> impatience

-> creative

-> innovative

-> strong brand image

-> integrity

-> good communication

opportunities

Threats

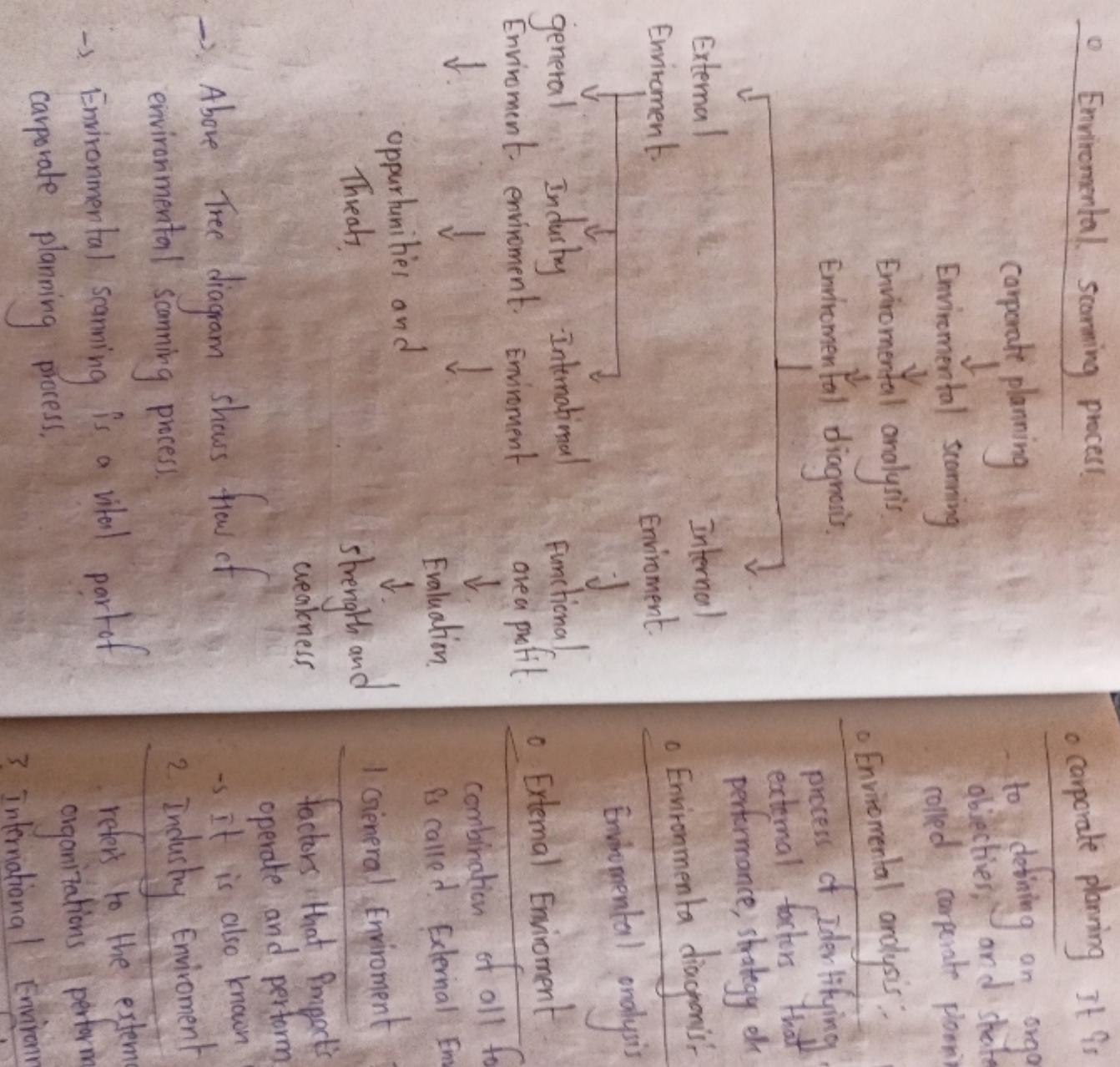
- > Technology trends
- > Market expansion
- > Press/land media coverage of your company
- > Economic conditions
- > Supply chain
- > Competition
- > Environmental conditions

X Environmental scanning

Def Environmental scanning is the process of monitoring and analyzing external factors that can impact on organization's performance, strategy and decisions. It is called Environmental scanning.

- > It is a key part of strategic planning and decision making

o Environmental Scanning process



o Corporate planning: It is a systematic approach to defining an organization's mission, vision, objectives, and strategies to achieve goal in rolled corporate planning.

o Environmental analysis: Env It is a systematic process of identifying, evaluating internal and external factors that can impact on organization performance, strategy etc.

o Environmental diagnosis: write definition &

Environmental analysis

o External Environment: External environment is the combination of all factors outside of business is called External Environment.

1 General Environment: It is a set of external factors that impacts on company's ability to operate and perform.

→ it is also known as macroenvironment.

2 Industry Environment: Industry Environment refers to the external factors that affect an industry.

→ Environmental scanning is a vital part of corporate planning process.

3 International Environment: It refers to the global external factors that affect an organization performance beyond its domestic market.

c) Internal Environment

- > Internal Environment refers to the strengths and weaknesses.
- > Marketing factors
- > Research and development
- > Production management.
- o profile of research and development

d) Entrepreneurial mode :-

- o A daptive mode
- o planning mode

o steps

- o values assessment
- o Environmental scanning
- o strategy design.

Implementation of strategy formulation

- > Institutionalization of strategy.
- > & setting proper organizational climate.
- > developing appropriate operating plans.

* strategy formulation

- Def Strategy formulation is a strategic management process that involves creating a plan to guide an organization's actions to achieve its goals.
- > strategy formulation is a primarily analytical
 - > This process involves scanning external and internal environmental factors.
 - > Modes of strategy formulation.

* project management

Def: project management is the application of knowledge, skills, and techniques to execute project effectively within budget is called project management.

X PERT

Def: project evaluation and review technique is a project management tool that helps visualize a projects timeline and manage tasks is called PERT.

→ PERT is a visual representation of project timeline.

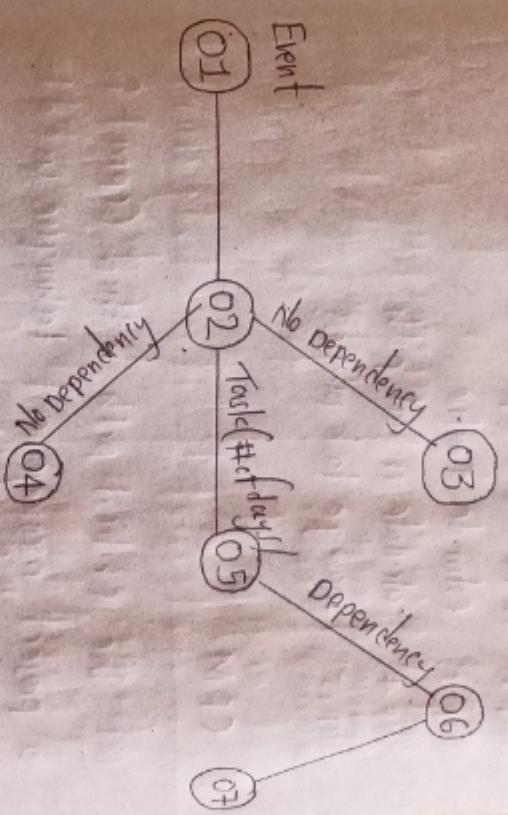
→ PERT uses three time estimates.

1. optimistic time.
2. most likely time.
3. pessimistic time.

→ PERT is used for large scale projects.

→ PERT calculate the amount of time required to finish a project.

- PERT is a scheduling technique.
- PERT chart



- PERT chart is a project management tool used to plan and schedule tasks.
- PERT chart is used to make schedule.

→ PERT chart contains

- a. Nodes (represents task or milestones)
- b. Arrows (represents direction or sequence of task)

- c. Time estimation (it estimate the time to complete task)

Timeline]

o creation of PERT chart

step 1: identify project tasks

step 2: define task dependency

step 3: Estimate Timeline

step 4: calculate critical path.

step 5: manage task progress

X CPM

Def The critical path method (CPM) is a project management technique used to planning and scheduling for the on-time completion of project. Is called CPM.

→ CPM stands for critical path method.

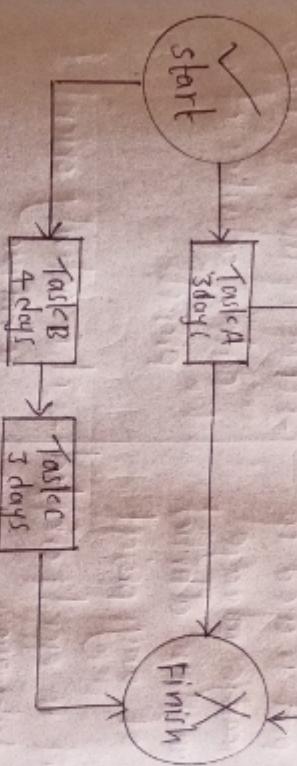
→ It is also known as critical path Analysis.

→ CPM was created in 1950.

→ CPM identifies critical path.

→ CPM includes, tasks, activities, estimating completion time etc.

- CPM identifies most important tasks in project.
- CPM calculates time required to complete each task.
- How to find critical path.
- o Identify all tasks required to complete the project.



o diagram diagram

- o Identify critical path.
- o Calculate the float.
- o Monitor the critical path.

PERT

- > PERT - project Evaluation Review technique.
- > pert is used to manage management of any activities of any project.
- > It is event oriented technique.
- > It is probability model.
- > It has non-repetitive nature of job.
- > It is suitable for project which required research and development.
- > It doesn't use any dummy activities.
- > It is appropriate for precision time estimation.

CPM

- > CPM - critical path method.
- > CPM is used to manage certain activities of any project.
- > It is activity oriented technique.
- > It is deterministic model.
- > It has repetitive nature of job.
- > It is suitable for construction projects.
- > It uses dummy activities.
- > It is appropriate for reasonable time estimation.

* probability of completing project within given time

$$\rightarrow \text{The probability of completing project within given time can be calculated using the normal distribution concept}$$

$$\rightarrow \text{probability factor } Z = \frac{T_s - T_e}{\sigma}$$

where T_s = scheduled completion time.

T_e = expected

σ = standard deviation

-> The value of Z depends upon probability.

-> Form

Example Expected duration of project is 45 days and standard deviation is 5 days.

-> use formula NORMPDIST(50, 45, 5 TRUE)

-> The result is 0.8413 means 84.13% chance of completing it within 50 days.

* project cost

project cost is defined as the total amount of funds needed to complete a project is called project cost.

- > project cost is important because it keeps project within budget.
- > project costs.
 - o direct costs.
 - o indirect costs.
 - o other costs

* project crashing project crashing - is a method

used to speed up a project's timeline by adding additional resources is called project crashing.

- > goal - completing project before timeline without changing the scope.

* project analysis It is a systematic evaluation of project goals, objectives, scope, risks, for success, is called project analysis.

UNIT-5

* Management Information system :

Def: Management information system is the study of people, technology, organizations, and the relationships among them is called MIS.

→ The information system is the one of the most promising field today.

o Objectives of MIS :

→ The following are objectives of MIS.

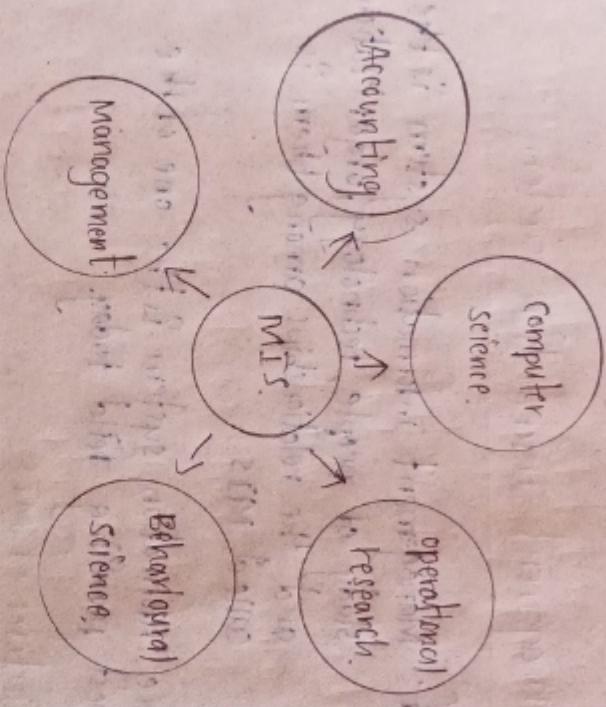
1. Capturing Data: capturing contextual data (or) operational information that will contribute in decision making from various internal & external sources of organization.

2. processing data: The captured data is processed into information needed for planning, organizing, coordinating, directing and controlling.

3. Information storage: Information need to be stored for future use.

4. Information Retrieval: The system should be able to retrieve this information.

o Nature and scope of MIS



→ Above block diagram shows nature and scope of MIS.

→ MIS is utilized by every level of management.

→ MIS is maintained through either manual or automated systems or combination of both.

→ MIS involves "processing data into information".

→ processing data means recording, summarizing, classifying, etc.

o Initiating transactions

o Responding to inquiries

o producing reports

o characteristics of MIS

→ It should be based on a long-term planning.

→ Data quality

→ data processing

→ reports

→ relevance

→ alignment and organizational goals.

o Three components of MIS : The three components of MIS provide a more simple and focused definition.

definition.

Management : Management covers the planning,

control, administration

→ The top management concentrates on planning, middle management concentrates on controlling, lower management concentrates on administration.

Information : Information in MIS, means processed data.

→ data is processed, recorded, summarized, finally presented to management

System : data is processed into information with the help of a system.

* Benefits of MIS :

- o Increased customer satisfaction.
- o Improved quantity and quality of information.
- o Improved quality of planning.
- o " control
- o " of internal and external communication.
- o Improved operational efficiency.
- o Improved flexibility.

* Enterprise Resource planning

Def: ERP is a software system that includes all tools and processes required to run a successful company, is called, ERP.

↳ ERP stands for : Enterprise Resource planning.

→ ERP block diagram

↳ Block diagram of ERP

↳ Human

Resource

↳ HR management, training & development, compensation, benefits, etc.

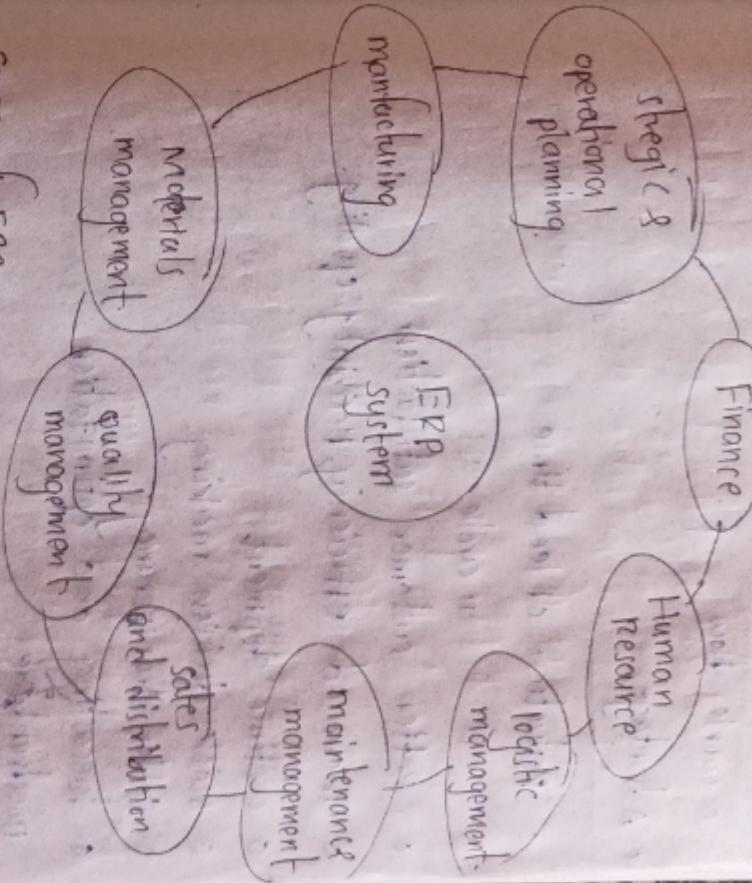
↳ Financial

Management

↳ Logistics :- production planning, material management, project management, event management.

↳ Finance - Finance accounting, material accounting, budget control, casting, enterprise control.

Scope of ERP



- o supply chain
- o work flow.

o Advantage

- o Reduction of lead time.
- o "cycle"
- o Better customer satisfaction.
- o Increased efficiency, flexibility, quality.
- o one-time shipment.
- o quick decision making.
- o Better transparency.
- o forecasting and optimization.

Disadvantages

- o Expense
- o difficulty in integration.
- o joining different projects together
- o increasing costs.
- o loss of jobs.
- o loss of market position.
- o loss of customers.
- o loss of market share.
- o loss of market position.
- o loss of market share.

* Business process Reengineering

Def Business process Reengineering (BPR) is

a strategic approach to improve an organization performance by rethinking and redesigning its business processes.

→ The goal of BPR is to achieve improvement in parameters like cost, quality, service and speed.

→ The main aim is to improve customer satisfaction.

→ BPR is not just a change, but actually it is a dramatic change and dramatic improvement.

Effective change management

ongoing continuous improvement.

Adequate IT Infrastructure

Business process

Reengineering

Business needs analysis

BPR know

composition

o phases of BPR

→ There are 7 different phases for BPR.

1. Begin organization change.

2. Build the reengineering organization.

3. Identify BPR opportunities.

4. Understand the existing process.

5. Blueprint the new business system.

6. Reengineering the process.

7. perform the transformation.

Challenges faced by BPR

-1 resistance.

2. Tradition.

3. Time requirements.

4. cost.

5. Job losses.

Advantages

Disadvantages

→ It is flexible. → Not capable of immediate resolution.

→ Scalable. → Not fit for every business.

* Benchmarking

Def: Benchmarking is a systematic process.

Identifying, evaluating, and comparing an organization's performance processes, practices with other organizations is called benchmarking.

→ Benchmarking involves measuring the process of improving performance of organization.

team (or individual) against best. per

→ Types of Benchmarking

o Internal Benchmarking

o External

o Competitive

o Functional

o process

→ Benchmarking improves performance and productivity. Better decision making, increased efficiency and reduction in cost.

* Balance scorecard

Def: Balance scorecard is a strategic management

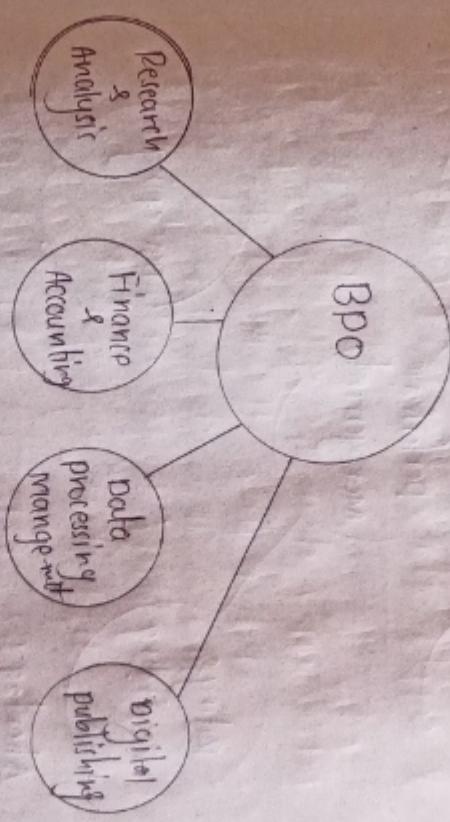
tool used to measure an organization's performance from four interconnected perspectives i.e.

- o Financial
- o Customer
- o Internal processes
- o Learning and growth.
- > It encourages balance & decision making.
- > communication and accountability.

* Business process outsourcing (Bpo):-

Def: Business process outsourcing (Bpo) is a business perspective where a company contracts with an external provider to handle one or more of its business functions.

- > Bpo is oriented for the manufacturing industry.
- > The main motive for Bpo is allow the company to invest more time, money, human resource, which fuel company growth.
- > The global market is high competitive a company must focus on improving productivity down cost etc.
- > Bpo is divided into two types
 - o Back-office Bpo
 - o Front-office Bpo.



* performance Management:-

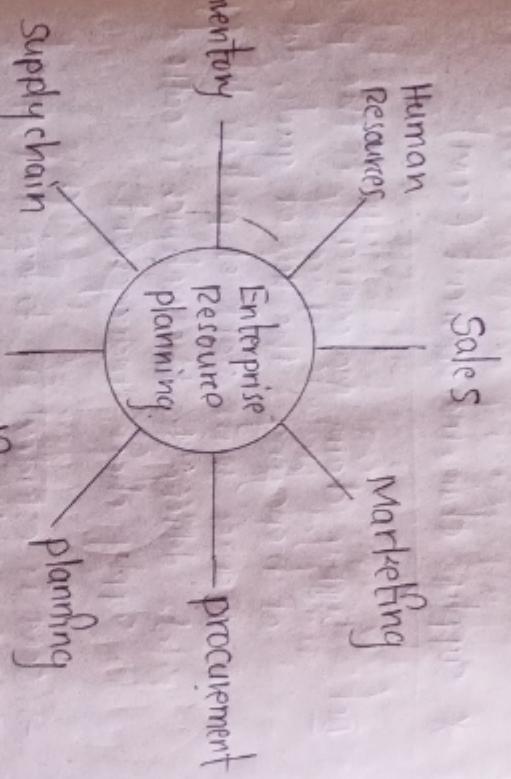
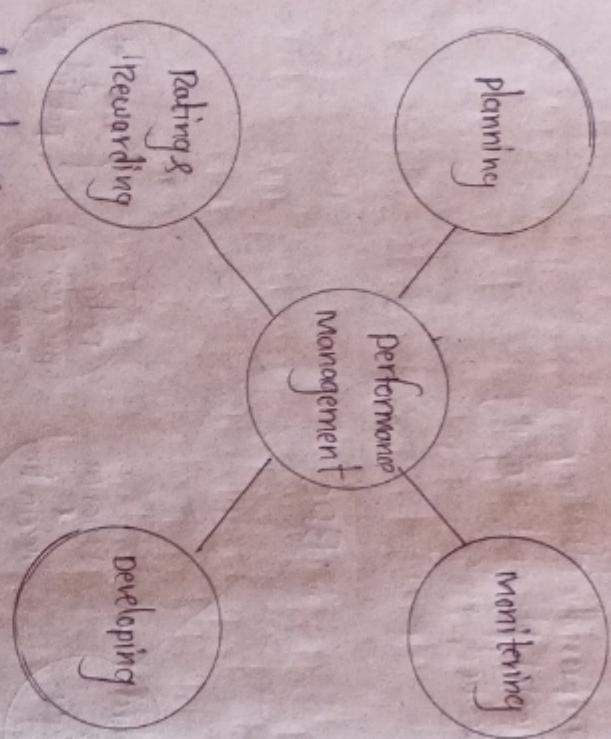
- Def: performance management is a continuous process of identifying, measuring and developing the performance of the employees by collecting p.m.
- > it is a tool used by manager to monitor and evaluate employee performance.
 - > performance management is about managing the organization.
 - > It is natural process of management not a system or technique.

- > Benefit of Bpo
- o Cost savings
- o Improved efficiency
- o Scalability and flexibility
- o reduced risk

-> Motivates employees to improve their performance

-> ERP system collect and store an organization's data at one place from multiple sources.

-> Enterprise Resource planning



Advantages

- o Better communication
- o " goal setting
- o " decision making
- o " organization performance

X Enterprise Resource planning (ERP)

Def Enterprise resource planning (ERP) is a software system that helps businesses to manage their day-to-day operations and activities is called ERP.

- > ERP can help businesses run more efficiently.
- > ERP can help businesses to increase their profitability.
- > ERP can used to manage variety of business functions, including
 - o Sales
 - o Marketing
 - o Procurement
 - o Supply chain
 - o Inventory
 - o Human resource.

-> ERP systems can be local-based or cloud based.

-> ERP systems can include modules for order, warehouse, work-force management.

* Supply chain management (SCM):

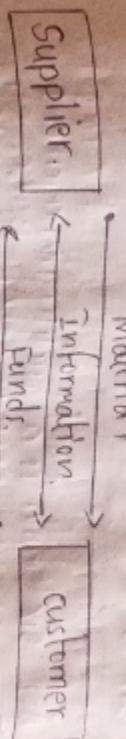
Def: Supply chain management is the process of managing the flow of goods, data, finance from start of product's life cycle to delivery to the customer is called supply chain management.

-> SCM is essential in today's fast-speed environment.

-> key components of supply chain management:

- o suppliers
- o manufacturers
- o warehouses
- o distribution centers
- o retailers
- o customers

-> overview of how SCM works.



1. Planning: developing strategies to meet customer demand while optimizing resources.

2. Sourcing: Sourcing involves identifying and selecting suppliers.

3. Manufacturing: coordinating production processes to create finished goods.

4. Warehousing: Warehousing involves storing raw materials, finished products,

5. Distribution: movement of goods from manufacturer to customer.

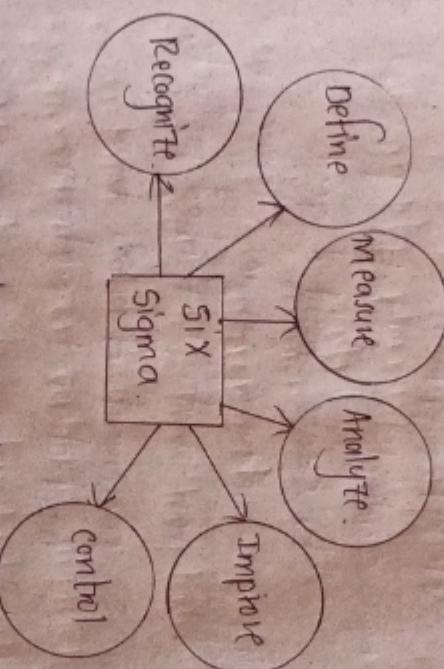
-> Examples of SCM: Dell, Toyota, Amazon etc.

-> SCM is essential for the seamless of modern business.

* Six sigma concept :-

Def Six sigma is a quality management methodology that aims to improve business by reducing defects and errors is called six sigma.

- > six sigma can lead to improve profits, quality of products, services etc.



- > Above block diagram shows structured approach of six sigma.

- > structured approach consist of define, measure, analyze, improve, control, Recognize etc.

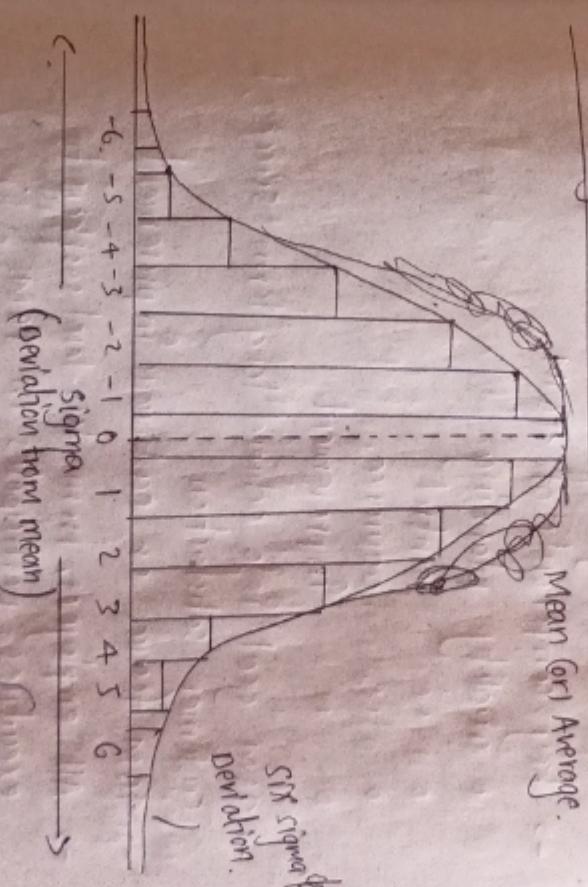
- > six sigma is developed by Motorola

- > The goal of six sigma is to achieve a level of quality that is nearly perfect

-> six sigma concept used in manufacturing, health care, finance, and service industries etc.

- > six sigma approach is a collection of management and statistical concept.
- > six sigma is a business statistical strategy.
- > six sigma can be written as "6σ"

o Six sigma Normal curve



- > six sigma curve shown in above figure.
- > y-axis represent mean or average
- > x-axis represent six sigma deviation.

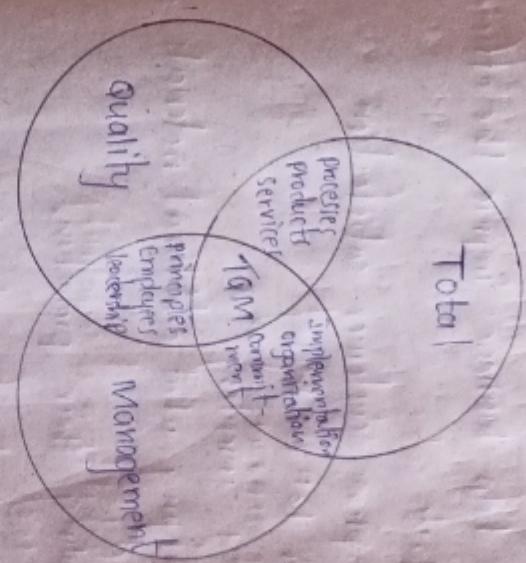
* Total quality management:

Def: Total quality Management (TQM) is a management approach that focuses on improving quality and delivering customer satisfaction.

- > It is a management approach to long-term success through customer satisfaction.
- > key component of TQM.
 - o quality planning
 - o quality control
 - o quality assurance
 - o continuous improvement
- > TQM goal is to achieve long term success by customer satisfaction.
- > TQM focuses on continuous improvement.
- > All employees, from low-level workers to executives, participates in TQM.
- > TQM can improve employee productivity, increase customer satisfaction, etc.
- > TQM is a structured approach.
- > Three principles of TQM.
- 1. Quality Leadership

2. Quality Technology

3. organisational commitment



* Material requirement planning:

Def: Material Requirement Planning (MRP) is

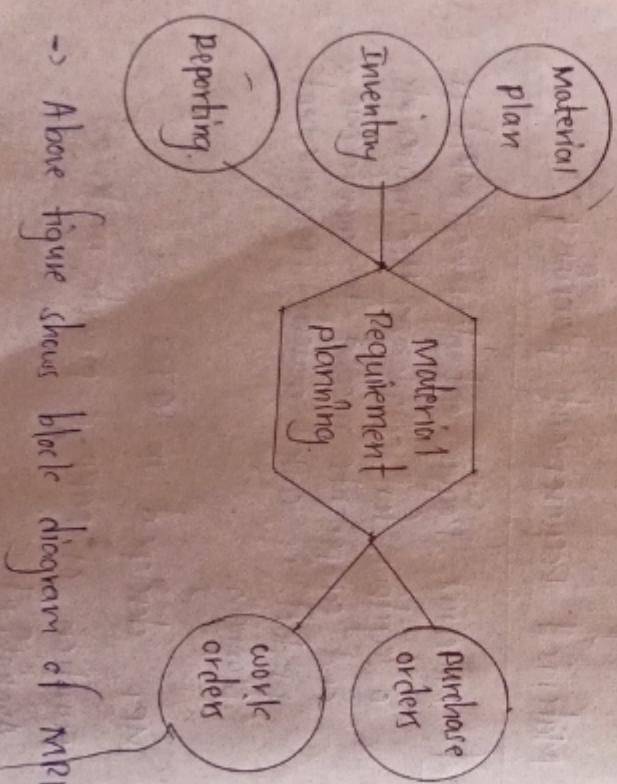
a system for calculating the materials and components needed to manufacture a product. It is called material requirement planning.

- > MRP developed in 1970s

- > Function of MRP is provide material Availability

- > Main objective of MRP is to determine which material is required, quantity required, and when it is required.

- > MRP can help businesses improve the efficiency, flexibility, etc.
- > MRP improves customer satisfaction.
- > MRP can be used by
 - o Taking inventory
 - o Identifying what additional materials are needed
 - o Scheduling their production.
- > MRP is subset of supply chain management.



-> Above figure shows block diagram of MRP.

- > Block diagram consist of material plan, inventory reporting, purchase orders, work order, etc.
- > Benefits of MRP
 - o Reduced Inventory costs
 - o Improved Efficiency
 - o Improved labour productivity
 - o Customer satisfaction

- > MRP is a system designed plan.
- > Types of MRP
 - o Simple MRP
 - o closed-loop MRP
 - o Regenerative MRP
 - o Time-phased MRP.

* Customer Relations Management (CRM):

Def.: customer CRM is a business strategy and tool that helps companies to manage and analyze their interactions with customers to improve relation with customers and growth. Their business is called CRM.

- > CRM aim is to improve customer service, retention, etc.

- CRM interact with social media sites like Twitter, linkedin, facebook to track and communicate with customers.
- Functions of CRM.
 - o Increase sales
 - o Improve quality
 - o customer management.
 - o proper communication.

Advantages

- High Reliability and scalability
- Easy to use.
- Highly secured.