

1. Introduction to System

Concept & Definition

A **system** is a group of connected parts working together to achieve a goal.

Example: A car engine, a computer, or a manufacturing process.

Types of Systems

- **Open System:** Interacts with the environment (e.g., a business).
- **Closed System:** No interaction with the environment (e.g., chemical reactions in a lab).
- **Physical System:** Tangible systems (e.g., a building).
- **Abstract System:** Non-tangible (e.g., mathematical models).

System Parameters

These are fixed values that define how a system works (e.g., temperature limits, machine speed).

System Variables

These are changeable values in a system (e.g., current material input, worker attendance).

System Behaviour

How a system acts or reacts in different situations (example: a factory increases production when demand rises).

2. Management

PODC

Definition

Management is the process of planning, organizing, directing, and controlling resources to achieve goals.

Functions of Management

1. **Planning** – Setting goals and deciding how to achieve them.
2. **Organizing** – Arranging resources (people, materials).

3. **Staffing** – Hiring the right people.
 4. **Directing** – Guiding and motivating people.
 5. **Controlling** – Checking if goals are achieved.
-

3. Organization Structure

i. Definition

The way in which a company or factory is arranged (like a hierarchy).

ii. Goals

- Proper division of work
- Clear flow of authority
- Smooth communication
- Efficiency in operations

iii. Factors Considered in Structure

- Size of the organization
- Type of business
- Goals
- Technology used
- People involved

iv. Types

1. **Line Organization** – Simple, direct chain of command
2. **Functional Organization** – Based on functions (e.g., HR, Finance)
3. **Matrix Organization** – Combination of line and functional
4. **Project Organization** – Temporary for specific projects

v. Advantages & Disadvantages

Type	Advantages	Disadvantages
Line	Simple, clear authority	Heavy workload for top leaders
Functional	Specialization, efficiency	Possible confusion in authority
Matrix	Flexibility, skill sharing	Complex structure
 Project	Focused goals, quick action	Temporary, uncertain job security

vi. Applications

Used in industries, hospitals, schools, construction companies, IT companies, etc.

4. Key Concepts in Industrial Management

Division of Labor

Breaking work into smaller tasks so each worker specializes in one area.

Importance: Increases efficiency and production speed.

Scalar & Functional Processes

- **Scalar Process:** Chain of command from top to bottom.
- **Functional Process:** Dividing work by functions or skills.

Span of Control

Number of workers a manager can handle directly.

- **Wide span** = many workers per manager
- **Narrow span** = fewer workers per manager

Delegation of Authority

Giving responsibility and power to others to do tasks.

Centralization vs. Decentralization

- **Centralization:** Decision-making at top level.
- **Decentralization:** Decision-making spread across levels.

Centralization

Definition:

Centralization is a type of organizational structure where decision-making power is kept at the top level of management.

Features:

- Top leaders make most of the decisions.

- Lower-level employees follow instructions from the higher-ups.

Advantages:

1. Clear authority and responsibility.
2. Quick decision-making when fewer people are involved.
3. Easy to control and coordinate activities.

Disadvantages:

1. Slower response to ground-level problems.
2. Employees may feel less motivated or powerless.
3. Overload on top managers.

When is it used?

- In small organizations.
- In stable business environments.
- When tasks are routine or repetitive.

Decentralization

Definition:

Decentralization refers to the distribution of decision-making power to lower levels of management or different departments.

Features:

- Managers at various levels can make decisions.
- Power is shared across the organization.
- Faster response to local issues.

Advantages:

1. Better decision-making at local levels.
2. Encourages employee responsibility and motivation.

3. Reduces workload of top management.

Disadvantages:

2. Harder to maintain control and coordination.
3. Managers need proper training and skills.

When is it used?

- In large and diversified companies.
- When environment changes quickly.
- In organizations that encourage employee growth and innovation.

1. Morale

Definition

Morale means the overall attitude, confidence, and satisfaction an employee has while working in an organization. High morale means the worker is happy and motivated; low morale means the worker is unhappy and less motivated.

Factors Affecting Morale

1. **Working Conditions** – Clean, safe, and comfortable workplace raises morale.
2. **Salary and Benefits** – Fair and timely payment increases employee happiness.
3. **Job Security** – Workers feel better if they know their job is stable.
4. **Leadership Style** – Supportive and friendly managers improve morale.
5. ~~Recognition~~ and **Rewards** – Appreciating employees for good work boosts morale.

6. **Career Growth** – Opportunities for **training** and promotion make employees feel valued.
 7. **Teamwork and Relationships** – Friendly co-workers help create a positive atmosphere.
-

2. Relationship Between Morale and Productivity

- **High Morale → High Productivity:** Workers are motivated, do quality work, take fewer leaves, and stay loyal.
- **Low Morale → Low Productivity:** Leads to slow work, more mistakes, lack of interest, and higher absenteeism.

In simple words: **Happy workers = Better work.**

3. Job Satisfaction

Definition

Job satisfaction is the **feeling of happiness** ~~or contentment~~ a person gets from their job.

Factors Influencing Job Satisfaction

1. **Pay and Benefits** – Good salary and perks = more satisfaction.
2. **Type of Work** – If the job matches skills and interest, satisfaction is high.
3. **Work-Life Balance** – Not too much pressure, time for self and family.
4. **Recognition** – Being appreciated encourages employees.
5. **Company Policies** – Fair and transparent rules make employees feel secure.
6. **Promotion Opportunities** – Chance to grow in the company increases satisfaction.

7. **Co-worker Relationship** – Friendly environment keeps employees comfortable.
-

4. Important Provisions of Factory Act & Labor Laws

Here are some key points from the **Factories Act, 1948 (India)** and other common labour laws:

Working Hours

- Maximum **48 hours/week**.
- Not more than **9 hours/day**.
- At least **30 minutes rest** after 5 hours of work.

Safety and Health

- Cleanliness, ventilation, proper lighting.
- Safe machines and equipment.
- First-aid and medical facilities.

Child Labor

- Children **below 14 years are not allowed** to work in factories.

Women Workers

- Special rules for night shifts.
- **Maternity leave** benefits.

Wages

- Workers must be paid **minimum wages** set by the government.
- **Equal pay** for equal work (men and women).

Leave and Off

- At least **one weekly holiday**.
- Annual **paid leave** after working for full calendar year.

Accidents and Compensation

- Workers injured during work must get **compensation** based on **injury level**.

