UNIT-1

UNIVERSITY SYLLABUS

Introduction: Concept, Development, application and scope of Industrial Management.

Productivity: Definition, measurement, productivity index, types of production system, Industrial Ownership.

Concept of Industrial Management

Application of Management theories & concepts are now all pervasive and all encompassing. With Best engineering skills and knowledge, professional cannot just sustain since any operational issues require application of management techniques. Any engineer by profession is also a manager, as engineers also qualify in the classical test of managerial roles, interpersonal roles, and informational roles and decisional role.

Also, a successful management of organizational behavior largely depends on the management practices prevailing in an organization. Understanding the basics of management, therefore, precedes understanding the organizational behavior.

Industrial Management:
Industrial management, as a branch of engineering facilitates creation of management systems and integrates the same with people and their activities to productively utilize the resources.

The subject emphasizes studying the performance of machines and so also the people.

Industrial management, therefore, in the structured approach to manage the operational activities of an organization.

Process of Development of Industrial Management:

Tracing history, before industrial revolution the production was done on a very small scale and only some people and mostly family members were involved in the production process hence management as a significant human activity did not get recognize then. The advanced technology increased the production level, the market coverage and people involved in the production process.

The need for more organized production activity in the form of factory – centered production system had emerged. Management then became an inevitable taste to bring co-ordination b/w the individual efforts in groups.

Several management thoughts have evolved over the time. Important dimension are discussed herewith:--
<table>
<thead>
<tr>
<th>S. No.</th>
<th>Orientation</th>
<th>Pioneered by</th>
<th>Definition concerned with</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Productivity orientation</td>
<td>F.W. Taylor &amp; J. F. Mee</td>
<td>Increased Productivity</td>
</tr>
<tr>
<td>2.</td>
<td>Human Relations Orientation</td>
<td>L. A. Appley &amp; H. Knortz</td>
<td>Emphasis on people</td>
</tr>
<tr>
<td>3.</td>
<td>Decision making Orientation</td>
<td>Ross Moore &amp; Stanley Vance</td>
<td>Decision making as primary management function</td>
</tr>
<tr>
<td>4.</td>
<td>Leadership Orientation</td>
<td>Donald J. Clough &amp; Ralph C.</td>
<td>Leadership is the essence of Management</td>
</tr>
<tr>
<td>5.</td>
<td>Process Orientation</td>
<td>Dalton, &amp; McFarland</td>
<td>Management as process</td>
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### Development of Management

The study of development of management can be put under three distinct phases as follows:

#### 1. Classical School of Thought

<table>
<thead>
<tr>
<th>Author</th>
<th>Theory</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>F.W. Taylor</td>
<td>Development of Scientific Management</td>
<td>(1856-1915)</td>
</tr>
<tr>
<td>F. B. Gilberth</td>
<td>Time &amp; Motion Studies</td>
<td>(1868-1924)</td>
</tr>
<tr>
<td>Henry L. Gantt</td>
<td>The Gantt Chart</td>
<td>(1861-1919)</td>
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</table>

**Administrative Theory**

<table>
<thead>
<tr>
<th>Author</th>
<th>Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. Fayol</td>
<td>General Theory of Management</td>
</tr>
<tr>
<td>Max Weber</td>
<td>Rules</td>
</tr>
</tbody>
</table>

#### 2. Neo-Classical Thought

<table>
<thead>
<tr>
<th>Author</th>
<th>Theory</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark Parker Follet</td>
<td>Group Influences</td>
<td>(1868-1933)</td>
</tr>
<tr>
<td>Elton Mayo</td>
<td>Effect of human motivation on productivity &amp; output</td>
<td>(1880-1949)</td>
</tr>
<tr>
<td>A. Maslow</td>
<td>Relates human motivation to hierarchy of needs</td>
<td></td>
</tr>
<tr>
<td>Douglas Mc Gregor</td>
<td>Puts emphasis on human characteristics Theory X &amp; theory Y and the corresponding style of leadership</td>
<td>(1906-1964)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Author</th>
<th>Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chris Argyris</td>
<td>Human &amp; Organizational Development</td>
</tr>
</tbody>
</table>

#### 3. Modern Approaches

- Quantitative School of thought
- System Theory Approach
- The Contingency Theory
1. Classical School of Thought

Scientific Management Approach
Taylor emphasized following points to achieve organizational efficiency
1. Develop scientific way of performing jobs.
2. Train and develop workers to perform the job.
3. Establish harmonious relation between management and workers.
Taylor suggested two important practices:
1. Piece rate incentive system.
2. Time and motion study.

Piece rate system rewards the workers who produce the maximum output.
Time study helps in determination of time required, recording analyzing and synthesizing the time elements of each operation.
Motion study on the other hand involves study of movements in doing jobs in parts and eliminates wasteful movements and retains only necessary movements. It makes a job simpler, easier and better.

Time and Motion Study concepts were developed by F.W.Taylor in association with Frank and Lillian Gilberth.
Gilberth conducted research on motion studies. They had classified 17 basic hand motions like search, select, position, hold etc. They called this therbligs. Their approach helps to analyse the exact elements of a workers’ hand movement.
Henry Gantt worked with Taylor. His contributions are introduction of task and bonus plan, and Gantt chart. As per his incentive plan worker gets daily wage even if he does not complete his job, but gets bonus if the jobs is completed in less than normal time.
Gantt chart is used for production control indicating progress of production in terms of time.

Drawback of Scientific Management Approach
1. Scientific Management principles revolve around operational level problems do not focus on managerial issues essential for managing organization.
2. This theory also ignores the human desire for job satisfaction.

Administrative Theory
Administrative Theory another part of classical school of thought focuses on principles to coordinate the internal activities of the organization. Henry Fayol classified business operations into 6 activities.
2. Commercial: Activities relating to buying selling and exchange.
4. Security: Activities to ensure protection to employees and property.
5. Accounting: Activities concern with costs, profits, liabilities, balance sheet.
6. Managerial: It is functional approach to management. i.e. planning, organizing, directing, coordinating and controlling.

Bureaucratic Theory
Max Waber had advocated the necessity of a formal organizational structure with set rules and regulations. Weber’s concept is intended to remove ambiguity, inefficiencies, and patronage.
Limitations of Classical School of Thought
Management principles are not universally applicable in today’s complex business situation. Classical school of thought ignored organizational behaviour (leadership, motivation informal relation) only concentrated on productivity.

2. Neo Classical School of Thought
This school of thought lays emphasis on human elements in an organization.

- Max Parker Follett recognized the significance of human elements, attributed greater significance to the functioning of groups in workplace.
- Elton Mayo father of Human Relations Approach conducted the study to evaluate the attitudes and psychological reactions of workers in on the job situations.
- Maslow’s focus was on importance of human needs driving force for motivation.
- McGregor has made assumption about people categorizing them as under
  - Theory X People are by nature lazy, have little ambition, dislike work, avoid responsibility.
  - Theory Y People are more positive, innovative, creative and do not dislike work. Chris Argyris’s contributions are maturity–immaturity theory, integration of individual and organizational goals.

3. Modern Approaches
These approaches are classified as

i. Quantitative School of Thought: Different branches of quantitative approaches are Management Science, Operations Management, MIS.

- Management science approach or operations research approach is used in production, scheduling human resource planning, inventory management etc.
- Operations management is primarily concerned with production management and related management.
- MIS approach focuses on design and implementation of information system for management uses. It converts raw data into information inputs to be used by management for decision making.

ii. System Theory Approach: It considers organization as a whole because of interdependent nature of activities requiring organization to interact with external environment factors.

iii. Contingency Theory Approach: This Approach discards the concept of universality in management principles and determines managerial decisions considering situational factors. Contingency theory and System theory together are classified as integrative school of management thought because these two theories integrate the classical, behavioral and quantitative theories and uses only the best of each approach in a given situation.
APPLICATION & SCOPE OF INDUSTRIAL MANAGEMENT

Initially the scope & application of industrial management was restricted to manufacturing industry. Later on it spread to non-manufacturing activities such as construction & transportation, farm and air-line operations and maintenance, public utilities govt. & military operations.

In an industry besides the production, other departments utilizing industrial management concepts are Marketing, Finance, Purchasing, Industrial relations etc.

Major applications of Industrial Management

<table>
<thead>
<tr>
<th>Production Management</th>
<th>Plant location</th>
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<tbody>
<tr>
<td></td>
<td>Capacity Planning</td>
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<td></td>
<td>Selection of Machinery and Equipment</td>
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<td></td>
<td>Plant Layout</td>
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<td></td>
<td>Material Handling</td>
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<td></td>
<td>Planning</td>
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<tr>
<td>1. Pre-production Planning</td>
<td>Routing</td>
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<tr>
<td></td>
<td>Scheduling</td>
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<tr>
<td></td>
<td>Dispatching</td>
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<tr>
<td></td>
<td>Controlling</td>
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<tr>
<td>2. Production Planning &amp; control</td>
<td></td>
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<td></td>
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<tr>
<td>3. Inventory management &amp; store keeping.</td>
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<tr>
<td>4. Total Quality Management</td>
<td>Finance</td>
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<tr>
<td>To improve the process and service in</td>
<td>Marketing</td>
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<td></td>
<td>Human Resources etc</td>
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Scope of Industrial Management

The scope of industrial Management can be grouped as follows.

| 1. Expertise Help | i. Help in all decision making and problem solving |
|                   | ii. Help in the design of production system |
|                   | iii. Help in design, selection and implementation of new technology |
| 2. Advice & consultancy | iv. Interpretation of data and information |
|                       | v. Review of data and information |
|                       | vi. Productivity measurement and improvement |
The management process is methodology of getting the things done. The logic of management process is that particular functions are performed in a sequence through time.

Management functions are

**1. Forecasting.**
- Forecasting is necessary preliminary to planning.
- Forecasting begins with sales forecast followed by production forecast and forecast for cost, finance, purchase, profit or loss etc.

**2. Planning.**
Planning is a process by which a manager anticipates the future and discovers the alternative course of action.
- Planning involves what is to be done?
- How, when and where it is to be done?
- Who is to do it? And
- What results are to be evaluated?
Without proper planning, the activities of an enterprise may become confused, and ineffective. e.g. If a refrigerator company making concern does not plan in advance –how many refrigerators and of what capacities are to be made before the summer starts? And thus if it does not procure necessary material, tools, supplies in time, it cannot reach the production targets.

3. Organizing.
Organizing is the process by which the structure and allocation of jobs is determined. The process of organizing involves:-
- Divide the work into component activities.
- Assign people to task.
- Define responsibilities.
- Delegate authority.
- Establish structural relationship to secure coordination.

4. Staffing.
Staffing is the process by which managers select, train, promote, and retire their subordinates. Developing and placing of qualified people in the various jobs in the organization. The aim is to have appropriate persons to move into vacated positions or new positions.

5. Directing:
Directing involves motivating, guiding, and supervising subordinates towards company objectives. Directing includes:
- Giving instructions to subordinates.
- Guiding the subordinates to do the work.
- Supervising the subordinates to make certain that the work done by them is as per the plans established.

Directing involves functions as:
- Leadership,
- Communication,
- Motivation,
- Supervision.

a) Leadership:
- Leadership is to inspire confidence and trust in their subordinates.
- Get maximum cooperation from them.
- Guide the activities of subordinates in organized efforts.

b) Communication:
- It is the process by which ideas are transmitted received and understood by others.
- Communication may be verbal or written orders, reports, instructions etc.
- Ineffective communication leads to confusion, misunderstanding, and dissatisfaction.

c) Motivation:
- Inspiring the subordinates to do work, or
- To achieve company objectives effectively and efficiently.

d) Supervision:
To ensure that
The work is going on as per schedule and
The workers are doing as they are directed to do.

6. Coordinating.
   - Achieving harmony of individual effort towards the accomplishment of company objectives.
   - Coordinate the activities of subordinates
   - Regulate their communications.

7. Controlling.
Controlling is the process that measures current performance and guides it towards some predetermined goal.

   - The process of controlling involves:
     1. Observe continuously and study the periodic results of performance.
     2. Compare this performance with the present standard
     3. Ascertain the exact causes of deviations.
     4. Initiate and implement the corrective action.

8. Decision making:
   - It is the process by which a course of action is chosen from available alternatives for the purpose of achieving desired results.

==================================================================================================

PRODUCTIVITY

CONCEPT AND DEFINITION

Productivity may be defined as the ratio between output and input. Output means the amount produced or the number of items produced and inputs are the various resources employed, e.g., land, building, equipment and machinery, material, labour, etc.

Productivity of a production system is analogous to the efficiency of a machine.

   - According to Peter Drucker, “Productivity means a balance between all factors of production that will give the maximum output with smallest efforts.
   - ILO defines productivity as the ratio of aggregate output to aggregate input.

FACTORS AFFECTING PRODUCTIVITY

(a) Factors affecting National Productivity:
   - Human Resources: General level of education, computing skills, motivation towards work, etc.
   - Technology and Capital Investment: Adoption of new technologies, investment in new machinery and equipment
   - Government Regulation: An excessive amount of regulation may have detrimental effect on productivity.

(b) Factors affecting Productivity in Manufacturing and Services Sectors:
   - Product and System Design: Standardization of the product and the use of group technology are the design factors that make possible greater productivity in the factory.
   - Machinery and Equipment: The equipment used – machines. Tools, conveyors, factory layout – all affect the productivity.
Skill and Effectiveness of the Worker: The trained and experienced worker can do the same job in much shorter time.

Production Volume: If the output is doubled the productivity of support people (like Engineers, Design People, Headquarter staff or other support personnel) is doubled.

Measurement of Productivity
The basic objectives of productivity measurement are:
1. To study performance of a system over time.
2. To have relative comparison of different systems for a given level; and
3. To compare the actual productivity of the system with its planned productivity.

The measurement of the productivity creates problems:
- when the production system produces different types of output,
- whenever different kinds of input like capital and labor, are to be added to arrive at an aggregate output and aggregate input figures respectively, a common unit of measurement is needed for these outputs and inputs.

The most common way is to express both outputs and the inputs in monetary terms. If the outputs and inputs for the period for which productivity is measure, are expressed in rupees, then
Aggregate output = Gross sales = G(say); and
Aggregate input = Cost = C (say)

Kinds of Productivity Measurement
1. Land Productivity: The productivity of land and building is said to have increased if the output of goods and services within that area is increased.

2. Material Productivity: The productivity of the materials becomes a key factor in economic production / operation.
Raw material productivity can be increased by:

i. Proper choice of design;

ii. Better handling of materials and reduction of rejection;

iii. Recycling and reuse of materials.

iv. Searching alternative cheaper material.

For Example: A skilled worker by improved design may cut 12 metals disc from given length of metal plate but from the same length of metal an unskilled worker may cut only 10 discs. The productivity of the material has increased by

\[
\frac{(12-10) \times 100}{1} = 20\%
\]

2. Labour Productivity:

<table>
<thead>
<tr>
<th>Aggregate Output</th>
<th>Number of units produced</th>
</tr>
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<tbody>
<tr>
<td>Labour productivity = \frac{\text{Aggregate Output}}{\text{Number of units produced}}</td>
<td></td>
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<table>
<thead>
<tr>
<th>Amount of Labour</th>
<th>Man hours utilized</th>
</tr>
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<tbody>
<tr>
<td>Labour productivity = \frac{\text{Amount of Labour}}{\text{Man hours utilized}}</td>
<td></td>
</tr>
</tbody>
</table>

Output can be measured in total quantity produced and labour can be measured in total man hours required to produce that output.

Output and labour can also be measured in terms of their value in money value. Thus,

| Total Revenue from Production | Labour productivity = \frac{\text{Total Revenue from Production}}{\text{Expenditure on Labour}} |
Labour productivity can be increased by:

i. Providing training to use best method of production.
ii. Constantly motivating the workers by providing financial and non-financial incentives
iii. Keeping high morale of the employees.
iv. Improving working condition on the plant.

For Example: A worker was assembling 10 pieces of mobile sets per hour and the same worker, by improved methods of the work is able to produce 13 pieces of mobile sets. The productivity is improved by

\[
\frac{(13-10) \times 100}{10} = 30\%
\]

3. Machine Productivity

\[
\text{Output} \times \frac{\text{Machine Productivity}}{\text{Actual Machine Hours Utilized}} = \text{Output}
\]

Machine productivity can be improved by:

i. Preventive maintenance;
ii. Use of proper speed, feed, etc.
iii. Using method study techniques (Using best method)
iv. Use of skilled, properly trained workers.

For Example: A machine was producing only 100 pieces per working day of 8 hours. The machine tool has fitted with a better tool that permitted more depth of cut and higher cutting speed. As a result the output from the machine increased to 130 pieces in a day of 8 hours. In this case the productivity has increased by

\[
\frac{(130-100) \times 100}{100} = \approx 30\%
\]
4. Capital Productivity

Capital productivity can be improved by:

i. Better utilization of capital resources like land, building machines etc.

ii. Careful make or buy decision.

iii. By using modern techniques of production, maintenance, flexible manufacturing system, proper plant layout etc.

General Measure of Productivity:

Output
Aggregate productivity = ----------------------------------------------------------
Land + Labour + Material + Machine + Capital + Other Inputs

Productivity Index

The average productivity index of a department or of a plant would be the total standard times or standard hours produced by all employees divided by the actual hours worked multiplied by 100. This assumes that all of the operations are covered by time standards. Thus a performance index can be used company wide as a labour productivity index.

Total Productivity Index

Sales + Inventory + Plant
= .................................................................
Labour + Material + Services + Depreciation + Investment

(3) It is found that if the standard time to assemble a band saw machine is 120 min. (2 hrs.) per unit and if an operator assemble 5 machines during the day, the output is 600 standard minutes (5X 120 = 600). If the operator works for 8 hours or 480 minutes in a day, the input be 480 minutes. The operator’s performance index would be
Performance Index = (600/480) X 100 = 124%

**Productivity Index on Base year**

It is the ratio of output produced and the resources used in the measured period, divided by the similar ratio from a base period.

\[
\text{Productivity index} = \frac{\text{Aggregate output in the measured period}}{\text{Aggregate Input in the measured period}}
\]

\[
\text{Labour Productivity Index} = \frac{\text{Number of outputs}}{\text{Direct labour hours}} x 100 = \frac{20000}{8000} x 100 = 250\\
\]

\[
\text{Aggregate Productivity Index} = \frac{10000/5000}{2} x 100 = 200 \%
\]
TYPES OF PRODUCTION SYSTEM

Manufacturing Systems
Production is the process by which goods and services are created. A typical production system is depicted in figure given below.

MANUFACTURING SYSTEM

The inputs can be raw materials, components, paperwork, etc. Whereas outputs are completed parts, products, paper work output, services and scrap. Manufacturing systems can be classified in two categories: (i) Intermittent system and (ii) Continuous system.
**Intermittent System**

In this system, the goods are manufactured specially to fulfill orders made by customers rather than for stock. Here the flow of material is intermittent. Intermittent production systems are those where the production facilities are flexible enough to handle a wide variety of products and sizes.

Examples of intermittent system are: machine shops, hospitals, general office etc.

**Chief characteristics of intermittent system are:**
1. Most products are produced in small quantities.
2. Machines and equipment are laid out by process.
3. Workloads are generally unbalanced.
4. Highly skilled operators are required for efficient use of machines and equipment.
5. In-process inventory is large.
6. Flexible to suit production varieties.
Job- Production or Project Type Production
Job or ‘make complete’ production is the production of single complete unit by one operator a group of operators e.g. bridge building, dam construction, ship building etc. Here whole project is considered as one operation and work is completed on each product before passing on to the next. In this system the goods are produced to definite customer’s orders. There is no assurance of continuous demand for specific items and the manufacturing depends on the receipt of orders from customers.

Job-order process is characterized by
1. Whole project is taken as a single operation.
2. Work is to be completed on each product before processing the next item.
3. Versatile and skilled labour is needed.
4. High Capital Investment required.
5. Control operations are relatively simple.
6. High unit cost of production.

Batch-Production
The items are processed in lots or batches unlike job-type system where one item is produced during each production run. In batch-type system new batch is undertaken for production only when the work on all items of a batch is complete.

It is characterized by
1. One can employ more specialized labour for each operation with comparatively low investment.
2. Organization and planning is more complicated in this system.
3. The irregularity in the increase of work added to the basic material.

The best example of batch production system is of chemical industry, where different medicines are manufactured in batches. Other examples can be, production of electronic instruments, machine tools, printing press etc.

Features of an intermittent System
1. Demand can be discontinuous.
2. All operational stages may not be balanced.
3. Elaborate sequencing and scheduling is required.
5. Planning, routing and scheduling changes with fresh orders.
6. Storage is necessary at each stage of production process.
7. Can adjust to new situation and specification.
8. Inspection is not in line with production.

Continuous System
In this system the items are produced for the stocks and not for specific orders. Here the inputs are standardized and a standard set of processes and sequence of processes can be adopted. In continuous manufacturing systems each production run manufactures in large lot
Sizes and the production process are carried on in a definite sequence of operations in a pre-determined order. First in first out priority rule is followed in the system.

**Mass Production**
1. Standardization is the fundamental characteristic of this system.
2. Here items are produced in large quantities and much emphasis is not given to consumers orders.
3. Uniform and uninterrupted flow of material is maintained through pre-determined sequence of operations.
4. Specialization and standardization also leads to economies in production

**Process Production**
This system is analogous to Mass production system with more stress on automation in production process.
1. The volume of production is very high.
2. Used for manufacturing those items whose demand is continuous and high e.g. petroleum products, particular brand of medicines, heavy chemicals industries, plastic industries etc.
3. Single raw material can be transformed into different kinds of product at different stages of the production process e.g. in processing of crude oil in refinery one gets kerosene, gasoline etc. at different stages of production.
Features of continuous type of Manufacturing Systems

1. There must be continuity of demand.
2. The product must be standardized.
3. Material should be per specifications and delivered in time.
4. All operational stages in the process must be balanced.
5. Work must conform to quality standards.
6. Appropriate plant and equipment must be provided.
7. Maintenance must be by anticipation and not by default.
8. Inspection must in line with production.

Advantages

1. Direct labour content is reduced.
2. High accuracy.
3. Work in progress is at a minimum.
4. Storage at different stages of operation not necessary.
5. Reduced material handling.
6. Control process simple.
7. Any weakness in the system is easily located.
8. Material requirements can be accurately planned.
9. Investment in material can be more rapidly translated into income from sales.
# Differences between Intermittent and Continuous Process

<table>
<thead>
<tr>
<th>Intermittent</th>
<th>Continuous</th>
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</thead>
<tbody>
<tr>
<td>i. Same product is not produced continuously.</td>
<td>i. Same product produced continuously.</td>
</tr>
<tr>
<td>ii. Items produced for order.</td>
<td>ii. Items produced for stock.</td>
</tr>
<tr>
<td>iii. Production process flexible.</td>
<td>iii. Process not flexible.</td>
</tr>
<tr>
<td>iv. Equipment used for limited time.</td>
<td>iv. Regular use of equipment.</td>
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<tr>
<td>v. Wide range of products can be produced.</td>
<td>v. Only particular type of product is produced.</td>
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<tr>
<td>vi. Smaller scale of production.</td>
<td>vi. Large scale production.</td>
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<tr>
<td>vii. Planning and control operations complicated and tedious.</td>
<td>vii. Planning and control operations simple and easy.</td>
</tr>
<tr>
<td>viii. More detailed and too many instructions are required for operations.</td>
<td>viii. Single set of instructions is sufficient for operations.</td>
</tr>
<tr>
<td>ix. Capital investment may be low.</td>
<td>ix. Capital investment is high.</td>
</tr>
<tr>
<td>x. Per unit cost of production is high.</td>
<td>x. Per unit cost of production is low.</td>
</tr>
<tr>
<td>xii. Functional type of organization.</td>
<td>xii. Divisional type of organization.</td>
</tr>
<tr>
<td>xiii. Requires staff of high technical skill and ability.</td>
<td>xiii. Requires more managerial capability and better co-ordination.</td>
</tr>
<tr>
<td>xiv. Control not in line of production.</td>
<td>xiv. Control in line of production.</td>
</tr>
<tr>
<td>xv. Storage is required at each operation.</td>
<td>xv. Storage required only at limited locations.</td>
</tr>
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<td>xvi. Change in location easy.</td>
<td>xvi. Change in location difficult.</td>
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<tr>
<td>xviii. Accuracy low.</td>
<td>xviii. Accuracy high.</td>
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</table>
Forms of Industrial Enterprises.

- Private Sector
  1. Sole Proprietorship
  2. Partnership
  3. Joint Hindu Family
  4. Joint Stock Company
  5. Co-operative Society

- Public Sector
  1. Departmental Organisation
  2. Government Company
  3. Public Corporations

- Joint Sector

Private Sector:
A private sector enterprise is owned, controlled and managed by individuals or group of individuals known as entrepreneurs.

Characteristics:
  1) Owned by private individuals or group of individuals.
  2) Managed by the owners or professionals appointed by owner.
  3) Its main objective to earn profit.

1. Sole Proprietorship:
A sole proprietor is a person who carries on business exclusively by and for himself.

Features:
  1) Common Identity or No Separate Entity.
  2) Capital
  3) Unlimited Liability
  4) Easy Formation
  5) One Man Control
  6) Profit & Losses
Advantages of Sole Proprietorship:

1) Easy Formation
2) Secrecy
3) Personal Touch
4) Low Overheads
5) Quick Decision Making
6) Flexibility
7) Direct Incentive
8) Few Government Regulations.

Limitations of Sole Proprietorship:

1) Limited Capital
2) Unlimited Liability
3) Unfavorable conditions
4) Uncertain Life of Business.

Joint Hindu Family / Hindu Undivided Family

Features of HUF:

1) Male Members
2) Women Members
3) Management
4) Registration
5) Minor Members
6) Governed by Hindu Law.

Features of Partnership:

1) Number of Members (2 to 10)
2) Agreement
3) Sharing of Profits
4) Limited Liability
Advantages of Partnership:

i) Easy formation
ii) More funds or capital
iii) Sharing of risks
iv) Balanced decision making
v) Pooling of skills
vi) Flexibility in operations
vii) Scope of expansions

Limitations of Partnership:

i) Uncertainty of existence
ii) Unlimited liability
iii) Limited funds
iv) Conflicting interests
v) Non-transferability of interest
vi) Low public confidence

Joint Stock Company:

Joint stock company as "voluntary association of individuals for the profit, having a capital divided into transferable shares, the ownership of which is the condition of membership."

L.H. Haney:

"A company is an artificial person created by law, having a separate legal entity, with a perpetual succession and a common seal."

Features of a Company:

1. Incorporated Association
2. Artificial Legal Person
3. Separate Legal Entity
4. Perpetual Succession
5. Common Seal
6. Limited liability
7. Transferability of shares
8. Separation of ownership and control
Merits of a Company:
1) Huge Financial Resources
2) Limited Liability
3) Transferability of Shares
4) Durability and Stability
5) Democratic Setup

Limitations of a Company:
1) Complex formation procedure
2) Lack of secrecy
3) Delay in decision-making
4) Excessive Government Regulations
5) Lack of incentives

Private Company:
A private company which:
- restricts the rights of members to transfer its shares.
- has minimum of 2 and maximum of 50.
- does not invite public to subscribe to its share capital, and
- must have a minimum paid-up capital of Rs 1 lakh.

Public Company:
As per the Indian Companies Act, a public company is one which:
- has a minimum paid-up capital of Rs 5 lakh
- has a minimum of 7 members and no max. limit
- has no restriction on transfer of shares
- is not prohibited from inviting the public to subscribe to its share capital.
Co-operative Society

"A co-operative society is a voluntary association of persons of moderate means, who unite together to protect and promote their common economic and social interest."

Features of Co-operative Society:

1) Voluntary Association
2) Legal Status
3) Limited Liability
4) Service Motive
5) Equality of Voting Rights
6) Democratic Management
7) Disposal of Surplus

Types of Co-operative Societies:

- Consumer Co-operative societies
- Co-operative credit societies
- Producer co-operative
- Marketing
- Co-operative farming
- " " housing

Merits of Co-operatives

- Easy formation
- Open membership
- Democratic management
- Limited liability
- Economical operation
- Stability
- Government support

Limitations of Co-operatives

- Limited capital
- Inefficiency in management
- Lack of motivation
- Conflicts among members