

ADVANTAGES

- 1. **Higher rate** of production with reduced cycle time.
- 2. Higher capacity utilisation due to **line balancing**.
- 3. **Less skilled** operators are required.
- 4. **Low process** inventory.
- 5. **Manufacturing cost** per unit is low.

LIMITATIONS

- 1. **Breakdown** of one machine will stop an entire production line.
- 2. **Line layout needs** major change with the changes in the product design.
- 3. **High investment** in production facilities.
- 4. **The cycle time** is determined by the slowest operation.

CONTINUOUS PRODUCTION

- Production facilities are arranged as per the sequence of production operations **from the first operations to the finished product.**
- The items are made to flow through the sequence of operations through material handling devices such as **conveyors, transfer devices, etc.**

CHARACTERISTICS

- 1. **Dedicated** plant and equipment with **zero flexibility**.
- 2. Material handling is **fully automated**.
- 3. Process follows a **predetermined** sequence of operations.
- 4. Component materials can't be readily **Identified** with final product.
- 5. Planning and scheduling is a **routine action**.

ADVANTAGES

- 1. **Standardisation** of product and process sequence.
- 2. **Higher rate** of production with reduced cycle time.
- 3. Higher capacity utilisation due to **line balancing**.
- 4. Manpower is not required for material handling as it is **completely automatic**.
- 5. Person with **limited skills** can be used on the production line.
- 6. **Unit cost is lower** due to high volume of production.

LIMITATIONS

- 1. **Process number of products** doesn't exist.
- 2. **Very high investment** for setting flow lines.
- 3. **Product differentiation** is limited.

OBJECTIVES OF PRODUCTION MANAGEMENT

- The objective of the production management is '*to produce goods services of right quality and quantity at the right time and right manufacturing cost*'.
- **RIGHT QUALITY:**
The quality of product is established based upon the **customers needs**. The right quality is not necessarily best quality. It is determined by the **cost** of the product and the **technical** characteristics as suited to the specific requirements.i.e.

- **2. RIGHT QUANTITY**

The manufacturing organization should produce the products in **right number**. If they are produced in excess of demand the capital will block up in the form of inventory and if the quantity is produced in **short of demand, leads to shortage of products.**

- **3. RIGHT TIME**

Timeliness of delivery is one of the important parameter to judge the **effectiveness** of production department. So, the production department has to make the **optimal utilization of input resources** to achieve its objective.

- **4. RIGHT MANUFACTURING COST**

Manufacturing costs are established before the product is actually manufactured.

- All attempts should be made to produce the products at **pre-established cost**, so as to reduce the variation between **actual and the standard (pre-established) cost**.

DIFFERENCE BETWEEN PRODUCTION & PRODUCTIVITY

- Production is **number of goods made**.
- Productivity is **the number of goods produced divided by employees**.

$$\text{Productivity} = \frac{\text{Units produced}}{\text{Input used}}$$

- **Example:**

Business A produced 40 chairs with 5 employees

- Production: **40 chairs**
- Productivity: **40chairs/5 employees= 8**

SCOPE OF PRODUCTION MANAGEMENT

- Production management concern with the **conversion of inputs into outputs**, using physical resources, so as to provide the desired utilities to the customer while meeting the other organizational objectives of effectiveness, efficiency and adoptability.
- It distinguishes itself from other functions such as personnel, marketing, finance, etc., by its primary concern for **'conversion by using physical resources.'**

- **Following are the activities which are listed under production management functions:**
- 1. Location of facilities
- 2. Plant layouts
- 3. Product design
- 4. Process design
- 5. Production and planning control
- 6. Quality control
- 7. Materials management
- 8. Maintenance management.