WORKSHOP ORGANIZATION

AND

MANAGEMENT

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WORKSHOP ORGANIZATION AND MANAGEMENT

WORKSHOP
A structure that enables a body of persons or machines work together effectively to accomplish a given purpose

Comparison of School Workshop with Commercial Workshop
Organization and management of the school workshop and commercial workshop have many elements in common :-

	Commercial Workshop	School Workshop
1.	Operates for profit	Operates to offer services to the community
2.	Develops new products	Organizes new courses of instruction to meet the demand of the most recent development within the community.
3.	Uses machines, tools, equipments best suited for the greatest economy and efficiency	Uses machines, equipment and tools best suited for instructional purposes
4.	Maintain high quality product through continuous consumer checkup	Maintain high quality and up to date instructional through community and student checkup
5.	Judges its own success by the expansion of the physical plans, increase in reputation and the extent of profit realized	Judges its own success by the number of students satisfactory employed in the field which they have trained
6.	Advertises its products to increase sales	Keeps community informed to the exact kind of service rendered so that continuous support may be maintained.

Similar Factors between School Workshop and Commercial Workshop
- i. The same machines are used
- ii. The same tools are required
- iii. The same materials are required
- iv. The same skills, methods, procedures and processes are employed

School Workshop
In school the *students a*re the products and *teachers acts as foremen* of their department thus they must be guided in all that they do by the necessity of producing well trained boys and girls.

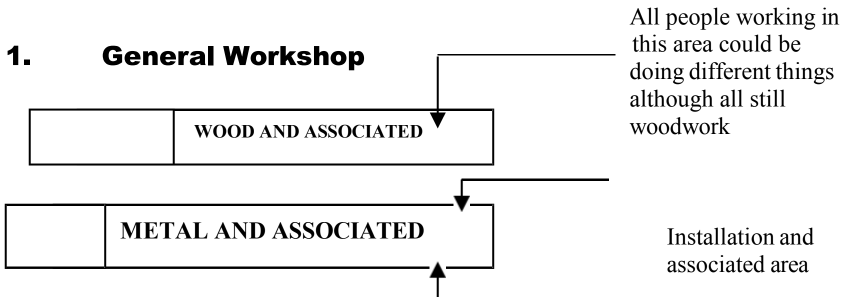
Teacher's Role
- i. Select jobs, which provide the best opportunities for students to secure the training necessary to meet the objectives
- ii. Instruct students effectively in the *best skills, methods and procedures* of the skill so that its best understood
- iii. Will be guided in his instructions by the progress of the students
- iv. Choose the machines tools and equipments most appropriate for a specific phase of instructions

Factors to Consider before starting a School workshop

- i. Need for the workshop
- ii. Kind of the workshop needed
- iii. Availability of students and materials
- iv. Number of students
- v. Location of the workshop

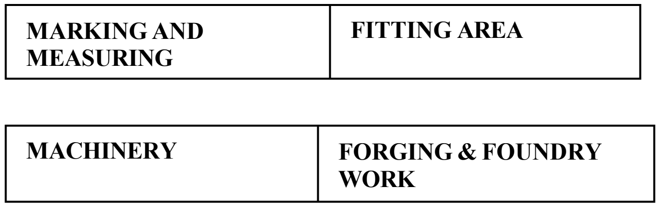
TYPES OF WORKSHOPS

1. General Workshop



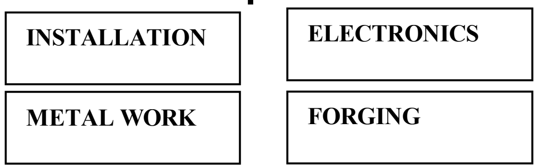
Similarly here people could be working in different projects eg some could be fitting others forging etc . No specific unit of the trade being taught. Many students doing different things eg woodwork, metalwork, power mechanics, electrical installation. There are enough tools for all in all fields

2. General Unit Workshop



Many things are done here but specific areas for specific jobs are set aside eg a machine area is exclusively spared for that, therefore a general unit workshop is divided in sections with specific duties assigned to them

3. Unit Workshop



This is a workshop specified for a single job only. There is no dividing the shop into many areas. Its only one job that can be done here, metal work only but not metal work and forging

Advantages of good workshop layout.

i. The floor area is effectively and economically utilized.
ii. The rate of production is increased i.e. less men and machine hours are used per unit of production
iii. The material handling time is minimized.
iv. The usual production delays are avoided.
v. A better utilization of labour
vi. There is better supervision.
vii. Adequate flexible arrangement to suit the future changes.
viii. It promotes better planning and effective control of production.
ix. It provides a safe and healthy working condition.
x. It results to better wages to the worker and enhance efficiency of the plant.

BASIC PRINCIPLES OF WORKSHOP PLANNING

Objective

Factors to consider when constructing a workshop.

1. The purpose for the workshop.
2. Comfortable for both the students and the teacher (ventilation, water system, space)
3. Economy of practice is maximized i.e. *use of natural light, use of materials that last*.
4. Flexibility for offering i.e. benches should be offered for both future extensions.
5. Plan for future extension.
6. Best possible space utilization i.e. every space must be used with maximum efficiency.

7. Ease of administration and supervision. The supervisors should be in a position to see every student in the shop. Incase of many sections, movement from one section should be easy.
8. Safety of the students and teachers should be considered. Floors should not be slippery.
9. All the necessary machines, tools and equipment needed should be determined.
10. Consider the kind and the extent of training to be given and the no of students to be accommodated at any one time.
11. Visit the existing schools. This helps the teacher in seeing actual practical operation of students, physical features of any new machines. This also helps the teacher to avoid or modify practices that have resulted in less than effectiveness.

LEGAL LIMITATIONS ON BUILDINGS

For the teacher to plan his shop he/she should realize that there a certain legal restrictions to which he/she must conform. These are:

1. **Government Requirements**
   Intended simply to protect the workers in shops against accidents. The requirements are published in form of industrial codes for various trades e.g. *the factory act*.

2. **Ministry of Education Requirements**-
   Laid down by the ministry e.g. from the inspectorate division and could include things like *safety of students*, *students enrollment* etc**.**

SELECTING THE SITE OF A WORKSHOP

Consider the *technical*, *commercial* and *financial* aspects, which may provide maximum advantage. The general location of a factory:-

a. The site should be near the source of raw materials in order to reduce the cost of transport
b. Proximity to the market - the cost of transportation of finished goods , advertising and distribution will greatly reduce if the factory is near the market
c. Transport cost is reduced especially when raw materials are bulky
d. When selecting a site consider whether the right kind of labour is available
e. Availability Of Power and fuel
f. Availability of water is necessary for construction of industries therefore water should be readily available
g. Supply of capital is important factor on the rate of development of the factory
h. Social and recreational facilities e.g. schools,
i. Business and commercial facilities

GENERAL REQUIREMENTS & CONSIDERATIONS OF WORKSHOP CONSTRUCTION

FACTORY LAYOUT

A good layout saves the *floor space*, smoothens *movement of materials*, *increases production* and *reduces the cost* by utilizing labour more effectively

1. **Floor construction**
   - **Floor material** should be appropriate for the work to be done in the workshop. Where concrete is used it must not produce any strain on individuals who are required to work on it for period of work i.e. provide firm footing at all times.
   - The floor should present a *pleasing appearance*, *require minimum repair* and *easy to clean.*

2. **Wall Construction**
   - Walls should be constructed of materials that can be cleaned.
   - Partitioning of the rooms should be sound proof

3. **Ceiling Construction**
   - Ceiling should be at least 12ft high'
   - Ceiling that are treated with acoustical material provide better teaching and learning conditions

4. **Doors**
   - All workshop doors should open outwards.

- To avoid congestion its suggested to have two large doors, one for the students to enter and another for exit
- The doors should not be secured or located while the class is in session

5. **Equipments**
   - Machines commonly used should be arranged in sequential order and placed in order of their application.
   - All machines should be arranged such as to provide maximum safety for any operation.
   - Each power machine should be equipped with a safety switch to automatically turn off the machine if its in operation and the master switch pulled off.
   - Equipments used mostly should be placed at the central area for supervision

6. **Comfort Facilities**
   - Wash basins/taps are needed in workshop.

7. **Planning Area**
   - Where the floor space is limited it may be necessary to use the same area both for *group instruction* and *as planning area'*
   - Planning area should be equipped with drafting tables and chairs or stools

8. **Instructional Area**
   - The area for group instruction should be large enough so that all members of the largest class will have a place to sit and write.
   - The chalkboard should be hung so that it is accessible to the teacher and readily seen by the students.
9. **Lighting**
   - Workshop should be well lighted. Light should be well-diffused eliminating glare at the point of vision and cast no shadow around the work

10. **Windows**
    - There should be windows on at least two sides of the workshop.
    - Arrangement of windows should allow installation of other equipments.
    - Windows should allow in maximum natural light.
    - Windows space should be at least ¼ of the floor space of the workshop

11. **Storing Materials**
    - Handwork to be stored on shelves.
    - Teaching aids not in use may be stored by having them mounted on panels and stored in drawers

12. **Student Storage**
    - A small area for each student personal belongings and a space for storing projects.
    - Individual departments may be provided with lockers placed along the wall or under the benches

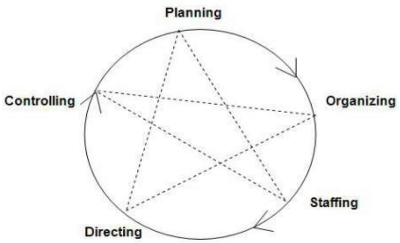
13. **Teacher Office**
    - A teacher needs an office, a place away from the activities of a workshop. The small room should include a table, chair, filing cabinet for teaching plans and books.
    - Its should be located near the instructional area and the planning room.

MANAGEMENT

The process of getting things done through the efforts of other people in order to achieve the predetermined objectives of organization.

Mary Parker Follet defines management as, “The art of getting things done through people

FUNCTIONS OF MANAGEMENT



(i) Planning

Planning involves choosing tasks that must be performed to attain organizational goals, outlining how the tasks must be performed, and indicating when they should be performed.

Planning activity focuses on attaining goals. Managers outline exactly what organizations should do to be successful. Planning is concerned with the success of the organization in the short term as well as in the long term.

(ii) Organizing

Assigning the tasks developed in the planning stages, to various individuals or groups within the organization. Organizing is to create a mechanism to put plans into action.

(iii) Leading

To influence others to engage in the work behaviours necessary to reach organizational goals. Leading includes *communicating, outlining a vision, giving direction and motivating others.*

(iv) Controlling

Regulates activity to ensure actual performance conforms to expected standards and goals (Newman 1975).

(v) Forecasting

The use of historic data to determine the direction of future trends. Forecasting is used by companies to determine how to allocate their budgets for an upcoming period of time

(vi) Motivating

Inspiring, stimulating or encouraging the subordinates with zeal to work. Positive, negative, monetary, non-monetary incentives may be used for this purpose.

(vii) Coordinating

Integration of activities, responsibilities, and command and control structures to ensure that the resources of an organization are used most efficiently in pursuit of the specified objectives.

A manager

A Person who coordinates and oversees the work of other people so that organizational goals can be accomplished.

The Roles and Responsibilities of a Manager

1. Supervise and manage the *overall performance* of staff in his department.
2. Analyzing, reporting, giving recommendations and developing strategies on how to improve quality and quantity.
3. Achieve business and organization *goal, visions and objective.*
4. Involved in employee *selection, career development, succession planning and periodic training.*
5. Working out compensations and rewards.
6. Responsible for the growth and increase in the organizations' *finances and earnings.*
7. Identifying problems, creating choices and providing alternatives courses of actions.

FOREMAN

People who direct/supervise the work force in order to get work done in disciplined manner.

Qualification of a Foreman

- Technical qualification
- Communication skills
- Knowledge of civil engineering
- Plant and equipment
- Production control
- Safety
- Material control
- Read & interpret drawings

Duties of a Foreman towards the Management

i. To translate polices to workers
ii. To inform workers desires to the management
iii. To get the required production in time
iv. Acts as a link between the employees and the employer
v. To reduce wastage to a minimum
vi. To formulate plans/methods to increase production

Duties of a Foreman toward the Workers

i. Loading both the machines and the personnel under him.
ii. Controlling the quality of work.
iii. Supervises the work and the people under him.
iv. Solving collaboration problems either of social or technical nature
v. Solving of any industrial dispute within his workshop.
vi. Encourage suggestions among workers and give credit where its due

Duties of a Foreman towards Materials/Building Equipments

i. To assist in selecting suitable materials
ii. To select the best equipments for a given operation
iii. To minimize wastage of materials

General Purpose of a Foreman

i. To report on the progress of work, wastage, time through machine and other operations
ii. Collaborating with the management in effecting change, methods and working conditions where necessary
iii. To assist in training
iv. To maintain the necessary records
v. To know first aid techniques and be able to put them in practice
vi. Report any danger or accidents in the work place.

WHAT MAKES A GOOD MANAGER

Interpersonal Relationship Skill.

Practice **empathy** and respect the personal values, opinions and ideas with the people you interact with. Listen and respond and offer praises and encouragements when they make progress. As the boss, *your ability to develop trust and confidence, resolve problems and issues will result in a productive, goal oriented work group.* You should encourage your team to ask for help, get involved and participate.

Communication Skill.

A manager is the middle person in between the top management level and the team that reports to him. He has to ensure that *communication is smooth and conveyed clearly to avoid misinterpretations and dissatisfaction*. It's useful to develop your **negotiation** and **customer service skills,** especially if you deal with clients.

A Good Planner.

Involves **thinking** and planning out strategies on how to improve quality and also being **cost conscious** and effective. Having goals and planning out the directions allow for effective time management and saves cost and resources.

Decision Maker.

Determining how to approach an employee who is not performing or lacking progress and how to bring about change to the organization and its team. It is essential that your day to day decision is based on what's important, what's right and not who's right.

Leadership skill.

To give direction, encourage and coach others to improve themselves and the quality of their work. You need to instill in them the desire to excel and accept responsibility and self management.

Appraiser.
The capacity to evaluate and examine a process or procedure and decide on the best choice to produce an outcome by at the importance, quality and values. You are also expected to track the progress of each individual's activities and effectiveness, review them and offer feedback and counseling.

SKILLS NEEDED BY MANAGERS

S**kills,** or abilities to translate knowledge into action that results in desired performance, required to help other employees become more productive. These skills fall under the following categories:

- **Technical Skills :**
  The ability to use special proficiency or expertise to perform particular tasks. *Accountants, engineers, market researchers, and computer scientists*, as examples, possess technical skills. Managers acquire these skills initially through formal education and then further develop them through training and job experience.

- **Human Skills:**
  Emerge in the workplace as a spirit of trust, enthusiasm, and genuine involvement in interpersonal relationships. A manager with good human skills has a high degree of self-awareness and a capacity to understand or empathize with the feelings of others.

- **Conceptual:**
  This skill calls for *the ability to think analytically* i.e. break down problems into smaller parts, to see the relations among the parts, and to recognize the implications of any one problem for others.

LEVELS OF MANAGEMENT

The level of management determines a chain of command, the amount of authority & status enjoyed by any managerial position. The levels of management can be classified in three broad categories: - *Top level/Administrative level, Middle level/Executory, Low level/Supervisory/ Operative/First-line managers*.

1. Top Level of Management

It consists of *board of directors, chief executive or managing director*. The top management is the ultimate source of authority and it *manages goals* and *policies* for an enterprise. It devotes more *time on planning and coordinating functions.*

The role of the top management:-

a. Lay down the objectives and broad policies of the enterprise.
b. Issues necessary instructions for preparation of department budgets, procedures, schedules etc.
c. Prepares **strategic plans** and **policies** for the enterprise.
d. Appoints the executive for middle level i.e. departmental **managers.**
e. Controls and coordinates the activities of all the departments.
f. Responsible for maintaining contact with the outside world.
g. Provides guidance and direction.
h. Responsible towards the shareholders for the performance of the enterprise.

2. Middle Level of Management

The *branch managers and departmental managers. T*hey are responsible to the top management for the functioning of their department. They devote more time to *organizational and directional functions*. In small organization, there is only one layer of middle level of management but in big enterprises, there may be senior and junior middle level management.

The role Middle level manager:-

a. Execute the plans of the organization in accordance with the policies and directives of the top management.
b. Make plans for the sub-units of the organization.
c. Participate in employment & training of lower level management.
d. Interpret and explain policies from top level management to lower level.
e. Responsible for coordinating the activities within the division or department.
f. Sends important reports and data to top level management.
g. Evaluate performance of junior managers.
h. Responsible for inspiring lower level managers towards better performance.

3. Lower Level of Management

It consists of *supervisors, foreman, section officers, superintendent* etc. Concerned with direction and controlling function of management. Their activities include

a. Assigning of jobs and tasks to various workers.
b. Guide and instruct workers for day to day activities.
c. Responsible for the quality as well as quantity of production.
d. Entrusted with the responsibility of maintaining good relation in the organization.
e. Communicate workers problems, suggestions, and recommendatory appeals etc to the higher level and higher level goals and objectives to the workers.
f. Help to solve the grievances of the workers.
g. Supervise & guide the subordinates.
h. Responsible for providing training to the workers.
i. Arrange necessary materials, machines, tools etc for getting the things done.
j. Prepare periodical reports about the performance of the workers.
k. Ensure discipline in the enterprise.
l. Motivate workers.
m. Build the image of the enterprise because they are in direct contact with the workers.

CONTRIBUTION OF PIONEERS' OF MANAGEMENT

PETER FERDINAND DRUCKER (November 19, 1909 – November 11, 2005)

A writer, management consultant, and self-described "social ecologist. In his books and scholarly articles he explored how humans are organized across the business, government and the nonprofit sectors of society.[2] His writings have predicted many of the major developments of the late twentieth century, including **privatization** and **decentralization**; the rise of Japan to economic world power; the **decisive importance of marketing**; and the **emergence of the information society** with its necessity of life long learning.[3]

Ahead of His Time

Drucker's track record is impressive, as *Business Week* succinctly summarized upon his death in 2005. Among his accomplishments:

- He introduced the idea of **decentralization**—in the 1940s—which became a bedrock principle for virtually every large organization in the world.
- He was the first to assert—in the 1950s—that workers should be treated as **assets**, not as **liabilities** to be eliminated.
- He originated the view of the corporation as a human community—again, in the 1950s—built on **trust** and **respect for the worker** and **not just a profit-making machine**, a perspective that won Drucker an almost godlike reverence among the Japanese.
- He first made clear—still the '50s—that there is "no business without a customer," a simple notion that ushered in a new marketing **mindset**.
- He argued in the 1960s—long before others—for the importance of substance over style, for institutionalized practices over charismatic, cult leaders.
- He wrote about the contribution of knowledge workers—in the 1970s—long before anyone knew or understood how knowledge would trump raw material as the essential capital of the New Economy.

6 stages of Peter Drucker management objectives

1. Define cooperate objective at board level.
2. Analyze objective /tasks, devise Job specification and allocate responsibities
3. Set performance standards
4. Agree/set specific objectives
5. Align individual targets with cooperate objective
6. Establish MIS to monitor achievement against objective

RENSIS LIKERT   Four Management styles 1967

During the 1960s and 1970s Likert's book on management theory were extremely popular in Japan and their impact can be seen across modern Japanese organizations. He particularly focused on leadership and conflict. Accord to Likert the efficiency of an organization or its departments is influenced by its system of management. He examined different types of organizations and leadership styles and argued that to achieve maximum profitability, good labour relations and high productivity every organization must make optimum use of their human assets. To achieve this optimum use Likert contends it is necessary to link high effective work froups in the organization.

1. **Consultative style**
   Leaders have substantial but not complete trust in their subordinates . There is communication and team work. Motivation is by rewards and some involment in decision making although the final decision ultimately rests with the leader

2. **Benevolent – authoritative style**
   Leadership is by a condescending form of master servant trust. The leader believes they know best but may occasionally consult their subordinates. Motivation is mainly by rewards which are preferred to threats. There is little communication and relatively little team work

3. **Exploitative – authoritative style**
   Decisions are imposed on subordinates. Motivation is characterized by threats and punishment and leaders have little trust or confidence in their subordinates. There is very little communication and no teamwork

4. **Participative- group style**
   Is the optimum solution with leadership by superiors who have complete confidence in their subordinates. There is much communication and a substantial amount of cooperative work. Motivation is by economic rewards based on goals which have been established through participation. Personnel at all levels feel real responsibility for organizational goals

CHRIS ARGYRIS Maturity Theory Presentation

Argyris Maturity Theory that seek to explain the human nature and behavior. According to this theory, a persons' development is processed along a continuous break of an **immaturity situation** to a **maturity situation**. A mature person is characterized for **being active, independent, self-confident and self-controlled**. On the contrary, an immature person is **passive, dependant, has lack of confidence and feels need of control by others.**

Many times, the self organizations functioning (in terms of work specialization, command chain, delegation level, control level, etc.), form in themselves a deterrent for the employees to achieve in a natural way a high maturity level.

Many times organizations expect that their cooperators be passive, dependant, that have a short term perspective and that produce without requesting a high control level. According to Argyris, whenever an employee with high maturity level is before a situation like this tends to take one of three attitudes:

- **Escape**: reflects into resignation, absenteeism, etc.;
- **Fight**: through structures like unions or even through an informal organization;
- **Adaptation**: is the most common reaction and consists in developing an apathy and indifference attitude, in which the monthly salary represents compensation for the "punishment" that the work represents.

Even though management based on the assumptions of **Theory X** is perhaps no longer widely appropriate in the opinion of McGregor and others, it is still widely practiced. Consequently, a large majority of the people in the workplaces today are treated as **immature human** beings in their working environments. In attempting to analyze this situation, Chris Argyris, compared bureaucratic / pyramidal values (the organizational counterpart to **Theory X assumptions** about people) that still dominate far too organizations with a more humanistic /democratic value system (the organizational counterpart to **Theory Y** assumptions about people) as outlined in the table below.

Bureaucratic/ Pyramidal Value System

According to Argyris, following bureaucratic or pyramidal values leads to poor, shallow, and mistrustful relationships. Because these relationships do not permit the natural and free expression of feelings, they are phony or non-authentic and result in decreased interpersonal competence. "Without interpersonal competence or a 'psychologically safe' environment, the organization is a breeding ground for mistrust, intergroup conflict, rigidity, and so on,which in turn lead to a decrease in organizational success in problem solving."

Humanistic / Democratic Value System

If, on the other hand, humanistic or democratic values are adhered to in an organization, Argyris claims that trusting, authentic relationships will develop among people and will result in increased interpersonal competence, intergroup cooperation, flexibility, and the like and should Chris Argyris immaturity / maturity motivation theory. In this kind of environment people are treated as human beings, both organizational members and the organization itself are given an opportunity to develop to the fullest potential, and there is an attempt to make work exciting and challenging. Implicit in "living" these values is "treating each human being as a person with a complex set of needs, all of which are important in her/ his work and in her/ his life... and providing opportunities for people in organizations to influence the way in which they relate to work, the organization, and the environment."

Even though management based on the assumptions of Theory X . Consequently, a large majority of the people in the work places today are treated as immature human beings in their working environments. In attempting to analyze this situation, he compared bureaucratic / pyramidal values (the organizational counter part to Theory X assumptions about people) that still dominate far too organizations with a more humanistic / democratic value system (the organizational counter part to Theory Y assumptions about people

Theory-X assumptions

(1) most people dislike work and will avoid it to the extent possible, therefore (2) they must be continually coerced, controlled, and threatened with punishment to get the work done, and that (3) they have little or no ambition, prefer to avoid responsibility, and choose security above everything else.

Theory-Y assumptions are:

(1) physical and mental effort are natural and most people (depending on the work environment) find work to be a source of satisfaction, (2) they generally, on their own motivation, exercise self-control, self-direction, creativity, and ingenuity in pursuit of individual and collective (company) goals, (3) they either seek responsibility or learn to accept it willingly, and that (4) their full potential is not tapped in most organizations.

These assumptions serve as powerful behavioral models reflected in the way an organization is structured. Management that believes in theory-X assumptions, creates stick-and-carrot approach based firms with restrictive discipline and pervasive controls. Theory-Y believers create trust based firms with empowered employees. These concepts were introduced by the US college-administrator and professor Douglas McGregor (1906-64) in his 1960 book 'The Human Side Of Eenterprise.'

FREDERICK HEZBERG

Herzberg's Motivation-Hygiene Theory was developed by Frederick Herzberg, a psychologist who found that job satisfaction and job dissatisfaction acted independently of each other. **Two Factor Theory** *states that there are certain factors in the workplace that cause job satisfaction*, while a separate set of factors *cause dissatisfaction*. According Theory of Frederick Herzberg **satisfaction** and **psychological growth** was a factor of **motivation**. **Dissatisfaction** was a result of **hygienic factor**. Herzberg developed this motivation theory during his investigation of 200 accountants and engineers in USA.

Hygiene Factor

Needed to ensure an employee does not become dissatisfied. They do not lead to higher levels of motivation but without them there is dissatisfaction.

Motivation factors

Needed in order to motivate an employee into higher performance. These factors result from internal generators in employees.

Typical Hygiene factors

i. Working conditions
ii. Quality of supervision
iii. Salary
iv. Status
v. Security
vi. Company
vii. Job
viii. Company polices and administration
ix. Interpersonal relations.

Motivation Factors

i. Achievement
ii. Recognition for achievement
iii. Reasonability for task
iv. Interest in the job
v. Advancement to higher level tasks

Combining the hygienic and motivation factors results

- **High Hygiene + High Motivation**
  the ideal situation where employee are highly motivated and have few complaints.

- **High Hygiene + Low Motivation**
  Employees have few complaints but are not highly motivated. The job is perceived as a pay check

- **Low Hygiene + High Motivation**
  Employees are motivated but have a lot of complaints. A situation where the job is exciting and challenging but salaries and work conditions are not up to par.

- **Low Hygiene + Low Motivation**
  The worst situation. Unmotivated employees with lots of complaints

Herzberg suggested that often work can and should be arranged in the following ways

- Job enlargement
- - job rotation

- job enrichment

Demotivating factors

As an employer, you have a certain amount of responsibility for the motivation and wellbeing of your workforce. For a team to function to the best of its ability, all members must be fully engaged and fully committed. It's important to recognize that true engagement will mean different things to different people and to understand what really drives an individual's motivation.

It's crucial to really listen and respond to your employees' needs to ensure high levels of engagement throughout your company. Spotting the warning signs of demotivation early and addressing them quickly can help encourage employee contentment and talent retention.

If you fear that one of your employees may be lacking in motivation, here are a few common causes that could be at the root of the issue.

1. Lack of career vision

In the majority of cases, money is merely one part of an employee's motivation. Most people want to have clear career objectives in place to feel that there's progression for them within their organisation. Career visioning can be a useful process in setting clear, long-term goals for an employee so that they can proactively work towards projected outcomes.

2. Job insecurity

Following on from the above point, a lack of career vision can give rise to feelings of insecurity. All employees want to feel a sense of security and longevity in their roles and an employer must help facilitate this with regular coaching and objective setting.

3. Feeling under-valued

If an employee feels that their efforts are not being recognized or appreciated, they'll soon begin to lack energy and commitment in their role. It's important to celebrate successes and give credit where credit's due. Try to make sure that achievements are rewarded – even if it's just with a pat on the back.

4. No development opportunities
Regular training and development opportunities can help boost employee motivation and engagement. Most employees will value ongoing learning potential and the sense that they're expanding and improving their skills and knowledge. If a workplace feels stagnant, non-progressive and uninspired – your employees' motivation levels will soon dwindle. Get regular feedback from your team to see where increased training or development opportunities would be best placed and appreciated.

5. Poor leadership
Effective leadership is an essential factor in the motivation of your staff. If strong leadership is lacking or is negatively affecting the outlook of the team – certain employees may start to feel demoralized. Leaders must have a flexible, inclusive approach to managing a team and be able to communicate clearly whilst instilling confidence and focus. If a particular team or individual is lacking motivation in your business, it may be due to a lack of good management.

6. Conflict
Conflict in the workplace is hugely detrimental. Healthy debate is often productive, but it's important to keep an eye out for any workplace intimidation or bullying. Some employees may feel worried to come forward about issues relating to a fellow colleague - which is where an anonymous employee survey may help to reveal any problem areas.

7. Unrealistic workload
It's important to keep a check on the expectations and demands that are being placed upon your employees. If someone feels overburdened by a large, impossible workload – they can soon become disillusioned, stressed and lose motivation. Equally, if an employee has a workload that's too light or not varied enough, they might quickly lose interest.

Broadly seven strategies for motivation.

- Positive reinforcement / high expectations
- Effective discipline and punishment
- Treating people fairly
- Satisfying employees needs
- Setting work related goals
- Restructuring jobs
- Base rewards on job performance

ORGANIZATION

A unit of people that is *structured* and *managed* to meet a need or to pursue collective goals.

All organizations have a management structure that determines relationships between the different activities and the members, and subdivides and assigns roles , responsibilities, and authority to carry out different tasks. Organizations are open systems--they affect and are affected by their environment

TYPES OF ORGANIZATIONS

i. LINE & SCALAR ORGANIZATION

It's also known as *military organization*. The flow of authority moves from top to the bottom in a vertical line. It has to be followed by the lower without any question.

Advantages

a. High level of discipline
b. Clear cut line of authority and responsibilities
c. The responsibilities of each individual is fixed
d. Everybody from top to bottom remain busy and thus the total cost of production is less
e. Flexible and able to extend or contract

Disadvantages

i. Require different departmental heads to be experts in different functions hence lack of specialization

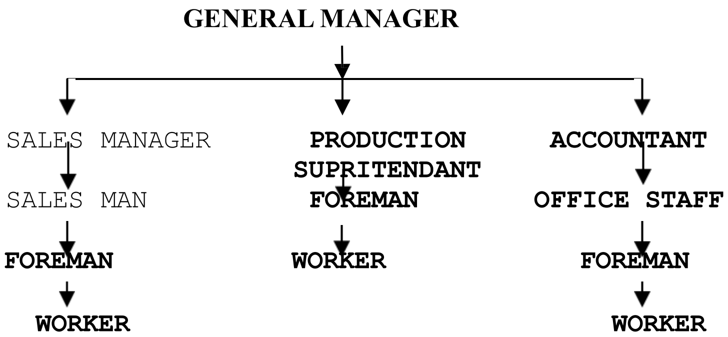
ii. Departmental heads are **over burdened** with volumes **routine jobs** hence no time to think for further expansion and planning

iii. It has no means of rewarding

iv. Fore-person is over burdened thus has insufficient time for each job

v. Chances of accidents, **wastage of materials** and labor are more because of persons who become key point and are loaded with work.

Chart of Line of Scalar Organization



Application

i. For small to medium size factories where there are a few workers

ii. Suitable for continuous process eg sugar factory, oil firms

iii. Suitable where labour problems are not difficult to solve

ii. FUNCTIONAL ORGANIZATION

*D*ivided into number of functional department. Every functional department serves the rest of the organization

Advantages

i Quality of work is better

ii. No special knowledge of workers is required as instructions are supplied by drawing and experts

iii. No over loading of responsibilities as in the line organization

iv. For every operation expert guidance is available and hence wastage of materials is less thus reducing the prime cost

v. Each supervisor being an expert, planning and supervision is likely to be efficient.

Disadvantages

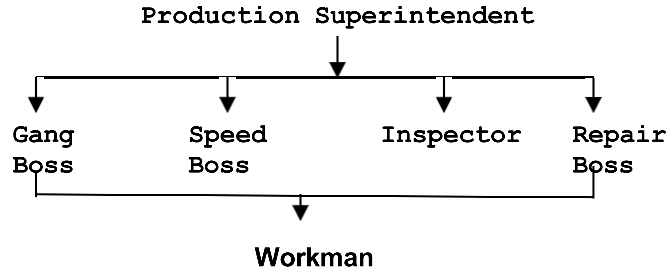
i. Divides responsibilities – *lack of unity of command* and *large no of subordinates* leads to unfixed responsibilities

ii. Low morale- employees find it difficult to satisfy many bosses

iii. Uneconomic – several specialists have to be maintained at a heavy overhead cost.

iv. Production is affected if there is failure or wrong operation of expert and nobody can correct him thus resulting to wastage of materials.

Chart Of Function Organization



iii. LINE AND STAFF ORGANIZATION

*C*ombine the advantages of division of work with unity of command. The line *serves to maintain unity of command and discipline* whereas the staff *provides expert knowledge and advice to management problems*.

Advantage

i. **Planned specialization**

The line executives receive expert advice from the specialists on various problems

ii. **Balanced decision**.-

with information and advice provided by staff specialist the line executives can make sound decision

iii. **Flexibility** –

there is greater scope for growth and expansions the staff are available to enable line to cope with greater work

iv. The **quality** of product is better

v. **Wastage** is less

Disadvantages

i. **Conflict**- the staff may undermine line authority leading to friction between them

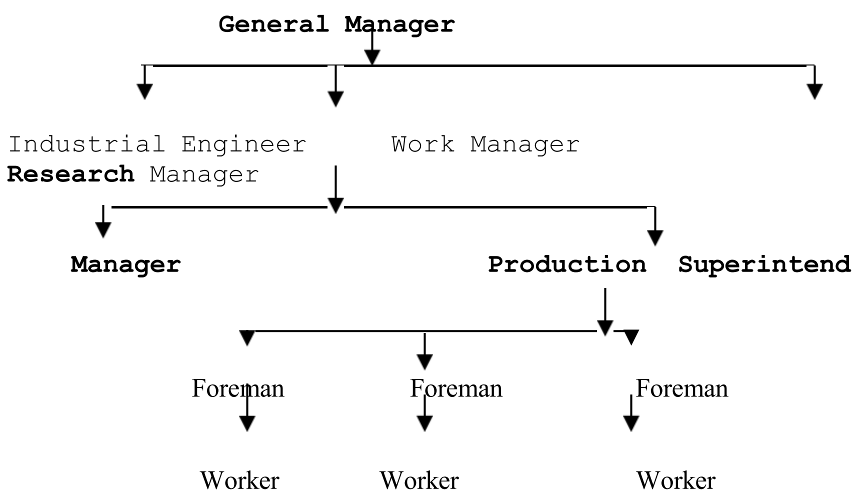
ii. **Lack of coordination**- the allocation of responsibilities between line and staff may not be very clear and thus may lead to conflict and disorder.

iii. **Ineffective staff** – the staff are not responsible for their result and may not be very careful about their job.

iv. **Expensive**- line and staff organization is expensive in terms of overhead as two separate sets of personnel are required

v. If any section is slow in doing its work it will largely affect the whole work

Chart of Line/Staff Organization



iv. COMMITTEE ORGANIZATION

A committee is a group of people formed for the purpose of giving advice on certain important issues or problems, which cannot usually be solved by an individual.

Questions

1. a) State FOUR qualifications of a foremen
   b) Outline FOUR responsibilities of a foremen
   c) Explain the following types of organization
      i. Line
      ii. Functional
      iii. Line and staff
   d) Explain FOUR methods of organizing work in a workshop
2 a) Outline FOUR principles of a good organization
   b) State any SIX general requirements of a typical workshop in an organization
   c) State four factors considered when selecting the site of a factory workshop
   d) State advantages of good workshop layout.
3. List any four motivating and demotivating factors in an organization
4. Explain the following functions of management
   i. planning
   ii. Organizing
   iii. Co-ordinating
   iv. Controlling
5. State four styles of management as distinguished by Rensis Likert .

MAINTENANCE OF MACHINES

Plant maintenance is an important service function of an efficient production system. It helps in maintaining and increasing the operational efficiency of plant facilities and thus contributes to revenue by reducing the operating costs and increasing the effectiveness of production. This responsibility includes constant checking as well as minor repairs. The foreman must do the following

i. Lubrication – (Inspection)
The lubrication of all machines should be done before each period of the use. To do effective the assigned worker should be closely supervised by the foreman/technician

Those assigned should be taught the following
- The location of places requiring lubrication which may include oil holes, oil cups, grease cups, oil levels on hydraulic equipments
- The kind of lubricants to use
- The quantity to use
- The proper tools and instruments to use

ii. Machine Cleaning (Servicing)
All machines should be cleaned at the end of each period of use. This include brushing off chips, removal of dust, grease, oil, washing down machine with proper cleaning fluids at internal

iii. Machine Testing (Adjustment)
Machines should be tested and adjusted periodically. The following should be checked:-Keys, tension, belts, alignment, electrical devices regularly

OBJECTIVE OF MAINTENANCE

i. To increase functional reliability of production facilities
ii. To enable products or services quality to be achieved through correctly adjusted serviced and operated equipment
iii. To maximize the useful life of equipment
iv. To maximize the total production costs directly attributed to equipment service and repair
v. To maximize the frequency of interruptions to production by reducing breakdowns
vi. To maximize the production capacity from the given equipment resources
vii. To enhance the safety of manpower

IMPORTANCE OF MAINTENANCE

i. To minimize the possibility of failure or breakdown which can result to loss of production
ii. To ensure that the planned life span of a machine is obtained
iii. To minimize operating cost by preventing major repair works from arising
iv. To discover whether a machine is wearing out
v. To give cost records which are helpful when it comes to considering plant replacement
vi. To reduce the chances of scraps in production and hence accidents and fire risks
vii. To improve the morale of the machine operators

TYPES OF MAINTENANCE

1. **Corrective Maintenance - Breakdown Maintenance Policy**
Is emergency based policy in which the plant or equipment is operated until fails and then it’s brought back into running condition by repair. The maintenance staffs locate any mechanical, electrical and any other fault to correct it immediately

2. **Routine Maintenance**
Procedures followed regularly. Routine services include lubrication, inspection, or adjustment. Routine maintenance emphasizes easy to follow instructions which cover most plant units with regular services and its down at minimal cost

3. **Preventive Maintenance Policy**
This is the policy of replacing components or parts of a system that are nearing the end of their life and are therefore likely to fail. The main objective of preventive maintenance is to detect weak points and ensuring perfect functioning by replacing parts. It aims at locating the source of fault and to remove them before breakdown occurs

((Prevents the probable breakdown and it ensures smooth and uninterrupted production by anticipating the breakdowns (failures) and taking corrective actions.))

The preventive maintenance policy has four forms

a. **Time based**
Doing maintenance at regular intervals. Its time dependent rather than usage dependent

b. **Work based**
Maintenance after a set of operating hours of volume of work produced

c. **Opportunity based**
Repair and replacement takes place when the equipment or system is available

d. **Condition based**
Often relies on planned inspection to reveal when maintenance is required

Preventive maintenance is used to prevent the breakdown of equipment and also to reduce the severity of any breakdowns that occurs. Two aspects of preventive maintenance are:

i. **Inspection**
Inspection of critical parts will indicate the need for replacement or repair well in advance or probable breakdown. Regular inspection conducted by either by equipment or operator or maintenance department is the most important direct means of increasing equipment reliability

ii. **Servicing**
Routine cleaning, lubrication and adjustment may significantly reduce wear and hence prevent breakdowns. Frequently such duties are carried out by equipment operator or may be carried out by maintenance department

PREVENTIVE MAINTENANCE VERSUS BREAKDOWN MAINTENANCE

	Preventive Maintenance	Breakdown Maintenance
	Preventive maintenance is routine inspection and serves activities designed to detect potential failure conditions and make minor adjustments or repairs that will help prevent major operating problems	1. Breakdown maintenance is emergency repair and it involves higher cost of facilities and equipment that have been used until they fail to operate
2.	An effective preventive maintenance programme for equipment requires properly trained personnel, regular inspection and service and have to maintain regular records	2. Breakdown maintenance stops the normal activities and the machines and the operators are rendered idle till the equipment is brought back to normal condition of working
3.	Preventive maintenance is planned in such a way that it will not disturb the normal operations hence no down time cost of equipment	

Replacement Of Machines

The problems of replacement arises because of the following reasons

i. The existing machines have outlived their effective life and its not economical to avail their services in the organization
ii. The existing units might have failed to perform because of accident
iii. The existing machines have become outdated because of the new machines with latest technology and superior performance

Advantages Of Preventive Maintenance

i. Reduction in production close down time
ii. Lesser over time pay for maintenance personnel
iii. Lesser number of stand by equipment, lesser spare parts are needed to be stored at all time
iv. Less expenditure on repair

vi. Greater safety to employees because reduced breakdown

Questions

1. Explain the following activities as used in the maintenance of machines
   i) Periodic services
   ii) Partial stripping

2. a) Outline FOUR functions of a maintenance department in an industrial firm

   b) Explain THREE preventive maintenance activities usually carried out on a machine

COMMON WORKSHOP SAFETY

It is absolutely necessary to provide everybody with a safe work environment be they student/factory workers. It is equally important to ensure that the costly building together with expansive tools and equipment are protected.

How Safety Awareness and Practice Can Be Developed and Sustained in each Students at all time

1. Establish Safety Program

A comprehensive safety program should include;
Safety guard against tendency like risky shortcuts. This may include safety rule and safety posters. Safety posters eventually turns into worthless rituals if they are not backed up by a comprehensive safety program. Safety program is a relatively new concept which evolved out of the motto that "prevention is better than cure".

Components of A Safety Program

a. **Standing safety committee**
To plan, execute and enforce all aspects of safety.

b. **Accidents prevention program**
Includes identification and specification of appropriate protective gears such as goggles, helmets, boots, overall, earthling of electrical equipments and ensuring emergency exit doors.

c. **Provision of medical attention**
Such as dispensary or dully-stocked fast aid kit.

d. **Accident reporting**
Outline procedures for accident reporting, which ensures that all accidents are reported and recorded however minor.

e. **Accident investigation**
Ensure that all accidents are investigated and details recorded so that correct measures may be taken where necessary.

f. **Safety education**
Includes providing training on safe use of equipments such as use of fire fighting equipments, correct handling of tools and equipments, evacuation procedures during emergency such as fire or leakage of toxin matters or chemicals.

g. **Safety enforcement**
- Designing and prescribing incentives for exceptional safe work and -habits.
- Prescribing negative inducement for bad work habits.
- Designing fair and objective ways of identifying individuals who display qualities of good safety behaviour.

SAFETY RULES

Safety rules fall into two, i.e.;

i. Specific Rules
Specific rules for a particular machine. The rules are posted near the machine or within the area to which they apply i.e. where any person expected to work in that area can easily see them.
Examples of specific rules
a. Remove the chunk key before switching or the lathe or drilling machine.

b. The grinding wheel must not be started or stopped when in contact with the work piece.
c. Do not use files without handles.
d. Spanners and screwdrivers must be selected to suit their use properly and be of the correct size
e. make sure that any measuring instrument is connected properly and set to the correct range before power is switched on.

ii. General Rules

a. Don't run in the workshop.
b. Don't play in the workshop.
c. Keep floor, gangways and exit clear and tidy.
d. Don't operate a machine without the authority of the supervisor.
e. Each machine must be operated by one person only at any given time.
f. Don't switch on or temper with any machine if you do not know how to operate it
g. Stop machine before making any adjustment or servicing any of its parts.
i. Avoid loose clothing or other ornaments such as bracelets, ties which may get caught in moving parts of the machine
j. Provide guards on all moving parts of the machinery
k. Always wear appropriate eye protection when grinding, chiseling, welding or using any machine where the chips produced are likely to fly about
l. check all electrical equipments are properly earthed
m. All accidents must be reported immediately however small.

ACCIDENT PREVENTIONS

Tools

Maintained in sharp clean and correctly adjusted conditions. Blunt dirty or wrongly adjusted tools may lead to accident because the tools do not act as expected by the user and may slip and cut the person rather than the material being worked. Tools in the workshop must be handled and stored carefully to avoid accidents. Accidents may cause injury or damage to tools, material and equipment.

Storage of tools

Tools should be stored in;
a. Tool box
b. Tool kit
c. Tool rack

Identification

For easier identification symbol sketches of the tools may be painted in the storage facilities. This eases and quickens the process of returning the tools in their proper places. It also speeds up the checking of tools.

Issuing Tools

i. When issuing tools the sharp edge or point should never point to the receiver.
ii. In the store, the toolbox and tool kits should be kept in such a position that they do not obstruct the pathway.

Guards

Guards should always be in place and properly adjusted when tools are operating. Some guards are designed to prevent actual physical contact between the operators and the cutting edges. Some are designed to guard the moving parts such as belts and pulley and others are designed to prevent chips and dust flying from the work hitting the face and in particular the eye of the operator. When using machine tools always wear goggles

Clothes

Attention should be paid to personal clothing if accidents are to be avoided. Wear apron or overalls to prevent ties, pockets and flipping clothes from catching and upsetting tools and equipments. If working in shirt sleeves roll them tightly on the arms to prevent the cuffs from catching on your work or sleeves slipping down at an unexpected moments. Long hair can be a nuisance in the workshop and should be restrained by a suitable headgear

SAFETY CAHRTS

POSTERS

Safety posters must be neat, clear and attractive to look at. They must convey the massage effectively with ambiguity. The wording on posters must be kept to minimum. The wording must be simple, brief and precise

Categories Of Safety Posters

1. Standard direct
2. Alarmist in nature
3. Humorous

1. **Standard Posters**

   Posters that convey the message in a direct and straightforward manner. The main advantage is that they do not fall into the pitfalls identified in the other two types. Their main weakness is that they are not responsive to different situations and personalities. This often makes them dull and uninspiring.

   Examples

   i. “Cigarettes smoking is not good for your health”
   ii. “Think safely and act safely”
   iii. “Ensure there is adequate ventilation in confined welding area”
   iv. “Keep all gangways clear and tidy “
   v. “Replace all machine guards before use”
   vi. “Mind the safety of your co-worker”

2. **Alarmist Posters**

   They are meant to scare and discourage people from dangerous behavior. However they should not be made so negative to disquiet the intended recipient. Thus there is need to choose the mode and tone of the message carefully and wisely.

   Examples

   i. ***“***Danger! Electricity is a killer***”.***
   ii. “Think! Machine Guards are for your safety”.
   iii. “Watch your steps! Falling off means certain death”

3. **Humorous Posters**

   Intended to convey the message in a pleasant and exciting manner.

   - They appeal most to light hearted persons.
   - They often adopt the cartoon approach to deliver the message.
   - One of the dangers of humorous posters is that the humor may sometimes dilute or overshadow the seriousness of the message.
     - The other danger is that certain mode may irritate if they tend to ridicule a segment of the population as the bases of a set religion, physical stature or habits. Some messages may also be irritating if they are humorous in a sarcastic way eg

   Examples

   i. “Unclean desk is a sign of a sick mind”.
   ii. “Have a small head and a big brain. Think before you act”.
   iii. “Be one of the proud wise men. Keep your work place tidy”.
   iv. You have got only one life to live, live it to the end. Know your safety rules and avoid injuries”.
   v. “Tools and machinery don’t think! You do it for them, Think and act safely.

FIRST AIDS

The application of skilled principles in the event of a sudden illness or accidents by the use of the readily available facilities until the casualty is taken to the doctor

Importance Of First Aids

i. To sustain life
ii. To promote recovery
iii. To prevent the situation from worsening

ELECTRIC SHOCK

Electric shock happens when one’s body becomes a part of an electric circuit. It causes burns, unconsciousness or instant death. A shock victim who is burned or unconscious could be helped through the following procedures

Steps.

i. Remove the victim at once from electrical contact. This is done by opening the switch or cutting the cable. The victim can be removed from a live wire using a piece of dry wood, rope, and rubber plastic

ii. Loosen the victim's clothing and keep him lying on a comfortable place without moving

iii. If the victim is breathing treat the burns and try to relieve the pain. Contact a doctor. **DO NOT GIVE A PERSON A STIMULANT** eg coffee or tea

iv. If the victim is not breathing send for a doctor and start artificial respiration immediately

Treatment for Electric shock

1. The electric supply line should be cut off at once ie switch off the main.

ii. The victim should be pulled away by force using dry stick of wood or use a rope. The person performing this operation should be insulated by standing on a rubber mat.

iii. Make the victim lie on dry ground or floor after he has been separated from the supply line

iv. If there are any sparks still in the clothes, they should be extinguished

v. If there are burns or an injury on the body , first aid should be given immediately and efforts should be made to carry the victim to hospital or call the doctor.

vi. check if the victim is still breathing or not. If he is not breathing resort to artificial respiration at once by laying the victim with his face and chest downwards.

CUTS

Wounds can result from:-

i. Bruises that is under skin or surface injury

ii. Minor cuts that is slightly broken skins with some bleeding

iii. Deep cuts that is a major broken skin and muscles with serious loss of blood

The general procedure is that to disinfect the affected part and apply the relevant pain and germ killing ointments. Thereafter apply suitable dressing before taking the victim to a doctor

DEEP CUT

i. Stop the cut from any further bleeding by applying a pad

ii. Clean the cut and apply a suitable ointment

iii. Take the casualty to a doctor

BURNS

Caused by dry heat from fire, hot object or over exposure to the sun. Treatment should be administered as per the prevailing conditions but the general rules are

i. Place the affected part under slowly running cold water or immerse in cold water as soon as possible

ii. Remove any constriction (ring, bangles, boots)

iii. Cover the affected part with a clean cloth

iv. Immobilse the burned limp

v. Give small quantities of cold drinks to the victim

vi. Arrange for immediate transport to hospital

TOXIC MATERIALS

When using synthetic resin glues and some types of finishing materials such as creosote and some oil stains wash your hands when the task is finished as some such materials can cause skin irritation

Some woods give rise to dust, which affect the respiratory system, its advisable to wear some form of filter typeface mask. The irritation caused to the respiratory system by such dusks can be quit severe

Many substances used in industrial processes attack the skin. Degreasers, patrols and paraffin's dissolve the grease and oils in the skin. Alkali solutions like soluble cutting oils break down other skin substances

Questions

1. a) State FIVE causes of accidents in a workshop

b) State FIVE measure taken by companies to reduce accidents in a workshop
c) State FOUR precautions to be observed when using metal cutting machines
d) State any four methods of enhancing safety at the place of work
e) Outline three safety measures taken in a workshop
f) State six general requirements of a typical workshop in an organization

CHAPTER 2. .PRODUCTION PLANNING AND CONTROL. .

Production
A process whereby raw material is converted into semi finished products and thereby adds to the value of utility of products, which can be measured as the difference between the value of inputs and value of output.

Planning
Process of thinking about and organizing the activities required to achieve a desired goal

Production planning
is a plan for the future production, in which the facilities needed are determined and arranged

Control
To determine whether performance is in line with these standards and presumably in order to take any remedial action required to see that human and other

Production function encompasses the activities of *procurement, allocation and utilization of resources*. The main objective of production function is to produce the goods and services demanded by the customers in the most efficient and economical way

The needs may be
- Removal of the current deficiencies
- Removal of anticipated deficiencies

The Product Planning Functions
a. Marketing and its analysis
b. Evaluation and selection of the product systems
c. Planning documentation
d. Planning strategies

Objective Of Production Planning
i. Meeting delivery dates
ii. Ensuring of smooth continuous production
iii. Use of man power equipment to the best advantage
iv. Raw materials work in progress and control
v. Prevention of bottle necks in production

TYPES OF PRODUCTIONS

I. JOB
Production of a **single article** or **huge piece of equipment**.

Individual requirement of the customer are met and each job stands out independently and it might not be repeated again. It has a lot of flexibility of operation and hence general-purpose devices are used. The layout is generally flexible so that all types OF WORK can easily and efficiently be carried out with little adjustments. It's mostly found in heavy engineering industries such as *bridge construction*, *road construction, ship building* etc. There is unpredictable demand and the work force is skilled in a wide range of operation, there is a wide variety of different operations to be performed under varying circumstances

Characteristics
a. High variety and low volume
b. General-purpose machine and equipments to performance wider range of operation
c. The flow of materials and components between different work stations is highly discontinuous due to imbalance in work content
d. Manufacturing cycle time is more
e. Highly skilled workforce is required
f. Highly competent and qualified supervisors are required
g. Very large work force in process inventory
h. Difficult in planning, scheduling and coordinating the productions of numerous components of wide variety

Advantages
a. This method can meet the individual requirement
b. There is no managerial problem since there are few employee
c. There is less risk or loss to the factory adopting this type of production
d. Because of its flexibility there is no chance of failure of the organization due to the reduction in demand

Disadvantages

a. There are fewer raw materials purchased at a time making the costs to be slightly high
b. Its difficult to avoid idleness of both man and machine
c. In order to handle different types of jobs only skilled and intelligent employees are needed. This makes the Labour cost to increase

2. MASS PRODUCTION

This is a large-scale production (*A small range of products is produced in large quantities by flowing uninterrupted from one operation or process to the next until completion in the production*.) and it is continuous. It requires *specially planned layout and one purpose machines are used only one type of a product is produced* because of commercial economy. The workforce require a narrow range of skills because of specialization

Characteristics

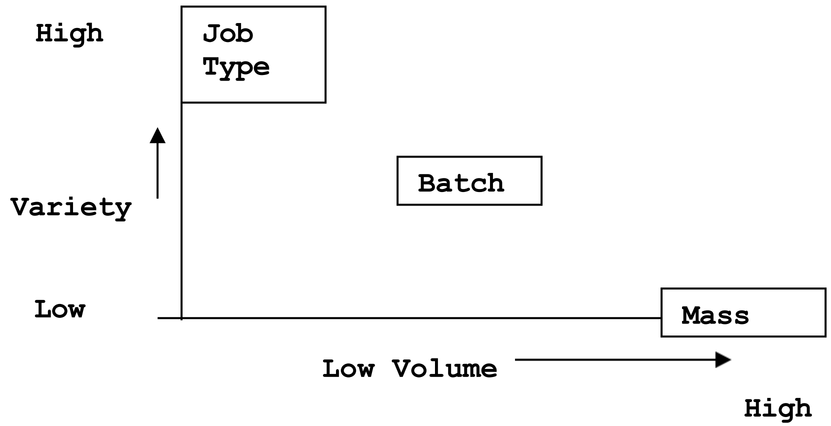
i. Flow of material is continuous
ii. Special purpose machines are used
iii. Material handling systems is mechanized most of the time by conveyers
iv. Relatively lower skilled persons can manage work
v. Shorter cycle time
vi. Work in progress is comparatively low because of line balancing
vii. Higher inventory of raw materials
viii. Less flexibility of equipment and machine

Advantages

a. It gives better output in production both quality wise and quantity wise
b. There is minimum wastage
c. Due to bulky purchases there is economy of scale i.e reduction on costs
d. Sales and advertisement does not prove to be costly
e. Only a few skilled employees are needed and hence the Labour cost is reduced

Disadvantages

a. There is heavy investment on the machines because of its specialized nature
b. During the period of less demand heavy losses may be experienced
c. It does not fulfill the individual needed of the production is in large scale



3. BATCH PRODUCTION

Products are manufactured in lots and **at regular intervals**. Different types of products are manufactured but which are of almost a similar nature. There is standard set of operation carried out sequentially. The workforce requires a narrow range of skills. It requires more machines than men's production. Some machines are specialized while other are general purpose in nature.

Characteristics

i. Short production runs
ii. The plant and machineries setup is used for limited number of parts and then its used to make different products
iii. More number of setups
iv. Flexible material handling systems '
v. Large work in process inventory
vi. Plant and machineries are flexible
vii. The amount of supervision required is less compared to job type

viii. The worker are expected to possess skill in one particular manufacturing operation
ix. Manufacturing cycle is comparatively lower than job production

Advantages

a. Its well controlled than job or batch production
b. Raw materials can be bought in advance
c. If the demand of one product reduces then the demand for the other product may increase to take care for the fixed expenses

Disadvantages

a. The cost of sale and advertisement per unit is more than mass production
b. The raw materials to be purchased could be less in quantity as compared to mass production making it slightly expensive

4. FLOW PRODUCTION (PROCESS PRODUCTION)

Product or raw materials flow from one operation process to the next. The flow can take place continuously for two days, a week or even a month. The supply of raw materials has to be planned to the highest standards so as to avoid shortages, which may lead to shut down. It requires less number of employees and this type of production is used in the production of liquids

Advantages Of Production Planning And Control

i. It stabilizes the business by getting more customers through better services to them
ii. It ensures better utilization of capital through proper inventory control
iii. It increases the production through effective use of resources
iv. It assures for adequate return on the capital invested
v. It provides jobs security to the employees as plans are laid to maintain steady flow of the production despite fluctuations in the market demand

Some of the most important types of production are: (i) Job Production (ii) Batch production and (iii) Mass or flow production! A production manager will have to choose most appropriate method for his enterprise.

The final decision regarding any particular method of production is very much affected by the nature of the products and the quantity to be produced. Production methods may be broadly classified as Job Production, Batch production and Mass or Flow Production.

(i) Job Production:

Under this method peculiar, special or non-standardized products are produced in accordance with the orders received from the customers. As each product is non- standardized varying in size and nature, it requires separate job for production. The machines and equipment's are adjusted in such a manner so as to suit the requirements of a particular job.

Job production involves intermittent process as the work is carried as and when the order is received. It consists of bringing together of material, parts and components in order to assemble and commission a single piece of equipment or product.

Ship building, dam construction, bridge building, book printing are some of the examples of job production. Third method of plant layout viz., Stationery Material Layout is suitable for job production.

Characteristics:

The job production possesses the following characteristics.

1. A large number of general purpose machines are required.
2. A large number of workers conversant with different jobs will have to be employed.
3. There can be some variations in production.
4. Some flexibility in financing is required because of variations in work load.
5. A large inventory of materials, parts and tools will be required.
6. The machines and equipment setting will have to be adjusted and readjusted to the manufacturing requirements.
7. The movement of materials through the process is intermittent.

Limitations:

Job production has the following limitations:

1. The economies of large scale production may not be attained because production is done in short-runs.
2. The demand is irregular for some products.
3. The use of labour and equipment may be an inefficient.
4. The scientific assessment of costs is difficult.

(ii) Batch production:

Batch production pertains to repetitive production. It refers to the production of goods, the quantity of which is known in advance. It is that form of production where identical products are produced in batches on the basis of demand of customers' or of expected demand for products.

This method is generally similar to job production except the quantity of production. Instead of making one single product as in case of job production, a batch or group of products are produced at one time. It should be remembered here that one batch of products may not resemble with the next batch.

Under batch system of production the work is divided into operations and one operation is done at a time. After completing the work on one operation it is passed on to the second operation and so on till the product is completed. Batch production can be explained with the help of an illustration. An enterprise wants to manufacture 20 electric motors.

The work will be divided into different operations. The first operation on all the motors will be completed in the first batch and then it will pass on to the next operation. The second group of operators will complete the second operation before the next and so on. Under job production the same operators will manufacture full machine and not one operation only.

Batch production can fetch the benefits of repetitive production to a large extent, if the batch is of a sufficient quantity. Thus batch production may be defined as the manufacture of a product in small or large batches or lots by series of operations, each operation being carried on the whole batch before any subsequent operation is operated. This method is generally adopted in case of biscuit and confectionery and motor manufacturing, medicines, tinned food and hardware's like nuts and bolts etc.

The batch production method possesses the following characteristics:

1. The work is of repetitive nature.
2. There is a functional layout of various manufacturing processes.
3. One operation is carried out on whole batch and then is passed on to the next operation and so on.
4. Same type of machines is arranged at one place.
5. It is generally chosen where trade is seasonal or there is a need to produce great variety of goods.

(iii) Mass or flow production:

This method involves a continuous production of standardized products on a large scale. Under this method, production remains continuous in anticipation of future demand. Standardization is the basis of mass production. Standardized products are produced under this method by using standardized materials and equipment. There is a continuous or uninterrupted flow of production obtained by arranging the machines in a proper sequence of operations. Process layout is best suited method for mass production units.

Flow production is the manufacture of a product by a series of operations, each article going on to a succeeding operation as soon as possible. The manufacturing process is broken into separate operations.

The product completed at one operation is automatically passed on to the next till its completion. There is no time gap between the work done at one process and the starting at the next. The flow of production is continuous and progressive.

Characteristics:

The mass or flow production possesses the following characteristics.
1. The units flow from one operation point to another throughout the whole process.

2. There will be one type of machine for each process.
3. The products, tools, materials and methods are standardised.
4. Production is done in anticipation of demand.
5. Production volume is usually high.
6. Machine set ups remain unchanged for a considerable long period.
7. Any fault in flow of production is immediately corrected otherwise it will stop the whole production process.

Suitability of flow/mass production:

1. There must be continuity in demand for the product.
2. The products, materials and equipments must be standardised because the flow of line is inflexible.
3. The operations should be well defined.
4. It should be possible to maintain certain quality standards.
5. It should be possible to find time taken at each operation so that flow of work is standardised.
6. The process of stages of production should be continuous.

Advantages of mass production:

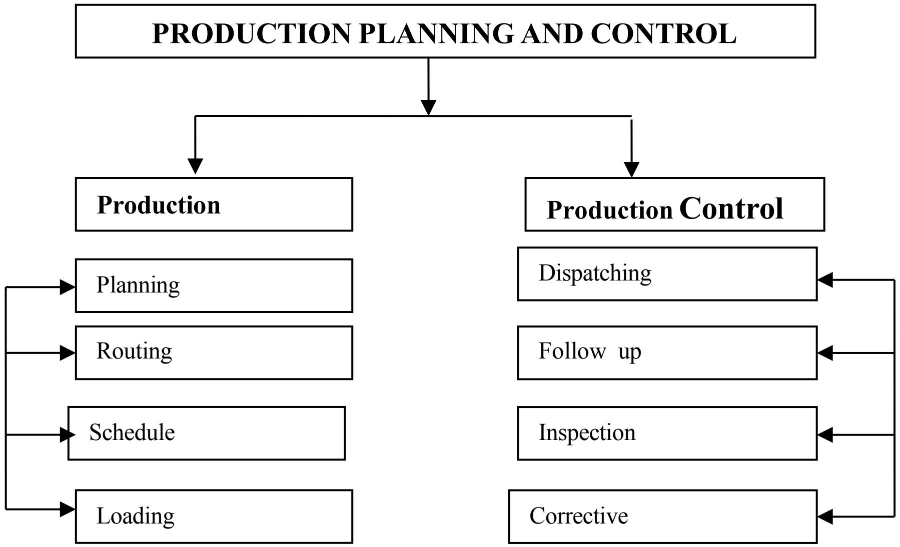
A properly planned flow production method, results in the following advantages:

1. The product is standardised and any deviation in quality etc. is detected at the spot.
2. There will be accuracy in product design and quality.
3. It will help in reducing direct labour cost.
4. There will be no need of work-in-progress because products will automatically pass on from operation to operation.
5. Since flow of work is simplified there will be lesser need for control.
6. A weakness in any operation comes to the notice immediately.
7. There may not be any need of keeping work-in-progress, hence storage cost is reduced.

PRODUCTION PLANNING

Production planning is a blue print for the accomplishment of production programme and activities. Any plan is a weapon against disorder and uncertainty. Production planning involves the following functions

STAGES OF PRODUCTION AND CONTROL



PRODUCTION CONTROL

The procedures and techniques by which manufacturing program and plan are determined, information issued for their execution data collected and recorded to control production in accordance with the plan. An effective production control minimizes the idleness of man and machine. It ensures that the right delivery schedules are met and the quality and quantity of components are produced at low cost per unit

Objective

i. To direct and check the progress of work at various stages
ii. To plan the work so as to optimize the utilization of resources
iii. To coordinate all the necessary information needed for production

iv. To facilitate the task of manufacturing and to ensure that every activity is carried in accordance with the plans to ensure that production targets are met

ENFORCEMENT OF PRODUCTION CONTROL

In order to achieve the objective of production control it may be divided in to the following

i. Planning:

To workout the quantity of materials , man power, machine and money required for producing pre-determined level of output in a given period of time.

ii. Routing

Routing decides *the path and sequence of operation to be performed on each job*. Routing starts from the component drawing and aims at optimum utilization of resources. Routing forms the basis for scheduling and dispatching functions

Routing Procedures

a. From the blue print the final product is analyzed
b. A detailed bill of materials is prepared
c. Based on the facilities a decision is taken regarding the component, which can be manufactured in the organization and those, which can be bought form outside
d. For each component to be manufactured in the organization a proper sequence to be followed is listed
e. A list of tools required at each stage is prepared
f. The information obtained from4 and 5 is recorded in a route sheet

iii. Scheduling

Workout time required to perfom each operation and also the time necessary to perform the entire series as routed making allowance for all factors concerned.

TYPES OF SCHEDULES

a. **Master Schedules**
The overall picture of the production plan of an organization based on the customer requirements; sales forecast and plant capacity .New orders can be accommodated depending on the planned capacity. These can be given on weekly, monthly and yearly basis

CUSTOMERS	JAN	FEB	MAR	APR
A	500	100	200	400
B	100	500	__	200
C	200	400	600	100

b. **Shop/Production Schedule**
Assigns a defined period of time to the manufacturing of a specified quantity of a product. Production schedule can further be divided into :-

i. **Order Schedule**
Setting dates for doing jobs based on the orders

ii. **Machine Schedule**
Allocating machine time to certain orders. If certain machines are over loaded then priority orders will be taken first

Techniques of Schedule

A number of charts can be used for scheduling and these include

a. **Order Control Char**ts
Materials are marked on the horizontal scale and the machines are noted on the other axis. The time when the work on a particular order will be done is marked by a firm line and the machine on which these work will be done is marked on the line. The actual progress of various orders is shown by a dotted line. The cursor placed on today’s date shows whether the work is being carried out as planned or not

MACHINES	JAN	FEB	MAR
NO 1	A-007	C-009	
NO 2		B-008	A-007
NO 3		A-007	C-009

Planned ———— **Actual Progress** ....

iv. Loading

Assigning and allocating work to an individual machine or work unit. The tasks are allocated depending on the availability of time and resources in different departments or sections. The aim of loading is to reduce the material waiting time, the set up time and to ensure that there are no idle machines or employees. Loading also ensures that the whole programme is completed in time.

PRODUCTION CONTROL

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Enforcement of Production Control

In order to achieve the objective of production control it may be divided in to the following

i.

ii.

iii. Dispatching

Issue of production orders for starting the operation.
Dispatching is the transition of information into work .

Functions

i. Material requisition are issued to store to deliver the required materials.
ii. Job cores are issued to instruct workers to start work on certain materials.
iii. Tools and gauge orders are issued to release the necessary tools for work.
iv. Time tickets are issued to record the beginning and the ending time of each operation.
v. Inspection orders are issued to inspectors to carry out the necessary inspection and report the quality of work.
vi. More orders are issued to authorities to move materials from one workshop to the other for further production.

ii. Follow up

It consist of reporting the data and investigate variances from the predetermined time schedule. This function is designed to keep track of work done and to ensure that the work was done according to what was intended and it being achieved..

Functions

i. Ensuring that the physical facility needed is the production process should be achieved in the right quality.
ii. **Progress reporting** – it consist of conversion of data at various stages and the preparation of the progress report so as work can be compared

iii. Causes for deviations - Out of the work done if there are any deviations corrective action should be taken to follow the planned schedule

iii. Inspection:
To examine in order to ensure the quality of goods. It can be required as effective agency of production control.

iv. Corrective measures:
Involve any of those *activities of adjusting the route, rescheduling of work changing the workloads, repairs and maintenance of machinery or equipment, control over inventories of the cause of deviation is the poor performance of the employees*. Certain personnel decisions like training, transfer, demotion etc. may have to be taken. Alternate methods may be suggested to handle peak loads.

v. Progressing
A control action which is exercised throughout the manufacturing period and *progress is continuously* ***compared*** *with planned schedule so that suitable* ***corrective steps*** *are taken* in case of difference between ***planned*** and ***actual production***

Technique for Maximizing Productivity

i. Sales
ii. Research
iii. Production efficiency.
iv. Administrative efficiency
v. Reviewing employees disputes
vi. Plant and machinery in use.

DOCUMENTS REQUIRED IN PRODUCTION PLANNING AND CONTROL

1. Work order
Written order from the customer providing specific authorization to the contractor to proceed with the performance of the contract without further instructions.

2. Demand note
Promissory note from a borrower to a lender, with a specific due date or payable whenever lender demands repayment

3. Control sheet
A form (document) used to collect data in real time at the location where the data is generated. The data it captures can be quantitative or qualitative. When the information is quantitative, the check sheet is sometimes called a tally sheet.[1]

4. Internal delivery note
A document for a shipment that describe and quantity of the goods that are being handled. A copy is signed by the buyer and returned to the seller as proof it was delivered

5. **Progress or move note**
An "official" record describing what occurred during production session and should be able to tell that the production plan is being followed and services are being directed toward the goals of the production plan.

QUESTION.

1. i. Explain the term production control

ii. Highlight four activities involved in production control

iii. Explain four characteristic of batch production

iv. Briefly explain four ways in which productivity can be improved in a workshop

2. Describe the following types of production stating one advantage and one disadvantage in each case

i. Job

ii. Mass

iii. Batch

3. i. List six ways in which the productivity of an organization can be improved

ii. List four stages of production and control

iii. Explain three objectives of production planning and control.

PLANT LAYOUT PLANNING

Plant layout technique determines the physical disposition of the plant and of the various parts of the plant

Layout Techniques

Before a layout can be planned it is necessary to have information on

a. The operations to be undertaken which includes description, sequence and standard times
b. The type of equipments needed to carry out the work
c. The number of movement of materials required from one workstation to the other
d. The volume of storage required
e. The lines of communication needed
f. The type and quantity of Labour required
g. The details of space available into which all the above requirement will be fitted

Principles of Plant Layout

i. There should be minimum total movement of both the materials and the employees. All the movements made should be quite necessary, direct and over a short distance

ii. **Maximum utilization of space**.
Inconsistencies with the production efficiency, safety, comfort requirement, space utilization should be taken care of

iii. **Maximum utilization of equipment**.
The layout should facilitate maximum use of equipments by ensuring that it reflect on t he logical sequence of operations and group related activities together

iv. **Unidirectional flow**.
Materials and completed work should all flow in one direction. The work lanes and transport lanes should not cross one another

v. **Flexibility**.
If the type of product permits the layout should be capable of being modifies quickly to meet the changing circumstances

vi. **Safety**.
All layouts should safe to minimize the risks of accidents or the occurrence of health hazards

vii. **Discomfort**.
Poor lighting, noise, vibration and bad smell should be minimized

viii. **Maximum accessibility**.
Servicing and maintenance points should easily be reached.

Advantages of Plant Layout

i. **To the workers**
Reduce the effort of the workers and minimizes the annual material handling thus ultimately reducing the cost per unit. This helps the management to gain competitiveness in manufacturing

iii. **To manufacturing**
Minimizes the movement between work centres and also result in reduced manufacturing cycle

iv. **To production control**
Facilitate production through uniform and uninterrupted flow of materials and helps to carry out production activities within the predetermined time period and with effectiveness

TYPES OF LAYOUTS

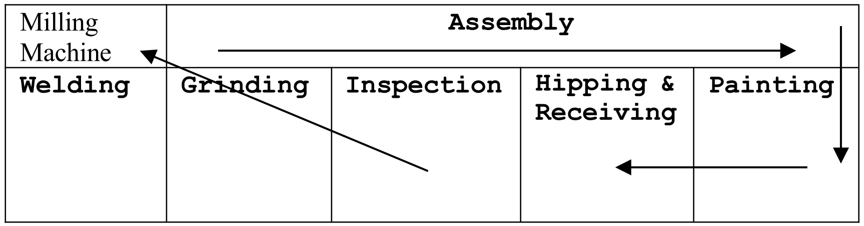
i. **Fixed Position Layout**
In this type of layout the basic machines remains in one position and the other components or materials are moved to it. This is to ensure that the necessary build up continues. The main machines are located in a fixed position due to its bulkiness or weight. The big piece of items to be produced remains in the same position. This could also be so that when the equipment is completed its mot moved. The layout is usually found in job production

ii. Process Layout/Functional Layout

In this type of layout similar machines or operations are grouped together so that all operations of same type are performed at the same place always . It is usually preferred for industries that are involved in job order type of production.

Advantages

a. Fewer machines are needed hence smaller capital investment.
b. There is job enlargement for the workers because they handle different varieties of jobs.
c. There is high quality product because workers and supervisors attend to the same machinery and operations i.e. high morale.
d. The available machinery and equipment are better utilized
e. Health hazards in one section does not effect other sections.
f. There is greater flexibility in work allotment due to job enlargement.



iii. Product Layout/Line Production

In this type of layout all the machines are arranged in a line according to the sequence of operation ie each following machine or section is arranged to perform the next operation to that performed by its preceding machine or section.

Turning operation → Milling operation → Drilling operation → Assembly → Inspection

Advantages

i. Relatively less floor area required
ii. Production planning is easier and better coordinated
iii. There is smooth and continuous work flow.
iv. Smaller inventory of in process is needed.
v. Material handling process can be easily automated thus less handling costs

QUESTION

1. i. Explain the term production control
ii. Highlight four activities involved in production control
iii. Explain four characteristic of batch production
iv. Briefly explain four ways in which productivity can be improved in a workshop

2. Describe the following types of production stating one advantage and one disadvantage in each case and giving examples
i. Job
ii. Mass
iii. Batch

3. i. List six ways in which the productivity of an organization can be improved
ii. List four stages of production and control
iii. Explain three objectives of production planning and control
iv. One of the most important activities of production control is **Progressing**. State four reasons that justify the need of a progressing section in a busy workshop

4. a. Explain any four principles of plant layout
b. State four factors considered when selecting the site of a factory workshop
c. Outline four objectives of a good plant layout
d. Describe three types of plant layout
e. state five techniques of maximizing productivity in an organization

5. a. Explain five techniques for maximizing productivity in an industry
b. Outline five guidelines for selection of plant and machinery
c. Outline five advantages of a well planned and controlled production firm
d. List six the technique of maximizing production
e. Explain three functions of production planning and control department.

6. a. State any three stages involved in production planning and control
b. Explain how the following factors affect production in industries
i. Technological development
ii. organizational factors
iii. work environment
iv. individual factors

WORK STUDY

Examining the current methods and procedures with the aim of improving them in order to increase productivity.

Objective

i. To find the most economic way of doing the work elimination of waste and unnecessary operations.
ii. To standardize the methods, tools and equipments
iii. To determine the time required to do a job by a qualified personnel working at a normal pace – standard time
iv. To assist in training the workers for the new method
v. contributes to the profit as the savings will start immediately and continue through out the life of the product.

Advantages of work Study

i It helps to achieve the smooth production flow with minimum interruptions
ii It helps to reduce the cost of the product by eliminating waste and unnecessary operations
iii Better worker management relations
iv Meets the delivery commitments
v Reduction in rejections and scrap and higher utilization of resources of the organization
vi Helps to achieve better working conditions
vii Better workplace layout
viii Improves upon the existing process or methods and helps in standardization and simplification
ix Helps to establish the standard time for an operation or job which has got application in man power planning, production planning

WORK STUDY PROCEDURE

i. **Select**- job or process to be studied
ii. **Record**- all details concerning job using various recording techniques
iii. **Examine** – recorded facts critically by asking questions like who , what, when, why
iv. **Develop**- most economic method
v. **Measure** – the amount of work involved and set standard time to do that job
vi. **Define** – new method and standard time
vii. **Install**- the new method as a standard practice
viii. **Maintain**- new method as agreed standard

Techniques of Work Study :-

(i) Method study
(ii) Work measurement

1. METHODS STUDY/MOTION STUDY

Systematic recording and critically examination of existing and proposed ways of doing work, as a means of developing and applying easier and more effective methods and reducing cost.

Objective

i. To bring improvement in processes and procedures
ii. To bring improvement in the factory and work place layout
iii. To find the way for optimum utilization of resources man and machine
iv. To bring economy in human efforts by reducing the unnecessary fatigue and thereby increase efficiency
v. To develop suitable working conditions

Scope of Method Study

i. To improve work methods and procedures
ii. To determine the best sequence of doing work
iii. To smoothen material flow with minimum of back tracking and improve layout
iv. To improve the working conditions and hence to improve labour efficiency
v. To reduce monotony in the work
vi. To improve plant utilization and material utilization
vii. Elimination of waste and unproductive operations
viii. To reduce the manufacturing cost through reducing cycle time of operation

Steps involved in method study

Select-work which can be studied with economic advantage

Record- all facts about the job/operation

Examine – the facts critically (purpose, place, sequence, person) seek alternative, simplify, eliminate, combine or change

Develop- a record of an improved method under prevailing conditions. Reeximine and select best method

Define – method, procedure, layout, equipment working condition, materials, quality instructions.

Install- the improved method, plan arrange and Implement

Maintain- verify at regular intervals that the improved methods is in use

RECORDING TECHNIQUES .

In order that the activities selected for investigation may be visualized in their entirety and in order to improve them through subsequent critical examination its essential to have some means of placing on record all the necessary facts about the existing methods.

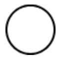
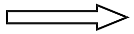
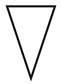
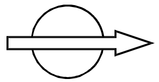
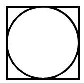
Records are very much useful to make before and after comparison to assess the effectiveness of the proposed improved method.

The recording techniques are designed to simplify and standardize the recording work.

According to the nature of the job being studied and the purpose for which the record is required the techniques fall into following categories

i. Charts
ii. Diagrams
iii. Templates and models

METHOD STUDY SYMBOLS

Symbol	**Activity**	**Example**
	Operation	An activity that enables the process to be carried out
	Transport	Travel, movement of man or materials
	Inspection	Verifying quantity or quality Compare with standard
	Delay	Delay of man material or Machine ie immediate performance of next planned thing does not take place.
	Storage	Hold, keep or retains the Materials in an authorized custody .
	Operation /Transport	Painting of parts on a conveyor
	Operation/Inspection	Operation / inspection of quantity in bottles

1. CHARTS

It's a graphic representation of the sequence of events and related information that occurs in the work method or procedures. Charts use standard symbols for recording. The activities comprising the job are recorded using method study symbols. A great care is to be taken in preparing the charts so that the information it shows is easily understood and recognized.

The following information should be given in the chart

i. Adequate description of the activity
ii. Whether chart for present of proposed method
iii. Specific reference to when the activities will begin and end
iv. Time and distance scales used whenever necessary
v. Date of charting and name of the peson charting

a. Operation Process Chart (Outline process Chart)

Gives a view of the whole process by recording only major activities and inspections involved in the process. Operation chart use only two symbols ie ***operation*** and ***inspection***. Operation process chart is helpful to:-

1. See the complete sequence of operations and inspections in the process.
2. You know where the operation selected for detailed study fits into the entire process.
3. the point at which materials are introduced into the process/what operations/inspections are carried on them are shown

(b).Flow Process Chart

Give sequence of flow of work of a product through the work centre using appropriate symbols. It's the amplification of the operation process chart in which operations inspection, storage , delay and transportation are represented.

The flow process charts are of three types

i. **Man Type**
   A flow process chart, which record what the worker does and his movement

ii. **Equipment Type**
   A flow process chart which records how the equipment is used and its movement

iii. **Material Type Process Chart**
   A flow process chart which records what happens to the materials and its movement

Flow process chart is useful :

a. Reduce distance travelled by man or materials
v. Avoid waiting time an unnecessary delays
vi. Reduce the cycle time by combining or eliminating operations
vii. Fix up the sequence of operation
viii. Relocate the inspection stages

EXAMPLES OF MAN TYPE PROCESS CHART

Details	▽	⇨	○	□	D
1 Operator goes to collects unwelded plates	▽	⇨	○	□	D
2 Collects unwelded plates	▽	⇨	○	□	D
3. Goes to collect welding rods	▽	⇨	○	□	D
4. Collects welding materials	▽	⇨	○	□	D
5. Goes to work place	▽	⇨	○	□	D
6. Keep the plates at work place	▽	⇨	○	□	D
7. Switches on electricity	▽	⇨	○	□	D

(c).Two Handed Process Chart

The activities of the workers hands are recorded in relation to one another. This chart is confined to work carried out at a single workplace.

LEFT		RIGHT	
⇦	To Bold	⇨	To fasane washer
○	Pick up Bold	○	Pick washer
⇨	To Position	⇦	To position
▽	Hold	○	Assemble the bold
		⇨	To second washer

Activity – assemble two washers and bolt together

(d) Multiple activities chart

Activities of more than one subject (worker and equipment) are recorded on a common time scale to show their inter-relationship.

Multiple activity chart is made to :-
1. study idle time of man and machine
2. determine number of machines handled by one operator
3. Determine number of operators required in team work to perform the given job.

(e) Travel Charts
It's a tabular record for presenting quantitative data about the movement or workers or materials between any numbers of workstations over a given period of time. The travel chart is useful in analyzing the movement in an organization. The departments between which there is high frequency of movement can be situated nearer to each other so that the distance covered during the movement is reduced.

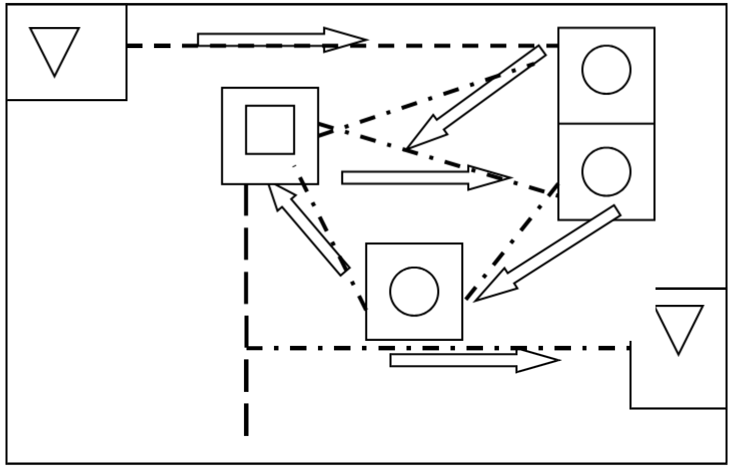
	MOVEMENT FROM				
TO	**A**	**B**	**C**	**D**	**E**
A	**X**				
B					
C	**X** **X**				**X**
D					
E			**X**		

A, B, C, D, E are work stations

f. SIMO Chart (Simultaneous motion cycle chart)
A recording technique for micro motion study based on film analysis used to record simultaneously on a common time scale the activities performed by different parts of the body of the operator.

2. DIAGRAMS AND MODELS
Diagrams and models are widely used in plant layout and material handling studies because its important to visualize the number of movement made by the worker or materials

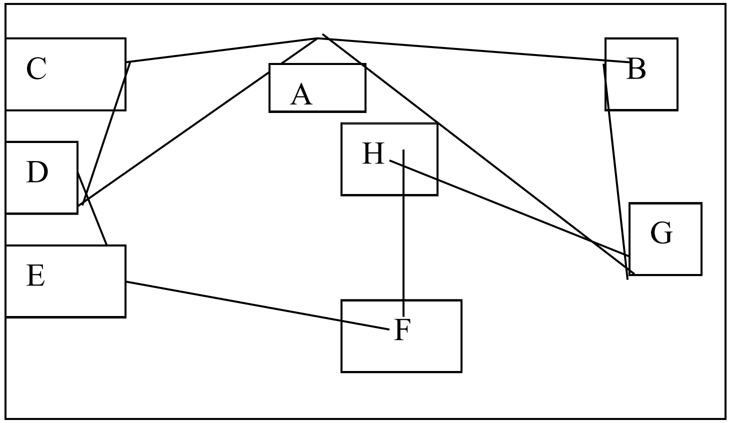
i. Flow Diagrams
It's a drawing made to a scale of the workplace following the location of various equipments machines and activities carried out and the routes followed by the workers and materials under study. The route followed in movement are shown by joining the points in sequence by a line which represents parts of movement by man or materials type.



Procedure to make the flow diagram
(a) The layout of the work place is drawn to scale
(b) Relative positions of the machine tools, work benches , storage, inspection benches are marked on the scale
(c) Path followed by the subject under study is traced by drawing lines.
(d) Each movement is serially numbered and indicated by arrow for direction
(e) Different colors are used to denote different types of movement.

ii. String Diagrams
It's a scale layout on which the length of the string is used to record the extend as well as pattern of movement of a worker or materials working within a limited area over a certain period of time. All the terminal points observed during the study are marked on the plan and pins or pegs are fixed at these points. The string is then taken around all the pins in the order of sequence of movement.. A string diagram is used in situations

where the movements are congested and difficult to trace on a flow diagram.



Procedure for making the string diagram

(a) A layout of the work place is drawn to scale on a soft board
(b) Pins are fixed into boards to mark the locations of work stations, pins are also driven at the turning points of routes
(c) A measured length of thread is taken to trace the movement
(d) The distance covered by the object is obtained by measuring the remaining pars of the thread and subtracting it from the original length.

iii. Micro motion study

A technique for recording and timing an activity. Its intended to divide the human activities in a group of movements and the study of such movement helps to find for an operator one best pattern of movement that consumes less time and requires less effort to accomplish the task.

(2).WORK MEASUREMENT

A technique used to determine the time taken by a qualified worker to carry out a specified job at a defined level of performance.

It means measuring the work in terms of time content required for completion of a job and its also concerned with investigating, reducing or eliminating ineffective time.

Objectives

i. Comparing alternative methods
ii. Assessing the correct initial man power requirement planning
iii. Planning and control
iv. Realistic costing
v. Financial incentives schemes
vi. Delivery dates of goods
vii. Cost reduction and cost control
viii. Identifying substandard workers
xi Training new employees

TECHNIQUES OF WORK MEASUREMENT

1. **Historical data method**
Uses the past-performance data. Here, past performance is used as a guideline for setting work performance standards. The main advantage of this technique is that it is simple to understand, quicker to estimate and easier to implement. However, past performance is not the best basis for fixing performance standards. This is because there may be many changes in technology, employees' behavior, abilities, etc.

2. **Time study**
Time study with the help of a stop watch is the most commonly used work measurement method. This technique was developed by Frederick Winslow Taylor (1856-1915).Time study is best suited for short-cycle repetitive jobs. Most of the production jobs can be easily timed by a time-study.

Time study procedure consists of the following steps:

i. Select the job to be timed.
ii. Standardize the method of doing the job.
iii. Select the worker to be studied.

iv. Record the necessary details of the job and conditions of work.
v. Divide the job into elements. Here, 'element' is a part ofthe job.
vi. Find out the time taken to do every single element.
vii. Keep provisions for relaxation, etc.
viii. Fix the standard time for doing the job.

3. **Work sampling**

Work sampling method was original developed by Leonard Henry Caleb Tippett (1902-1985) in Britain in 1934. In this technique, the workers are observed many times at random. It is done to find out for how much time the worker is actually on the job. It checks how long he is working and how much time he is not working (idle time).

Work sampling method does not involve stop watch measurement. The purpose of work sampling technique is to estimate what proportion of a worker's time is devoted to work-related activities.

Work sampling method involves following three main steps:

i. Deciding what activities are defined as 'working'. Non-working are those activities which are not defined as working.
ii. Observe the worker at selected intervals and record (write down) whether he is working or not.
iii. Calculate the portion of time (**P**), a worker is working.
    a. A portion of time (P) a worker is working equals to *'Number of observations during which working occurred' divided by 'Total Number of observations.'*

The above calculation is used as a performance standard.

4. **Synthesis method**

In synthesis method, the full job is first divided into elements (parts). Then the time taken to do each element of the job is found out and synthesized (totaled). This gives the total time taken for doing the full job. In this technique, the time taken to do each element of the job is found out from previous time studies. So, this technique gives importance to past-time studies of similar jobs. It also uses standard data.

Standard-data is the normal time taken for doing routine jobs. Standard data is easily available for routine-jobs like fitting screws, drilling holes, etc. So there is no need of calculating these times repeatedly. Most companies use Standard-data. They do not waste time doing studies for all elements of the job. This is because standard time is already available for most elements of a job.

Synthesis technique also considers the level of performance. Level of performance refers to the speed of performance, which is either, normal, fast, or very-fast.

Advantages:

i. It provides reliable information about standard time for doing different jobs. This is because it is based on many past time studies.
ii. It is economical because there is no need to conduct new time studies.

5. **Predetermined motion time system - PMTS**

The normal times are fixed for basic human motions. These time values are used to fix the time required for doing a job. Normally, three times are fixed for one job. That is, one time is fixed for each level of performance. The level of performance may *be normal, fast and very-fast*.

PTMS is better than motion studies because it gives the detailed analysis of the motion, and it fixes the standard time for doing that motion. PTMS technique is used mostly for jobs, which are planned for future. However, it can also be used for current jobs as an alternative to time study.

Advantages of PMTS method:

(a) It is a very accurate method. It avoids subjective judgment or bias of rater.
(b) It is an effective and economical method for repetitive jobs of short duration.
(c) There is no interference in the normal work routine, and so it does not face any resistance from the employees.
(d) It helps to improve the work methods because it gives a detailed analysis of the motions.
(e) It is more economical and fast compared to normal time studies.

6. **Analytical estimating**
   A technique used for fixing the standard time for jobs, which are very long and repetitive. The standard-time is fixed by using standard-data. However, if standard data is not available, then the standard time is fixed based on the experience of the work-study engineer.

   A**dvantages of analytical estimating technique:**
   1. It helps in planning and scheduling the production activities.
   2. It provides a basis for fixing labor rate for non-repetitive jobs.
   3. It is economical because it uses standard data for fixing the standard time of each job.

   Disadvantage or limitation of analytical estimating method:
   1. When standard-data is not available for a job, then the standard time is fixed by the work-study engineer. He uses his experience and judgment for estimating the standard-time. This is not accurate compared to a scientific time study.

1. STANDARD TIME

The time required by an average skilled operator, working at a normal pace, to perform a specified task using a prescribed method.[1] **It** includes appropriate allowances to allow the person to recover from fatigue and, where necessary, an additional allowance to cover contingent elements which may occur but have not been observed.

Method of calculation

The Standard Time is the product of three factors:
(a) Observed time: The time measured to complete the task.
(b) Performance rating factor: The pace the person is working at. 90% is working slower than normal, 110% is working faster than normal, 100% is normal. This factor is calculated by an experienced worker who is trained to observe and determine the rating.
(c) Personal, fatigue, and delay (PFD) allowance.

The standard time can then be calculated by using:[3]

Standard time = (Observed Time) (Rating Factor) (1 + PFD Allowance)

2. **Experiences of operator**
   A qualified worker is one who is having the necessary physical attributes and possesses the required intelligence and education and who has acquired necessary skills and knowledge to carry out the work in hand to satisfactory standards of safety quantity and quality. The time study man should not make any attempt to time the operative without his knowledge from a concealed position or with the watch in the pocket.

3. **Power consumption**

Objective of work-study in industry
- Productivity
- Costs
- Labour
- Materials
- Machines
- Layout

Performance Rating
The process of adjusting the actual pace of working of an operator by comparing it with the mental picture of pace of an operator working at normal speed.

$$\textbf{Performance rating} = \frac{\text{Observed Time}}{\text{Normal Time}} \times 100$$

Operation Time, Labour Requirements and Comparatives Costs Of The Process

i. **Standard time**
   The representative time established from the observation data is the time, which an operator has taken while working at a certain pace. The observed time is concerted in to basic or normal time by multiplying it by rating factors

$$\text{Normal time} = \frac{\text{observed time} * \text{performance-rating (\%)}}{100}$$

Normal time of elements added together give normal time for the operation but this will not be equal to standard time as the operator cannot work continuously. Some additional time is added to normal time to arrive at standard time. The additional time is needed to

.i. **Relations allowance**
Allowance intended to provide the worker with the opportunity to recover from physiological and psychological effects of carrying out specified work under specified conditions and allow attention to personal needs

ii. **Interference**
An allowance of time included into the work content of the job to compensate the operator for the unavoidable loss of production due to simultaneous stoppage of two or more machines being operated.

iii. **Contingency allowance**
a small allowance of time which may include a standard time to meet legitimate and expected items of work or delays, the precise measurement of which is uneconomical because of their in frequent or irregular occurrence e.g. tool breakage, power failure. And obtaining the necessary tools and gauges from central tool store

iv. **Policy allowance**
An increment, other than bonus increment applied to a standard time to provide a satisfactory level of earning for a specified level of performance under exceptional circumstances

FACTORS CONSIDERED FOR PLANT AND MACHINERY LAYOUT

i. Type and purpose of machine/Machine arrangement
ii. Size and cost
iii. Economy of Space
iv. Provision of flow of materials
v. Provision of transport entry and exit point
vi. Availability of water, electricity light, ventilation, drainage, and safety
vii. Segregation of noisy machinery

Questions

1. a) State FOUR principles of motion study
   b) Outline the procedure for method study
   c) Explain FOUR benefits of work study in an organization
   d) Highlight FOUR obstacles associated with implementation of work study

2. a) State FOUR objectives of work study
   b) State TWO advantages of work study in an industry
   c) With respect to work measurement define the term “**standard rating**”
   d) A worker rated at 80 is observed to take 5 minutes to accomplish a task. Determine the workers basic time. Take standard rating to be 100

3. a) Explain FOUR benefits of work study to an organization
   b) Outline the procure of carrying out method study
   c) Differentiate between method study and work Measurement

4. a) Define the term work study ?
   b) State four objectives of work study in an industry?
   c) Describe the two technique of work study
   d) Kaange manufacturing company situated in southern rift is involved in the manufacturing of electrical fitting. An operator takes 4 minutes to assemble a fluorescent fitting. If the rating factor is 110% contingency allowance . .Determine
   i. Standard time,
   ii. No of lights assembled in 8 hour

CHAPTER 3. INSPECTION AND QUALITY CONTROL

INSPECTION

Comparing the characteristics of an object with some established standards. The characteristics may be dimension, texture, color, weight etc. Inspection may be carried out with the help of instruments, equipments or the correct senses etc

Objective Of Inspection Concerning Quality Of Products

a. To detect the defects in raw materials
b. To ensure that the products conform to established standards
c. To sort out good item or units from those which are below standard
d. To detect the defects as they occur during the processing and shop further processing of such items
e. To protect the interest of the customers and build good reputation for the organization by ensuring that only quality products go into the market
f. To collect and compile information regarding the performance of the product for use in the purchase production and quality control division

Function of the Inspection Department

i. To inspect raw materials
To ensure that raw materials received are physically and chemically in accordance with the specification. This is done to eliminate the loss of Labour and machining time on defective materials

ii. To inspect the purchased out parts
To inspection all parts purchased from outside the organization to ensure that they are in accordance to the stated specification and avoid accepting inferior quality items

iii. Work in progress inspection
This is done to ensure that products are correctly being produced at various stages of production

iv. Finished Product Inspection
To ensure that finished products are of right quality and the poor quality items may either be rejected or in some industries may be sold out at lower prices

v. Salvaging
Poor quality work is reworked to eliminate the defects or to improve on quality

vi. Complaint Division
A report on defective materials, poor workmanship, design shape etc is received. They make investigation and give recommendations to the manufacturing department to prevent future occurrences

Importance of Inspection

i. Reputation of the company
ii. Prevention of unnecessary work
iii. Incentive payment
iv. Location of faults in machines and bad workmanship

PLANNING FOR INSPECTION

Inspection helps to control quality, reduces manufacturing cost etc. Planning for inspection means selecting the points at which inspection should be carried out and provide the required facilities. The management decides on the following

a. What to inspect?
b. When to inspect?
c. Where to inspect?
d. How much to inspect?
e. Who should inspect?

1. What To Inspect?

The quality of a product is the sum of a number of characteristics such as shape, strength, finish, workmanship etc. Depending upon the product and its usage the management has to decide the most important characteristics to be inspected. Inspection may be carried out either on **variance** or **attributes** basis.

- When the items are inspected for their quality and results are expressed in terms of units of measurement this is **called inspection by variance**.
- When the items are inspected and results expressed in terms of **attributes** the products is accepted or rejected without making actual measurement of the characteristic..

Variance inspection – weight
Attribute inspection – shape, finish

Comparison of Inspection by Variance to Attribute

a. The cost of inspection per item is low as inspection is performed either visually or by gauging
b. Inspection is slightly subjective especially in respect of the visual characteristic
c. More than one characteristic can be considered at a time
d. For a high degree of efficiency more items used to be inspected.

Variance Inspection

a. The cost of inspection per unit is more as inspection is carried out in measurements and observations have to be recorded.
b. Inspection is more objective and it minimizes the possibility of misclassification
c. Only one characteristic can be considered at a time
d. For the degree of efficiency less items need to be inspected

2. When To Inspect

Industrial production may be divided into three

a. The input
b. The work in progress
c. Output

Inspection is carried out on one or more stages after deciding the critical point where inspection has to be done depending on the nature of the products and the process employed in manufacturing

a. **Input/Incoming or Receiving Inspection**
Inspection is done for accepting the raw materials and the bought out parts. The receiving inspection is done to

i. Ensure that the raw materials received from vendors meet the expected standard
ii. Ensure that the bought out parts meet the right characteristics physically and chemically

b. **In Process**
Products are inspected while they are in process. Inpection may be done at various point stages. It may be done during or after the operation. The purpose is to ensure that items going for further production meet the required standards. In process inspection is carried under the following circumstances**.**

i. After a critical operation that is likely to produce defective items
ii. Before operation where faulty products may break or jam the machine
iii. Before costly operations so that theses operations are not done on already defective items
iv. Before operations that will cover up defects eg painting
v. Before operations that cannot be undone eg welding

If the in process is done well organized it is possible to keep the rejection and rework at low level by taking corrective actions at appropriate time

c. **Finished Product Inspection**
Items are inspected when they are completed and about to be sent to the finished goods store for handing over to the sales department. This inspection is carried out to make sure that the products conform to the specified quality. Only the right quality items will get their way into the market. This is for the purpose of creating good reputation to the organization.

3. Where To Inspect?

Depending on the industry and the accuracy requirements inspection can be done either at the machine itself or in the central inspection rooms separate from the actual production workshops.

INSPECTION METHODS

i. Floor Inspection

The products are inspected near the machines and the inspectors move from one machine to the other to detect defective items before large quantity is produced.

Advantages

a. Defects are detected on time
b. It requires less handling because the work does not have to be taken to the inspection rooms
c. A delay due to piling of work at inspection rooms is avoided.
d. Indirect Labour costs is reduced a less transportation of materials is involved

Disadvantages

a. Its difficult to keep track of good products from the defective products
b. The work may pile up at the machines
c. Advanced machined for inspection purposes can be used
d. Inspectors may be influenced by some employees resulting in favourism and poor quality products may be cleared for sale or onward processing

ii. Central Inspection

The parts to be inspected are moved to centralized inspection rooms with high quality inspection devices. Centralized inspection could mean one inspection room or many inspection rooms

Advantage

a. High quality inspection devices can be used for inspection
b. Less number of instruments are required
c. Its possible to achieve quality as the work of inspectors can closely be supervised.
d. Accurate inspection with delicate instruments can be done under controlled conditions

Disadvantages

a. There is increase material handling
b. Delays at inspection rooms and causes waste of time on production
c. The defects may not be detected and communicated on time resulting to more spoilt work

iii. Combined Inspection

It combines the advantages of a shop floor inspection and centralized inspection. Large and heavy jobs are inspected on the shop floor and while the light are inspected in the centralized rooms.

How Much To Inspect

Depending upon the product and the accuracy required sample inspection or 100% inspection may be employed

a. 100% Inspection

Under this inspection every part or unit manufactured or purchased from outside the origin is inspected. 100% inspection is carried out where reliability and accuracy is important. It could be carried out where a process normally yields a high percentage defactive product.

b. Sampling

A small number of items called a sample is drawn on a random basis from the batch and inspected. The sample is assumed to represent the lot from which its drawn and a decision to accept or reject will depend upon whether the sample conforms or does not conform to the set quality specification. As the items are drawn from the lot each item contained has an equal chance of being drawn for sample inspection. To obtain a sample that truly represent a lot the sample must be drawn at regular intervals from the entire production run and from different sides of the box containing the lot

Advantages of Sampling

a. It's less time consuming and less costly
b. It leads to less damage as fewer items are inspected
c. A smaller number of inspectors is needed which is easy to supervise
d. Rejection of the complete lot based on the sample pressurizes for improvement in quality

e. Errors due to monotony and fatigue encountered in 100% inspection are not encountered.

Disadvantages of 100% Inspection

a. It consumes more time if the lot size is large leading to delays in decision making
b. Total cost of inspection per lot is high
c. The number of skilled persons required is more
d. There is more handling of materials, which leads to damages during inspection
e. Complete accuracy may not be attained due to errors arising out of fatigue , negligence and monotony

Who should inspect

In manufacturing organization the operators working on the machines may be asked to inspect the products or a separate inspection staff may be employed.

Qualities of Inspector

a. They should know their job thoroughly well
b. They should understand their job well and try to work with patience
c. They should know the statistical quality control techniques
d. They should be cost conscious and therefore not set unnecessary strict and narrow limits
e. They should have the working knowledge of the general quality standards.

QUALITY CONTROL

Quality control means the degree of perfection and its never absolute. It indicates the degree of perfection or extent to which it fulfill customers requirement. Quality of a commodity is defined by the characteristic it possesses eg design, size, material, chemical composition, workmanship, finish etc.

To a customer - The best quality he can get for the money he is will to pay.

To manufacturer - The best product he can produce for the price he can get

Quality can be achieved in three main ways:-

i. Quality of Design
Quality specified by the designer on drawings and its determined by the stringency from the specification of the manufacturer of the products

ii. Quality of Conformance
The extent to which the product complies with the designers specification. This is normally affected by man, material and machine employed

iii. Quality of Performance
It 's quality of design and quality of conformance. It denotes how well the product meets customers' requirements.

QUALITY CONTROL

Sum of activities, which must be performed in an organization to ensure that the resulting product will meet the required quality standards and perform the intended functions.

Inspection is an instrument of quality control. Inspection leads to either rejection or acceptance but as we plan ahead and try to locate and eliminate the causes of rejection then that is quality control.

Objectives Of Quality Control

1. To establish quality standards for the products which are acceptable to the customers. i.e. customer acceptance.
2. To take necessary steps so that only the products, which meet, specified standard are cleared for sale.
3. To prevent the production of defective parts by locating and eliminating the causes of rejection.
4. To evaluate the method and processes of production and suggest improvement.

5. To correct the data regarding performance of the product in the market for uses of design and engineering depts.

Factors Affecting Quality Control

i. Market research
Demand of purchase

ii. **Money**

iii. **Management**
Management policies for quality level

iv. **Production methods/Product Design**
a part from poor packing inappropriate transportation and poor after sale services are the areas which can cause damage to a companies quality image

Benefits Of Quality Control

1. Quality of the product is improved.
2. Reduction in scrap and rejection of items.
3. Reduction in cost of inspection.
4. Quality uniformity.
5. Better utilization of labour and machines.
6. Improved technical knowledge.
7. Improvement in customer-manufacturer relations.
8. High profits due to increased sales.

QUALITY AND COSTS

Various costs associated with quality include

i. Failure costs
Failure to comply with the specifications eg scrap costs, rework costs. Other costs include cost associated with investigation of defect, loss of manufacturing capacity, loss of good will.

ii. Appraisal costs
Costs associated with inspection and testing of the product result and eliminate products, which do not comply with quality specifications of assuage.

iii. Prevention costs
These are costs of quality control and include all the costs incurred to ensure that faulty products are not produced.

Statistical Quality Control (SQC)

Its application of statistical techniques for the maintenance of quality standards. SQC is based on normal distribution that no two things are exactly a like but when either man or nature tries to make identical products their actual sizes will vary from small to large with most items hitting close to the middle. The most frequent size will be middle size and least frequent size will be the two extremes. SQC informs the management whether the production processes are taking place the way they should. For this purpose SQC makes he use of control chart and acceptance sampling

Questions

1. a) Differentiate between **floor inspection** and **central inspection**
   b) Highlight **FIVE advantages** of central inspection over floor inspection
   c) Explain the importance of inspection during the production process
2. a) State any FOUR functions of the inspection department in an organization
   b) Outline FOUR benefits of quality control
   c) State FOUR aspect of quality of a product
   d) Explain the term **quality control**
3. a) Outline **TWO advantages** of inspection of plant and machinery
   b) Outline FIVE facilities a factory inspector may inspect in a workshop
   c) State FOUR objectives of quality control in manufacturing
   d) Outline FOUR advantages of quality inspection
4. Describe the following inspection methods
   i) Floor inspection
   ii) Central inspection
   iii) Statistical inspection
5. a) State THREE circumstances that make inspection necessary in an -organization
   b) List FOUR purposes of quality control
   c) List FOUR areas on inspection concerned with qualities of stock in an organization
   d) State four important reasons of inspection in a workshop
6. a) Define the term quality with respect to production
   b) State four factors of quality

c) List four rules of thumb with regards to inspection of products in a manufacturing factory.

CHAPTER 4. PURCHASING AND STOCK CONTROL

PURCHASING

Purchasing is the act of buying the goods and services that a company needs to operate and/or manufacture products. However in a broader sense, the term involves determining the needs, selecting the supplier, arriving at a proper price, terms and conditions, issuing the contract or order, and following up to ensure proper delivery. It focus is to *purchase or obtain materials in the right quantity, in the right quality, at the right price, at the right time, and from the right supplier and delivering to the right place*.

Objectives

1. Right products
2. Right price
3. Right quantities
4. Right quality
5. Right supplier
6. Right time

Importance of purchasing

i. Effect of quantity purchases in other departments
ii. Purchasing the right quantity promotes business for a longer period in an establishment

Disadvantages

i. High chance of spoilage
ii. High rate of storage costs
iii. Tying up money in non productive stock
iv. Higher insurance costs
v. High risk of loss incase of fire

Classification of Purchases

There are four classifications of all purchases of any organization

i. Good Bought As Equipments
These include such things as land and building, machinery, equipment, motor vehicles, furniture, fixtures and fittings that help in the running of the organization

ii. Raw Materials
This is the stock of goods waiting to be manufactured

iii. Spare Parts
These are purchased in anticipation of the break down of machines and motor vehicles

iii. Goods and Services Bought For Sale
These are bought at a lower price and sold at a higher price in order to make profit

Selecting a Supplier

i. By consulting other people and businesses in the same trade
ii. By studying advertisement in newspapers
iii. By referring to the classified section of telephone directories known as yellow pages in which the names addresses and telephone numbers of subscribers are listed under trades and professions
iv. Ascertaining prices. This may be done by using a catalogue which is a book issued by sellers, containing descriptions of goods offered for sale.

Duties of the Purchasing Manager

i. He buys equipment, raw materials, furniture, stationary
ii. He keeps records for the purchases
iii. He conducts market research to know what is available in the market
iv. He controls all purchasing done by the firm
v. He is in charge of the firm's laboratory for testing goods to see that he is buying the right kind of material for quality control

An activity which involves the procurement of raw materials or semi finished materials for use in the production

The status of the head of purchasing might be managerial or directorial depending on the responsibilities and financial turn over of the department.

Qualities and Knowledge Required By a Purchasing Officer

1. Good knowledge of the industry (Experience of the market)
2. Large measure of administrative and organizing ability (Store administration)
3. Constant touch with market prices, reports and tendencies (Tendering procedure)
4. A working knowledge of contract law and procedures (Legal procedures)
5. Practical understanding of the principles of economy laws
6. Knowledge of the different material used by his organization (Company's materials requirements and policy)
7. Knowledge of various suppliers and their suitability of different types or orders (Knowledge of supplier)

Purchase of material that are sub –standard result in:-

1. High material wastage
2. Low product quality
3. Expensive machine break down

Having unreliable Supplier may cause

1. Non delivery of essential items
2. Production hold ups
3. Penalty clauses to take effect
4. Lose of good will and customer
5. Lose of potential contracts
6. Expensive procurement cost

Assignment

Discuss any five factors that control purchasing sighting necessary examples.

FACTORS THAT CONTROL PURCHASING

1. **Change in production**
   The purchasing department should consider job, mass and batch production

2. **Change in the item order**
   Purchasing dependent should consider which should be the first finished part or item to be purchased

3. The amount of material and supply at hand so that it can keep good store inventory and good knowledge on how to control it

4. **Budget allocation**
   The department should always lias with other department to have budget cleared

5. **Space required for**

The department should plan on how purchased materials, finished parts and other supplies will be stored

6. **Market condition**
   The department should have knowledge on how to buy and what to buy at controlled prices

PURCHASING METHODS

All purchasing methods are based on the following

1. **Batch Buying**
   Types of buying in which a new purchase order is issued for each new batch of material or finished parts required. This type of purchase is used with job production and also widely used in production

2. **Schedule Buying**
   A type of buying in which orders are to cover the total requirement over a given period of time but the delivery is arranged so that items (goods) are delivered to a schedule in a number of batches at an interval of time. The objective of schedule buying is to obtain the advantage of prices of larger quantities, without the disadvantage of high stock and higher capital tie out. The system is widely used by large line of production plants

3. **Sole Supplier Agreement**
   The purchaser agrees to take a fixed portion of his agreement for a certain goods or class of materials from one supplier at an agreed price, but doesn't specify any particular quantity on the order or contract. Very often this type of agreement include appraisal clause by which the price is adjusted according to the quantity taken

TYPES OF PURCHASING

1. **Spot purchase.**
   When you go out on the spot market and pay market value instead of going through your normal supply chain where you might have contracts or discounts set up. To make a spot buy usually is more expensive but it is to fill and immediate need

2. **Quotation purchase**

3. **Contract purchase** -purchase contract is a binding agreement (between two or more parties with legal capacity) to purchase real property. It is based on legal consideration

4. **Tender purchase**

DECENTRALIZED PURCHASING

Decentralized purchasing refers to purchasing materials by all departments and branches independently to fulfill their needs. Such a purchasing occurs when departments and branches purchase separately and individually. Under decentralized purchasing, there is no one purchasing manager who has the right to purchase materials for all departments and divisions. The defects of centralized purchasing can be overcome by decentralized purchasing system. Decentralized purchasing helps to purchase the materials immediately in case of an urgent situation.

Advantages Of Decentralized Purchasing

- Materials can be purchased by each department locally as and when required.
- Materials are purchased in right quantity of right quality for each department easily.
- No heavy investment is required initially.
- Purchase orders can be placed quickly.
  The replacement of defective materials takes little time.

Disadvantages Of Decentralized Purchasing

- Organization losses the benefit of a bulk purchase.
- Specialized knowledge may be lacking in purchasing staff.
- There is a chance of over and under-purchasing of materials.
- Fewer chances of effective control of materials.
- Lack of proper co-operation and co-ordination among various departments.

CENTRALIZED ORGANIZATION

Centralized purchase exists and the responsibility for the purchasing function is assigned to a single group and its manager. This person is accountable to management for proper performance of the purchasing function regardless of where the actual buying takes place. Centralized purchasing can be entirely satisfactory in a multi-plant organization if the plants are manufacturing similar products from similar materials.

Departmentalized Organization

Neither completely rigid centralized nor loose decentralized of purchasing seems to meet the needs of all firms. A large company may have a Vice president, a director or a Manager of purchasing and a number of division or plant purchasing managers. Responsibilities at the different levels vary, but a compromise between centralization and decentralization is usually employed in an attempt to gain advantages of both and to minimize their disadvantages

INVENTORY CONTROL;

i. All materials, parts and in progress or finished products recorded on the book by any organization and kept in its store, warehouse and plants
ii. A list of the names, quantities and or monetary values of all or any group or classification of the items specified in

Inventory control therefore is concerned with the control of quantities and /or monetary value of items at predetermined level

Methods Of Inventory Control

i. **The Budgetary Control**
   - its assumed that the characteristics of the flow system and materials flow through the system will remain unchanged or will vary in some uniform relationship with the volume of output
   - Future stocks are forecast and calculated the effect of planned input and output changes on the stock

- Actual stock are compared with the forecast if there is a deviation from planned stock correction is effected by varying the order quantity or order frequency or in an emergency by changing the programme . This method of inventory control is perhaps always advisable with case of the total stock, but its expensive to operate and tend to be cumbersome in use, is applied to a large number of smaller stock categories. The value of this system tends to fall for various reasons with increase in the degree of analysis used. This method is generally associated with final budgeting controls of which it usually forms an interval part

ii. **The Trend Method**

In trend method the actual values of the stock are plotted on graph at regular intervals together with having annual totals. The plan in this instance is represented by the intension that the trend of stock should not be allowed to change significantly. The plan may actually be drawn on the chart to show the discrete future trends or show series of figures used.

Purpose on Inventory control

i. Control of stock volumes
ii. Control of stock distribution

Control Of Stock Volume

The prime purpose of inventory control is to forecast the value of the stock at appropriate time, interval, compare the actual value with the planned value and feed back early warning to higher management of any tendency to excessive having variation

The principles reasons why control of stock value is desirable are

- To ensure that the capital tied up in inventories doesn't exceed limits of fund available
- To ensure that the value of inventory is accurately shown in the company accounts
- To guard against theft

Hence the scopes of stock control are

a. Availability of goods
b. Reeducation of storage costs
c. Preservation of goods
d. Maintenance of accurate records

Questions

1. Outline FIVE functions of the purchasing department in a firm
2. Briefly explain the following terms quotation
   i. Quotation
   ii. Tender
   iii. Spot purchase
   iv. Contract

3. i. Explain the term centralized purchasing
   ii. State FOUR advantages of a purchasing department
   iii. Outline FOUR duties of the receiving section of a purchasing Department
   iv. State any TWO methods of purchasing
   iii. Explain FIVE factors that influence purchasing in an organization

4 i. Explain FOUR purchasing methods used in an engineering firm and state one
   advantage of each
   ii. State FOUR factors, which control purchasing in a department
   iii. State any competency required by a purchasing officer
   iv. State THREE factors considered when purchasing a new machine

STORE KEEPING AND STOCK CONTROL

STORE
A physical place where materials of all variety are kept .

Objectives
1. Minimizing cost of production through minimizing cost of materials.
2. Maintain cost of materials.
3. Service to user departments.
4. Establish co-ordination with other department.
5. Advising material manager

FUNCTION OF STORE
Store function deal with three major activities
1. Safe custody and stocking og materials
2. Receipts
3. Issue

Providing the right matrials at thr right time whenever required in the right condition to all department.

Receiving section
1. Recive incomining materials –phyically handling
2. Physically check receied materials
3. Arrange for speed and proper insepection
4. Raise goods inward note
5. Notify user department about availability or non-availability of materials requestioned by them
6. Inform purchase section regarding excess supply , shortage or defective supply.
7. Deliver materils to appropriate stores for storage
8. Prepare record keeping

Stocking section
Manager - Phyical custody of matrials and responbile for safe upkeeping as well as for any major discrepancy.
1. He must constantly review the stock and reconcile the physical and book stock which differ.
2. Issue on improper check onreceipts, pilferage, obsolescence , deterioration and damage, shrinkage, evaporation and spiilage by verifying stock periodically.
3. Complying with urgent issues without voucher.
4. Delays in posting the receipts and issue
5. Issue by numbers, receits by weighing and accounting by numbers.

Issuing section
1. Factors to be taken care of:-
2. Authorization of issue.
3. Requisition.
4. Material indent form

TYPES OF STORES.
The organization of stores varies in different business enterprises. The main types of stores are as under

1. **Centralized Stores**

   Materials are kept in one central warehouse and these are issued from one central point only.

   Advantages
   i. Smaller stocks are needed
   ii. Less staff required
   iii. Paper work is reduced
   iv. Control of stock level is easy and simple
   v. Better security measures can be introduced.
   vi. Less risk of duplication of items of stock

   Disadvantages
   i. Higher transport cost and increased handling
   ii. Possibility of breakdown of transport vehicles
   iii. Inconvenience to personnel
   iv. Increased fire risk
   v. Delays in supplying materials to branches and departments at distant places

2. **Decentralized stores**

When materials are held and issued by sub store in each department or branch.

Advantages

1. Reduced material handling and associated cost.
2. Less chances of bottlenecks and delays
3. Convenient for every department to draw material
4. Less transportation time.

Disadvantages

1. Ccordination and control of all decentralized stores is a challeng to management.
2. Labor utilization may suffer due to low store activity levels

DVISION OF STORE(Some other type of storage)

1. Raw material store
2. Components store
3. Work in progress store
4. Finished goods store
5. Semi finished goods store
6. Tools store, die crib.
7. Consunable matreial store.
8. Chemical store
9. Refrigerated mateial store.

STORE LAYOUT

The physical arrangement of storage facilities for efficient receipt, storage, and issue of materials. The internal arrangement of a store house. A proper layout should be clean with clear and defined lanes for each item of a stock, having respective BINS , SHELVES, RACKS etc, will ensure free movement of materials , timely inspection, and day to day verification of receipts and issues. It involves minimum of handling and optimum utilization of space.

The location of the stores department should be proper and it should be nearer to production department. The layout of stores department requires careful planning.

Factors affecting store layout

1. Type of stock
2. Volume of stock
3. Availability of space
4. Physical factors.

GENERAL PRINCIPLES OF STORE LAYOUT

a. **Appropriate storage**
   Space should be allocated for inspection, receiving, weighting, counting and assembly preparation

b. **Economy of movement**
   Racketing and equipments should permit the maximum use of flow area and height

c. **Transport**
   For ease movement of heavy and bulky items should be stored as low as possible

d. **Access**
   The layout should permit ease access for handling equipments

e. To prevent deteriorating of the stock the conditions – stores should be suited to particular materials and parts

f. If effective control of stock is to be maintained then non store personnel should not be permitted in the store

STOREKEEPER

An individual who takes care of store room and keep a watchful eye on the movement of both man, materials in and out of the storeroom

STORE KEEPING

Safe custody of materials, stocked in the store room for which the store keeper acts as the trustee. It means that the materials received are checked and carried into the store room and stored in a systematitc manner and protected and guarded against all kinds of damages and spoilage until they are issued. Store records provide the information regarding the *receipts, issues and stock balances of materials*.

Qualities of a good Storekeeper

i. Hardworking
ii. Honest and with pleasing personality
iii. Knowledge of accounting
iv. Managerial skills so as to create confidence in his/her colleagues
v. Conversant with materials carried into the store so as to enable him/her to preserve them proper ways

Duties of a Storekeeper

a. **Receiving**
He receives items and materials. He is responsible for the materials he receives and should satisfy him with regards to quality, quantity and value

b. **Storing**
The storekeeper is supposed to classify the materials he keeps according to their nature and place them at the right place after giving each of them a code

c. **Issuing**
The storekeeper is responsible for issuing the store and ensuring that they are correct out of their coding. Every material issued should be supported by a requisition form

d. **Store Verification**
The storekeeper is responsible for keeping the records in order so as to make it agree with items that physically exist in the storeroom. Any irregularity should be investigated immediately

e. **Coordination with other department**s
He should keep coordinating with other departments so as to ensure for a smooth functioning of the organization. He should be able to advise the management on the day to date affairs of the storeroom. Particularly regarding obsolete unserviceable and slow moving items

f. **Accounting and maintenance of records**
Maintenance of records in respect of materials received and issued . Proper upto date and complete record result in reduction or elimination of wastage and misappropriation

g. **Preservation**
Protection of materials from fire, corrosion, dust, theft, weather, heat, cold moisture etc. with the aim of maintaining their value and quality.

Benefits of good Store Keeping

i. Ease location of materials in the storeroom. This will avoid unnecessary delays in the storeroom
ii. Avoid blocking of capital through overstocking
iii. There is minimum wastage of labour, time and money due to damages and breakages
iv. Ascertainment of cost of storage, cost of production etc can be done easily to facilitate costing
v. There is smooth running of production unit because of regular and timely supply of materials into the storeroom and other department
vi. Accounting of all materials is facilitated

Features of effective and good Storekeeping

i. Immediate location of materials
ii. Speedy receipt and issue of materials
iii. Full identification of all materials at all times
iv. Keeping correct and up to date records of receipts, issue and stock balances of materials
v. Protection of materials against pilferage and deterioration
vi. Protection of materials against fire and theft
vii. Economical use of storage space

STOCK TAKING

To check physically the stock items in order to ensure that stock quantities shown on stock records and actual quantities are the same. Various systems of stock taking are

i. **Perpetual Inventory**
It means the use of a record card for each item of stocks that shows the balance in hand after each transaction. This involves recording all receipts, issues and running balances on each card. This method is mostly used together with continuous stock taking system. Under this method, recorded balances are compared with physical balances. The number of items checked each day must be such that the whole of the stock is taken over a selected period. All discrepancies in stock should

be investigated. This method of stocktaking ensures a continual detailed and reliable check of the stock items. It helps to investigate the discrepancies in time and take appropriate measures against corrupt and careless staff.

ii. **Periodic Stock Taking**
All stocks are counted at one time at regular intervals such as six months or one year. In annual stock taking the physical quantities of stocks on hand are ascertained at the end of each year. Stocktaking may take a few hours or several days. Mostly business is closed for annual stock taking for few days. This method avoids the continuous stocktaking but makes it more difficult to investigate discrepancies

iii. **Continuous Stock Taking**
Under this method recorded balances are compared with physical balances. It means quantities are continuously checked against the appropriate perpetual inventories balance figure

The principles of continuous stock taking are

i. A few items should be checked
ii. Checking should be made by staff unconcerned with keeping of store
iii. There should be an element of surprise
iv. All discrepancies should be investigated

PREPARATION FOR STOCK- TAKING:

Formation of team for stock- taking

(i) If stock- taking is to be done through **periodical method**, teams are formed by taking personnel from different departments of the unit. Such personnel are given brief regarding the process, details of various formats to be used and also the time schedule.

(ii) In **continuous method of stock- taking**, permanent stock takers shall be appointed on full time basis who continue the stock- taking through out the year in planned way. Such stock-taker/ Stock Verifier shall report to Accounts Department. Stock- taking can also be done by hiring the services of a reputed Charter Accountancy firm whose personnel do the job through out the year. In addition a team of labour force also need to be organized who shall help in counting, weighing or measuring the materials as the case may be. For heavy materials even handling equipment shall be provided.

(iii) Stock Verification shall be taken up by a team comprising of a technical person from Accounts person department

STEPS TO BE TAKEN FOR CONTINUOUS METHOD OF STOCK-TAKING:

(i) Accounts Department shall draw up a program in consultation with Contracts &Materials Management Department, for whole year in the beginning of financial year so that stock- taking of all the store items is done at least once in a year.

(ii) Details of the program shall be communicated to stores personnel well in advance so that necessary preparations are made at their end.

(iii) Reconciliation of Bin cards and Price- Stores- Ledger shall be done before proceeding for stock- taking. If any variations are found, those are settled and balances of both records are brought into conformity. This process helps to reduce number of discrepancies at the time of stock- taking as errors of balancing, posting etc. are corrected before hand.

(iv) Stock- taking sheets, sequentially numbered shall be clearly written indicating description, bin location, unit of measurement, code number and group holding stores .

PREPARATIONS IMMEDIATE BEFORE STOCK- TAKING:

(i) Materials are properly stacked in countable position so that there are no delays in rearranging and counting

(ii) Advice user departments to lift any materials, which are issued to them but still lying in stores.

(iii) All pending Stores Receiving Vouchers, Stores Return Notes, Stores Issue Vouchers, Stores Transfer Note etc. are posted in the Stores Ledgers.

(iv) Keeping in view method of stock- taking, necessary arrangements for handling equipment and labour force are made.

(v) Identify location of materials if stored at different places including open yards.

PROCESS OF STOCK- TAKING:

(a) Stock verifier in association with the concerned stockholder shall check up quantities of items by counting, measuring or weighing, depending upon unit of measurement.

(b) If physical quantities tally with Ledger/ computer master balances, the stock- verifier shall make necessary entries in the Stock- Taking Sheets- prescribed format Appendix 31 (Daily Report on Verification) and also record on the stock records" date--------------physically verified and found correct.

(c) In case physically verified quantity does not tally with stock balance, there exists discrepancy. The stock-verifier shall put up necessary remarks on the stock records i.e. date -------------- physically verified and ------------- quantity short/excess.

(d) The discrepancies so noticed during the day are summarized- stock holding group-wise into a document called "Stock- taking Discrepancies Report" (Appendix 32) and a copy of which shall be furnished to Heads of Stores and Finance Departments.

(e) Storekeeper, stock- verifier and head of stores sign all Stock- Taking Sheets and Stocktaking Discrepancies Report.

The stores-head shall arrange to investigate each discrepancy, reconcile the records and submit a report to Head of Finance within a specified time. In case some of the items/quantities are traced out subsequently, re-stock-taking shall be done and discrepancies shall be declared as settled.

STOCK CONTROL

Stock control is of great importance in any business organization. Stock includes goods of various kinds e.g. **raw materials, finished goods purchased for resale** etc. Stock of goods represents money and it must be controlled effectively. Stock control means making sure that the business has the right quantity of goods, in the right place and at the right time. Stock level must be neither **too high** nor **too low** and must be maintained at a reasonable level.

The main objectives of stock control are the following:-

a) To ensure the availability of goods when required
b) To ACCOUNT for the goods which has been purchased.
c) To reduce storage costs as much as possible
d) T o minimize the risk of deteriorations, wastage and theft.
e) T maintain accurate records
f) To avoid overstocking and under stocking

STOCK LEVELS

Too high or too low levels are not beneficial to an organization. If stock level is too low cannot meet the production demand. The decrease in production results in the loss of customers and profit also reduce. On the other hand when stocks are too high storage costs increase and there is a greater risk of deterioration of these goods. It means too high stocks the profits of the enterprise.

Stock levels should be determined in view of the requirements of the enterprise based on past experience.

The main factors which affect the stock levels:-

a. Availability

If a particular item of material is easily available through out the year, the stock level should be low and vice versa.

b. Lead time

Lead time means the period between the date of order and date of delivery. If lead-time is more then stock must be maintained at higher level and vice versa.

c. Stockholding Cost

Stockholding costs means the cost of keeping the material into stores. If stockholding cost is high then the stock level must be low and vice versa.

d. Consumption

If any item of material is consumed in greater quantity that must be maintained at high level and vice versa.

e. Trade Discount

Sometimes, the suppliers offer higher discounts for large quantities. If the benefit of trade discount is greater than stockholding cost then stock level must be maintained at higher level.

f. Durability

The stock level of durable goods can be maintained at higher at higher level but in case of perishable goods like fish and fruits, it should be kept at low level.

STORAGE AREA

Storage of materials and parts will take place in various places of factory and whenever it does it will involve costs. The cost associated with storage of materials is

i. Storage Area - This can be probably be reduced by use of different handling equipments or most efficient storage methods
ii. Re-handling and excess time caused by difficult in location parts
iii. Deterioration caused by unsatisfactory storage conditions

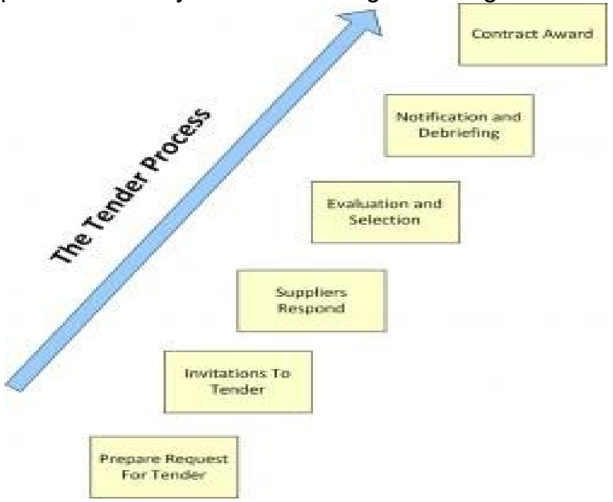
Questions

1. Explain the steps followed in store control system
2. State THREE benefits of an effective store control system
   i. Explain the importance of stock control in a workshop
   ii. Outline FOUR duties of the receiving section of a purchasing Department
3. i. Outline FOUR general principles of a good store layout
   ii. Explain the steps followed in store routines

4 i. The production manager has delegated the duty of organization and overseeing the annual stock taking in the workshop. Outline the major preparation to be undertaken in order to carry out the task successful.
   ii. Explain the importance of controlling stock in an organization

TENDERING

The process whereby governments and financial institutions invite bids for large projects that must be submitted within a finite deadline. Tendering is meant to encourage competition on the open market, promote innovative solutions, foster open and honest contract awards, and not to say the least reduce risk to the procuring entity. The tendering process is inherently fair and encourages competition. The business owner who understands the process already has the winning advantage.



- The procuring entity (usually the government, public body or large private company) will identify that it needs a certain service or product to be delivered in a predefined period. As such, within the business, the organization will determine the requirement, identify the finding and priorities against the business need.

- The commercial or financial team will then declare to the public that they intend to contract out to a suitable supplier. This is called the **Invitation To Tender** (ITT). In Kenya, large scale contracts are Gazzetted and listed in the Public Procurement and Oversight Agency publications.

- Companies and potential suppliers would then review the **ITT**. If they feel they can meet the requirement, then they purchase the Tender Documentation (usually KSh 2000 - 5000) from the procuring entity. At this point, these suppliers then prepare their proposal also known as the **Response to Tender**. During this part of the process, the suppliers are likely to have many questions. These are usually covered during an open session held by the procuring entity where all potential suppliers are invited. The proposal should be split into 2 parts: the **technical solution** and **financial**.

- Before the declared tender closing date, all suppliers must ensure that they submit their bids. Bids are not accepted after the closing date. Submit your proposal on time. Otherwise you will not be considered!

- The Procuring Entity usually has a committee ready to open the tenders. This is a crucial stage, and the first part to ensure that the process is fair and transparent. It is at this stage that the initial sift takes place. Proposals that do not meet the perquisite qualifications, information or expertise are eliminated.

- The remaining proposals are then reviewed on their technical merit, and score accordingly. When this process is completed, there is usually a supplier (or 2) that would have a lead. The next part is to review the financial submission. At this point, the committee looks at the technical solution and financial submission to determine which proposal will deliver the greatest value for money!

- Once the committees agree on the winner, usually termed as a recommendation, they pass this on the commercial, legal and financial teams to deal with the negotiation. When finalized between the suppliers and procuring entity, the **contract award** is offered, and this is then recorded for public knowledge.

This process as defined is known as the **One Stage Process**. In Kenya, we tend to follow a **2 Stage Process**. This first stage tends to determine suppliers who are capable of meeting the customer's need. The next stage determines which supplier with associated solution would meet the need of the customer by providing greatest value for money.

TYPES OF TENDERING PROCEDURES

There are four types of tendering procedures that can be used by commissioning bodies to buy services or products.

1. **Open procedure.**
   A one stage bidding process, where an opportunity is advertised inviting providers to bid directly for a contract. The advert states where interested parties obtain tender documents and the last date when tenders will be accepted. All interest parties then submit a tender. Scoring takes place and the successful organization is awarded the contract. Sometimes there is a selection stage first, which is then followed by the award stage.

Advantages of Open Tender.

(a) Give high level of competition and contra ctors tend to give best prices as compare to other tendering method.

(b) There is no list of restrictive tenderer, which does not allow favoritism

(c) It is very transparent process which ensures that only the contractor with the best price and meeting all the technical requirements will win the tender.

(d) This process is usually manage by procurement board where its staff are trained for such exercises and board ensure that all the procedures involved in tender are followed.

Disadvantages of Open Tender

(a) The low price usually detriment of quality and often result in the client obtaining poor quality job and late completion of work.

(b) Given that its open tender and thus there are no restrictions on the number of contractor who can bid and become bulky and lengthy job for tender analyses which often result in delays and high cost.

(c) Selective tendering consists of drawing up a list of chosen firms and asking them to tender. It is by far the most common arrangement because it allows price to be the deciding criterion; all other selection factors will have been dealt with at the pre-qualification stage

2. **Restricted procedure.**
   This involves the opportunity being advertised in the relevant places and media. Organizations will then submit an expression of interest and fill in a pre-qualification questionnaire. Successful organizations will go onto select list and be given an invitation to tender with the tender documents. Tender documents are completed and submitted. From the submitted tender documents scoring takes place and the successful organization is awarded the contract. The select list may be used for a period of up to eight years. So it is always useful to check when lists are coming to an end to see when your organization could be included. There must be a minimum of five bidders. This procedure works best when a commissioning body is clear at the start of the process what it wants to buy in terms of pricing and other award criteria

3. **The negotiated procedure**
   An opportunity is advertised (the specification is not established at the start of the process) and organizations can submit an expression of interest and fill in a pre qualification questionnaire. Successful bidders are invited to negotiate with the procuring body, which is called the dialogue phase. Once dialogue has generated solutions to the agreed requirements, final tenders are submitted based on each bidder's individual solution. Scoring then takes place and the successful organization is awarded the contract. There must be a minimum of three bidders

4. **Competitive dialogue**
   In the case of complex contracts. An opportunity is advertised and organizations can submit an expression of interest and fill in a pre-qualification questionnaire (the specification is not established at the start of the process). Successful bidders discuss the form of the contract and technical specifications with the bidders before the tender documents are issued. The discussion ends when the procuring body can identify a solution to meet its needs. Bidders then submit a tender based on the solution resulting from the discussion. Scoring then takes place and the successful organization is awarded the contract. There must be a minimum of three bidders.

Tender Evaluation

The tender review determines the lowest responsive bid submitted by a responsible bidder. The review may disclose errors, anomalies and omissions in the bids. The review may also point out weaknesses in the bid or contract documents, or improper tendering practices by bidders.

Legislation governing tendering

Legal contract

Responsive and Non-responsive
Responsive means, in relation to a bidder, that the person has submitted a bid that conforms in all material respects to the invitation to tender. If a requirement is not complied with (e.g., provision of bid security), the bid is non-responsive. If the tender documents are changed by the bidder, including not using the bid forms, or if the bid is qualified in some way, the bid is to be considered nonresponsive. For example, if the bidder changes the requirement "Supply and install 16 **metal** windows" to "Supply and install 16 **wood** windows", the bid is non-responsive. Proposals, however, are treated differently. The nature of a *Request for Proposals* is that it requires a solution to a problem, not meeting specific specifications. If a proposal does not meet a mandatory condition, then the proposal will likely be rejected for that reason.

Disqualification of Non-responsive Bids
The decision to consider an improper or incomplete bid must be made only after due consideration has been given to all facts and conditions involved. Such a decision may require communication with the bidder to rectify or clarify the particular bid. If not carried out with tact, this might suggest to the bidder that the purchaser is inclined to deal lightly with tenders, particularly if it is to the **Tender Evaluation.** This section describes the process for evaluating tender bids. The tender review determines the lowest responsive bid submitted by a responsible bidder. The review may disclose errors, anomalies and omissions in the bids. The review may also point out weaknesses in the bid or contract documents, or improper tendering practices by bidders.

Decisions to consider these bids further must result from exhaustive consideration of all the facts and conditions. On the other hand, it may not be in the public interest to disqualify a bid because of an error that neither jeopardizes the integrity of the bidding process, nor is "material". For example, the bidder has signed the bid but has not provided a seal may not be sufficient grounds for automatic disqualification. When dealing with tenders, whether at the opening or review stage, remember:

During the purchasing process, not only must all our actions always be beyond reproach, but they must also appear to be beyond reproach. When in doubt as to whether a bid is responsive or not, you should seek assistance and clarification.

Incomplete Bid
A bid is *incomplete* and subject to disqualification if the bidder has neglected to include significant information as described below.

Incomplete Unit Price Table
In a unit price tender where the total bid price is not available, but the resulting contract value will depend on the quantity, the bid is actually the unit price, **not** the extension or total tender price. Unit prices as bid govern, and after tender closing, may neither be changed nor added to if missing. In a unit price tender, the price that has been quoted on a firm basis is the unit price itself, and not the total tender price as in a stipulated price (lump sum) contract.

The total tender price is merely an extension based on the quantity estimated by the purchaser. Where the bidder has omitted a unit price in a unit price tender, the tender should be disqualified, since permitting the bidder to provide the missing unit price at this point would give the bidder an unfair advantage over other bidders

The only possible exemption is if the missing unit price can be calculated based on the extensions. If a detailed calculation and extension of all other unit prices prove beyond a doubt that the extension of the missing unit price is included in the total amount shown, then the tender may be considered. Confirmation of the missing unit price must then be obtained from the bidder, since it will be required for payment purposes.

Tender is Qualified
Qualified tender bids are those that contain qualifications and cannot be accepted. In April of 1999, the Supreme Court of Canada in its decision *M.J.B. Enterprises Ltd. v. Defence Construction (1951) Ltd.*, ruled that the privilege clause (lowest or any tender not necessarily accepted) does not permit the acceptance of a non-compliant (not responsive) tender bid. The

proper procedure for the bidders to follow is to tender exactly as required and to provide their options on the specified form accompanying the tender. In this case, the tender is valid and the options can, if appropriate, be evaluated to see what benefits they may provide. A tender is *qualified* or conditional when a bidder submits a bid
that does not comply with the requirements of the call for tenders.

Examples of Qualified Tenders

Some examples of qualified or conditional tenders are when the

- Bidder does not accept the terms of payment
- Bidder proposes different insurance coverage
- Bidder proposes different guarantees than those specified
- Bidder is not prepared to provide a certain component as specified in the call for tender but proposes something of different quality and performance

Qualification is Material or Not Material

When a tender is qualified or conditional, it may be disqualified as being non-responsive. It is very easy to declare a bid as nonresponsive when the qualification is significant or material, e.g., the low bidder is not prepared to provide a heating system to meet the specified requirements, but proposes something of substantially lower quality and performance. When the qualification of the bid is not material, it is harder to disqualify the bid as being non-responsive.

If you think that the qualification is not material and the bid should be accepted, it is recommended that you seek advice before making such a decision. Recent changes in common law have reduced the amount of latitude in such decisions.

Other Factors

If all bids are qualified in one way or another, the situation is not as delicate. The GNWT may choose to negotiate with the lowest bidder, and the other bidders should not complain. However, it is advisable to avoid having the negotiation result in a contract award at a price higher than the apparent second lowest bid. Again, seek legal advice before proceeding.

Identical Low Bids

According to the *Government Contract Regulations*, when two identical low bids are received, the Minister responsible for the contract will decide to whom the contract will be awarded.

The following factors should be considered:

- A bidder with an overall satisfactory performance record should be given preference over a bidder who is known to have an unsatisfactory performance record or no record at all
- Where time is an important factor , the bidder offefering the best completion or delivery date may be given preference
- Preference may be given to the local bidder only if the tender documents included the provision for local preference . generally local preference should only be considered as additional support for a recommendation of choice between two identical tenders and not as the sole criteria.
- Preference may be given to the bidder who has been operating for the past one or two years and has received the smallest volume of work during that time.
- Re-tendering may be the only choice avavliable if
  - No decision is possible
  - Time allows for re-tendering
  - A change of scope Is possible

Technical Review.

Responsible

Responsible means, in relation to a bidder, the capability in all respects to perform fully the contract requirements and the integrity and reliability to assure performance of the contract obligations. In deciding whether a bidder is responsible, factors to be considered include

- Financial resources
- Organization, plant and equipment
- Personnel – managerial and technical
- Experience on similar types of contracts
- Record on previous projects with the GNWT
- Reference from previous purchasers/owners

To assist in this assessment, financial and technical reports should be obtained on the bidders under consideration (usually the low bidder only). A bidder that is invited to tender cannot normally be deemed not responsible. The act of inviting a firm to submit a bid presupposed that the firm is qualified to bid.

Inadequate Tenders (Price Too Low)

When the lowest price bid is obviously inadequate, and /or the bidder does not appear to have the necessary resources to complete the work, the bidder must be made fully aware of the situation, and requested to review the tender. Following this review, the possible outcomes are as follows:

- If bidder agrees that the tendered price is unrealistic and request that the tender be withdrawn, the bidder should be permitted to withdraw the tender without penalty.

- If the bidder insist that the tender is correct and is in strict accordance with the tender documents the tow courses of action are as follows.

  - If we agree with the bidder's review of the price and the explanation of why the price is lower than the estimate, and if we consider the bidder to be responsible, we should request confirmation of the tender price in writing and award the contract accordingly.

  - If we do not agree with the bidder's review of the price and the explanation of why the price is lower then the estimate and if we consider the bidder to be non responsible we should disqualify the bid and award the contract to the next lowest responsible and responsive bidder

Under no circumstances may the bidder be permitted to increase the offer originally submitted

Excessive Tenders (Prices Too High) Excessive Tenders (Prices Too High)

When the lowest tender is obviously excessive, and a review of the scope of work required by the contract confirms that the Government estimate appears to be correct, the lowest bidder should be requested to review the estimate on which the tender was based.

Provided the bidder is co-operative (remember that the offer is the lowest in the competition, so the bidder is not required to prove the offer), the review may be accomplished by having the bidder: submit the estimate/tender for review by departmental personnel, or meet with qualified, knowledgeable departmental personnel review should result in:

- A revised departmental estimate
- A reduction of the offer by the bidder
- A combination of both
- No change in position

Following this review a report to the responsible manager should be made. The report should summarize the events and the findings, and should recommend a course of action, which could be one of:

1. Acceptance of the original offer. This should only happen where we can fully justify increasing our estimate to a point where the original offer can be considered acceptable and the best price that can be obtained under the circumstances. The additional funding requirement must be reviewed and approved by the client department.

2. Acceptance of a reduced offer based on minor changes to the scope of the work. This will result from negotiations with the low bidder to reduce the bid amount. Scope changes must be clearly defined in writing and agreed to by both parties.

3. Cancel the tender and re-invite the three low bidders to submit bids. This occurs when the GNWT is unable to secure a satisfactory reduction in price from the low bidder in relation to the proposed minor changes in the scope of the work

The fundamental intent of the original tender call remains the same. Tenders may be re-invited by reducing the scope of the work.

Technical Inconsistencies in the Tenders

The technical review may reveal that a bid is not in strict accordance with all the requirements and specifications. That bid is then subject to disqualification. The bidder may offer alternatives; however, the bidder must also provide a base bid that conforms to the tender specifications. **All** bids must be based on the same information so that no bidder has an unfair advantage. This is essential to maintain the integrity of the tendering process and protect the Government from legal liability. In all cases where a bid is officially disqualified as a result of the tender review (administrative or technical), the bidder should be notified by letter. The cover page or signature page of the tender should be clearly marked „**Disqualified**" and placed on the file with a copy of the letter

Sole Bid Received

If only one bid is received, you must consider whether the:

- Potential bidders had enough time to prepare and send their bids
- Bid amount is reasonable and within the budget
- Delivery of the requirement can be made in time
- Local and northern content is maximized.

If one or more of the above concerns have not been met through the tender process, the purchaser must decide if it is in the best interests of the Government to accept the sole bid, or reject it and issue a new tender. If a decision is made to cancel the tender and reissue it, the reasons must be documented, and the *Memo to File* should also explain possible reasons why only one bid was received.

No Bids Received

On occasion tender are closed and no bids have been received. When this situation occurs two options are available if the value of the tender is large enough and time permits the purchaser may consider retendering the procurement. In this instance the purchaser may expand the field of advertisement to attract bids or is aware of a change in the market which would now attract bidders to the procurement. Sole source the procurement to a suitable contractor.

CHAPTER 5. MARKETING

Definition.

According to the American Marketing Association

"Marketing refers to *the performance of business activities that direct the flow of goods and services from producer or seller to consumer or user.*

Kotler

Marketing involves the *satisfaction of human needs and wants through exchange process*

Stanton

Marketing comprises a *system of business activities designed to plan, price , promote and distribute want satisfying products and services to present and potential consumer segments.*

N/b All definitions include the main discipline i.e. marketing process require two set of actors – *the giver* and *the taker* (producer/seller and consumer/users).

General

Marketing is the *performance of those activities that attempt to satisfy a given individual's or organization's target group needs and wants for a mutual benefit or benefits*.

Buyers have a multitude of needs but only limited income with which to satisfy their needs and wants, hence they are involved in the choice process.

COMPONENTS OF MARKETING

a. **Controllable**

These are activities or decision area which a marketing executive can manipulate to achieve marketing objectives. They include *Planning, Pricing, and Distribution* **(**Place or location, Promotion, and Market research)

- The first 4 have been termed the 4Ps of marketing or :marketing mix"
- The fifth variable generates information which the marketer can use to make decisions on the 4P

The way the managers mix the 4P will determine the effectiveness of their marketing programme.

The managers need to understand the target market or customers, size of the market, its composition, its geographical dispersion and "how" and "why" the customer go about making their purchase decisions.

b. **Non Controllable**

These are variables which facilitates or hinder the activities to marketing

- These are *economic, political, geographical, social and technological environment*
- They influence positively or negatively the degree of freedom and individual executive has in making decision on the product price, place and promotion variables. Eg Regulatory board, government restrictions and controls

Importance of Marketing:-

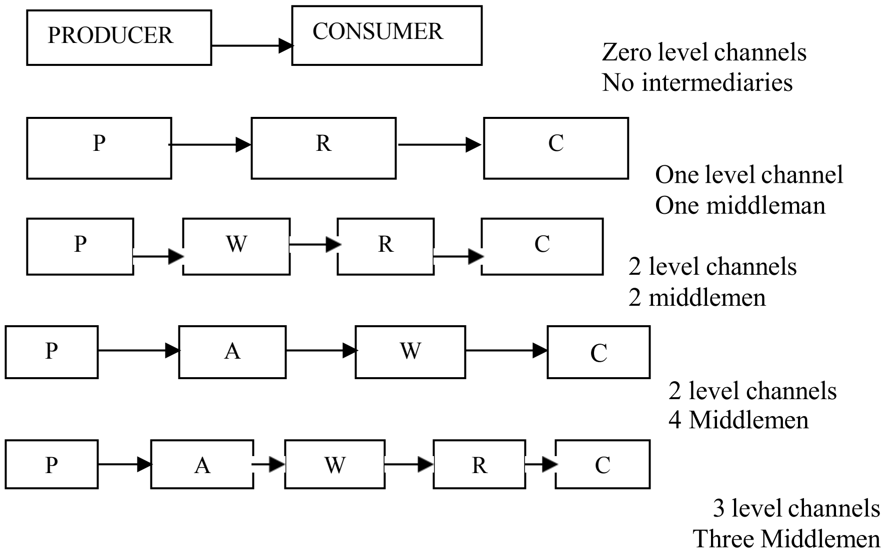
a. Enables citizens of any given country to consume product and services that they would not otherwise consume from other country
b. It creates employment. Many people in Kenya and elsewhere earn their living by performing marketing activities
c. Pays for most of the entertainment and news that the mass media provide to the public Eg vitimbi
d. Educating the potential buyers on the available products and how to use them.

Sales Manager

i. Carries out marketing researches to assess changes in the pattern and volume of demand.
ii. He co-ordinates advertising policy
iii. He keeps records of sales with suitable analyses.
iv. He directs and control sales activities including sales rooms and by sales staff.

CHANNEL OF DISTRIBUTION

Chain of market intermediaries or middle men used by producers or marketer to make products and service available when and where consumer users want them. There are several alternative channels which producer choose among various channels of distribution are



P = PRODUCER OR SELLER **W =** WHOLESALER
C = CONSUMER OR USER **A =** AGENT
R = RETAILER

1 **Producer** ⟶ **Consumer**
This is the shortest channel and entails selling direct to the consumer. The producer opens up their retailing outlets where the consumer sells merchandise commonly in agricultural commodities

2 **Producer** ⟶ **Retailer** ⟶ **Consumer**
This channel incorporates one middleman. The producer sells to the middleman then sells it to the consumer for this service the retailer get a profit margin otherwise he can not continue with the business. This type of sell is common in the marketing agricultural commodities

3. **Producer** ⟶ **Wholesaler** ⟶ **Retailer** ⟶

Consumer
This channel has 2 middlemen. It's more complicate. Most product in Kenya are distributed this way

4. **Producer** ⟶ **Agent** ⟶ **Retailer** ⟶

Consumer
The difference between wholesaler and an agent. The wholesaler's own merchandise he sells while the agent does not. An agent transact on behalf of his principal. This type of channel is common in international trade locally. Its mostly used in the insurance and travel industries.

5. **Producer** ⟶ **Agent** ⟶ **Wholesaler** ⟶

Retailer Consumer
This channel comprises of 3 middlemen although it's occasionally used in distribution locally produced and consumed product it is mostly used international transaction eg selling of coffee, KTDA. The more the number of level a channel contains the further the producer his customers as a result he has less direct knowledge of what is happening in the market.

FACTORS TO BE CONSIDER WHEN SELECTING CHANNELS

1. **Consumer Characteristics**
Producer must evaluate the size of the market
- The geographical dispersion of the consumer
- The consumer buying habits in terms of quantities purchased per period and Outlets from which they purchased and the composition of the market

Each of these factors directly or indirectly influenced channels of choice

2. **Product Characteristics**
   Product perishability and whether the product is for household consumption or industrial use

3. **Company Characteristics**
   The company objectives financial status, product mix, past channels experiences and desired degree channels

4. **Middlemen Channels**
   The major factors here are the market the middlemen serve, their financial requirement, the service that they serve and available

5. **Competition Characteristics**
   Products to met with those of his competitor's head on. He should therefore make sure his products are available where his competitors products are and this can be accomplished using the channel which the competitor use

6. **Environment Characteristics**
   Economical, political, legal, social, and cultural factors influences channel decision. Where economical condition, depressed marketers should move the product to the market via the route that is least expensive to the consumer

SALES PROMOTION AND PUBLICITY

Those marketing activities other than personal selling, advertising and publicity that simulate consumer purchasing and dealer effectiveness such as displays, shows and exhibitions, demonstrations and various non recurrent selling efforts not in the ordinary routine. it's a direct inducement offering extra incentive all along marketing channel to accelerate the market of product from the producer to the consumer. There are 3 important points to remember about sales promotion

- Its acceleration tool, designed to speed up the selling process.
- It normally involve a direct inducement eg money which provide extra incentive to buy
- It may be used anywhere along the market channel from the manufacturer to consumer

Objectives of Sales Promotion

1. To identify and attract new consumers
2. To introduce new product
3. To increase the total number of user for an established brand
4. To induce present consumer to buy more
5. To educate consumers regarding product improvement
6. To bring more customers into retail shops
7. To maintain sales in offspason
8. To off set competition
9. To increase retails inventories so that more goods may be sold.

SALES PROMOTION

- **Display/exhibition**
  Exhibitions and displays of the company's products in the trade fair, national and international shows is a means of promoting sales of the products.

- **Sales literature/catalogues**
  Using sales literature and catalogue containing information about the product eg its content, direction of use and where it is used. The consumers are able to make decision whether to buy the product when all the information is available.

- **Discounts**
  Special offers and discounts given to the consumers upon buying a certain quantity of the product is used to promote the sales volume. Sometimes free samples are given to the selected consumers.

- **Packaging**
  This is an attempt on sales promotion through attractive and aesthetic packing of the product. Manu business customers are attracted by good and attractive packaging which is protective, tell products story and build confidence, easy to handle and economical

- **Product superiority**

A firm may promote the sales of its products by manufacturing superior quality products compared to the substitute commodities in the market. Production of high quality products promotes high sales volume.

Sales Aimed At Retailers.

Manufacturers need some sort of help from retailers. The success in the use of sales promotion aimed stimulating support depends on retailer support advantage.

- There are variety sale promotion used by manufacturers which offers extra measures and display products.
- Common ones are the following:

i. **Promotion Allowances**
Consists of manufacturers agreement to pay retailers certain amount of money for providing special promotional efforts such as advertising or display before payment is made, the retailer's performance must be verified.

ii. **Buying Allowance**
It's the same, as promotion allowance except the retailer in this case is not asked to actively promote the product. Its purpose is to purchase/buy the product in larger quantities. A buying allowance is defined as a temporally reduction to retailers for purchasing specified quantities than usual.

iii. **Point Of Purchase Display**
Point of purchase materials includes such items as outside signs, window displays and posters. Used to attract attention, to inform customers and to encourage retailers to carry particular products.

vi **Spiffs**
A spiff (or push money) .Is monitory award paid to a retail sales man by manufacturers for selling the many. Line of product.

vii. Sales Contest
The desired participating contest seems to be a fairy universal human characteristics contest. The general purpose of are to stimulate retailer activity in push manufacturers product. In order to generate enthusiasm among retailers and to reduce the number of total losers they should be many prices. This should be awarded on the bases of % increase in sales during the life of contest.

viii. **Trade Exhibition**
Participation in the A.S.K shows around Kenya is one of the most effective and interest sales devices manufacturer can use. The shows lend themselves extremely well to the purpose of giving sample. Merchandise to prospective customers distributing brochures pamphlet and other advertising materials to show goers representative of the participating company can gain insight into attitude of the people towards the company and the competitors just by listening to comments that are made.

Sales Promotion Aimed At The Customer

Most visible form of sales promotion are those aimed at the ultimate purchase of the product. Sales promotion aimed at the customer is particularly useful when the manufacturer is introducing a new product. Sales promotion can also be used to encourage customers to buy more of the product at one time thus increasing total usage. Some of the most common and successful sales promotion techniques aimed at the consumer include the following:

i. **Free Samples**
Marketers use free samples for several reasons
(a) To stimulate the trial of a product.
(b) To increase the sales volume in the early stages of the products life cycle.
(c) To obtain the desirable distribution samples may be distributed by post, door-to-door shows or included with another product. The sample should be smaller than the product on the retailers shelves and be packaged as it usually is in a miniature of the regular product package in order to generate product recognition

ii. **Coupons**
Coupon is a certificate with a stated value, which is presented to a retail shop for a price reduction of a specified item. Coupon may be distributed in newspaper, magazine, door to door or by post. The

purpose of a coupon is to bring customers into a particular shop and build the sales volume of a specific brand

iii. **A premium**
An item that is offered for free or at a substantially reduced price to stimulate the purchase of the product being promoted. It's intended to produce quick sales. A premium can be attached tool put inside the package of the product itself.

iv. **Consumer Contest And Sweepstakes**
Contests and sweepstakes are similar in that they both imply opportunities to win something. A contest offers prizes based on the skills of entrants.

A sweepstakes offers prizes based on the luck of the entrants .To enter a sweepstake its only necessary to submit ones name in order to have a chance to win that is equal to that of anyone else who enters

FACTORS AFFECTING CUSTOMER BEHAVIOUR

Consumer behavior refers to the *selection*, *purchase and consumption of goods and services* for the satisfaction of their wants. There are different processes involved in the consumer behavior. Initially the consumer tries to find what commodities he would like to consume, then he selects only those commodities that promise greater utility. After selecting the commodities, the consumer makes an estimate of the available money which he can spend. Lastly, the consumer analyzes the prevailing prices of commodities and takes the decision about the commodities he should consume. Meanwhile, there are various other factors influencing the purchases of consumer such as *social*, *cultural*, *personal* and *psychological*.

The explanation of these factors is given below.

FACTOR AFFECTING CONSUMER BEHAVIOR

- New competing product
- High prices
- Poor packaging
- Change in customer taste**.**

QUESTIONS

1 i. State four functions of a marketing manager
ii. Describe the following pricing methods
a. Cost plus
b. Demand oriented

iii. Explain four circumstances under which its necessary to undertake market research in a company
v. Describe three methods of pricing a product

2. i. Explain THREE techniques used in qualitative research
ii. Highlight five methods of sales promotion giving an example of each
iii. Explain three techniques used in qualitative research
i. Outline four types of goods suitable for direct distribution to retailer

3. i. Explain two factors that may affect consumer behaviour towards particular product
ii. Explain three factors to be considered when selecting supplier for a required commodity
4. I Outline FOUR types of goods suitable for direct distribution to retailers
. ii. Explain TWO factors that may affect customer behaviour towards particular products
iii. Explain the cost plus method of pricing products
5. i. Explain four elements of marketing mix
ii. Explain four methods an organization may use to introduce its product into the market
i. List five factors to be considered when choosing advertising media
6. i. State four benefits of buying products direct from the manufacture
ii. State four functions of a marketing manager
iii. Explain four circumstances under which its necessary to undertake research in a company
v. State two advantages and disadvantages of distributing products to customer
vi. Define channel of distribution
7. Outline any four factors that a producer would consider in choosing a channel of distribution

CHAPTER 6. TYPES OF BUSINESS ORGANIZATION

SOLE PROPRIETORSHIP

A person who owns a business singly and he only provide all the necessary capital. He may employ people to assist him in running his business but remains the final authority on all affairs of the business. He is entitled to all the profits and responsible for all the losses. The law does not recognize him as separate entity from his business. This implication is that should the business suffer serious losses resulting in inability to pay its creditors, the sole trader will be called upon to make good the loss from his private resources, even to the extent of selling his very personal belongings. This is no doubt an extreme, but the very fact that it may happen is enough to restrain a person from investing a large sum of money in such business unit

Advantages

1. Simple to start and dissolve since there are no legal formalities to undergo before he can start such a business. All that is required is to obtains a trading license allowing him to conduct such type of business

2. He enjoys top secrets of his business success or failure and the secrecy is even more important in competitive market where the business will use different techniques to enable it to survive in the industry. Unfortunate some of these techniques may be unethical e.g. production techniques, marketing, workers motivations

3. The profits made by sole traders will depend upon the ability and handwork of the sole trader. This usually motivates the sole trader to work extra hard to earn himself maximum profits.

4. Since he runs the business himself, he will be able to supervise his employees more closely and also try to motivate them to work extra hard. This in turn will enable him to boost his sales and thus profits

5. He is also the sole decision maker in which case those situations calling for abrupt decisions making will suit him. This is very important in high risk areas where the owner has to make abrupt decisions to avert any impending catastrophe

6. Due to the small size of the business the sole trader is in a better position to co-ordinate all activities in the business and avoids bureaucracy, which is associated with big business. A sole trader can therefore put different talents where they suit best and this may lead to a profitable sole proprietorship

7. Due to the size of the business the owner can give his personal attention and touch to his customers. This means that a sole trader has to develop a good personality conducive to a good clientele relation and such will not only boost his goodwill but will also increase his profits

8. The owner can change his business at any time to cater for changing needs such as in tastes, social change, or any other changes,. This means that he can even change the location to look for an ideal one.

Disadvantages

1. The *economic life* of a sole trade type of business is usually equal to the life of the sole proprietor. This means that usually the death of the sole trader leads to the dissolution of the business either immediately or in the near future. The lack of continuity on the part of sole proprietorship means that such a business can not attract long term finances to finance its long term plans which limits the expansion and growth of such business

2. The sole proprietor has unlimited liability. This means that under situations where the sole proprietorship cannot pay its obligations then the assets of the owner of such a business will also be attached in the extreme. This is true because from the legal point of view, there is no personality difference between the owner and his business. This allows creditors to the business to not only attach the assets of the business but also those of its owner as well if need be.

3. The success of the sole proprietorship depends upon the judgment and management abilities of its owners. In some cases the owner may be a layman in such a line of business, which will entail limited abilities to run a viable business. This problem is compounded by the fact that the owners of such businesses are either reluctant to accept professional advice or they are ignorant of the availability of such services. This limits their ability to run an efficient and profitable business

4. Since the traditional sources of finance of such businesses are owners saving and finance from relatives these may be limited in amount. This

may hamper the operations of such businesses and may reduce their level of profitability

5. Usually the owners of such businesses may not have the basic accounting knowledge necessary to run a viable business. The point worthy emphasis is their inability to distinguish between their own cash and the business capital. This leads to such businessmen drawing their own capital mistaking it for profits. This usually leads to collapse of most sole trader businesses in Kenya.

i. PARTNERSHIPS

According to **Partnership Act 1934 section 3(1)** the law defines partnership as "***The relationship that subsists between persons carrying on a business in common with a view of making a profit***. "A partnership is thus an extension of a sole proprietorship and in fact it necessitated by the fact that sole trader for various reasons is not in position to carry out his business efficiently and thus profitably all alone. Thus he has to team up with other individuals in order to realize such objectives i.e. profitability and efficiency. Such individual will have in some cases known each other for some time and will agree to pool their financial and managerial resources with the aim of making a profit, which they will share on the agreed ration.

FORMATION OF A PARTNERSHIP

According to the **Partnership Act 1934** a partnership may come into existence in any of the following ways.

i. Orally
ii. Simply by the actions of the persons concerned i.e. if they are acting as if they were partners
iii. By a simple agreement in writing
iv. By a deed i.e. an agreement under seal, signed by persons who have agreed to become partners

Illegal Partnership

i. If it has been formed for illegal purposes e.g. to commit a burglary or for a purpose contrary to the public policy or for an objective that can only be achieved through illegal means
ii. In certain professions it is illegal to form a partnership unless all the partners possess certain minimum qualifications e.g. in auditing profession
iii. Where the partnership consist of more than 20 members

REGISTRATION OF PARTNERSHIP

However, in case the partnerships want to run their business under a name that does not disclose the true surnames of all partners such a firm must be registered under the registration of **business names Act**. Under this Act the partners must furnish the following particulars to the registrar.

i. The business name
ii. The general nature of the business
iii. The principal place or location of the business
iv. The present Christian and surnames, and any former name and surname of each partner and their usual residences
v. The nationality of each partner
vi any other occupation of the partners
vii. The date of commencement of their business

TYPES OF PARTNERSHIP

i. General Partner

The **most active partner** in a partnership. A partner who can be held liable for the **total debt of the firm** in the extreme case

ii. Limited Partner

A partner whose liabilities are limited to the amount of capital he has contributed to the partnership business. He does not usually participate in the management of the partnership business for if he does, he automatically losses his limited liability in respect of all transactions he has actually participated in their management or execution

iii. Active Partner

A partner who takes active part in the day to day running of the partnership business either by himself on behalf of the other partners or with assistance of a few of the other partners. This means that active

partners are actually employed by partnership business, which pays them remuneration for this matter

iv. **Sleeping Partner (Silent or Dormant Partner)**
A partner who **does not take an active part in the running of the partnership business** and as such remains in the background of such a business. In most cases, such a partner may either be employed somewhere else or may be in other business which cannot allow such a partner to take active part in the running of such a business. Nevertheless such a partner will have contributed to the capital of the partnership business and will thus share in the profits although at a lower proportion in most cases.

ARTICLES PARTNERSHIP/ PARTNERSHIP DEED

Although its not a statutory requirement that a partnership business be formed by a written agreement, its usual for big partnership business, in particular those involving huge capital commitments to write **articles of partnership** also known as **Partnership deed** to safeguard the interest of each partner in the business and this will constitute a legal contract among the partners. The articles of partnership must contain eleven clauses.

CONTENT OF A PARTNERSHIP DEED

1. The nature of the business to be carried out
2. The capital and property of the firm and respective capital contributions of each partner
3. The sharing of profits and losses by the partners
4. The rules as to the rate of interest on capital and drawings of partners
5. The provision for proper accounts and their audit
6. The powers of each partner
7. The ground for dissolution of the partnership
8. The method of determining the value of goodwill on retirement or death of a partner
9. The method of determining the amount payable to an outgoing or a deceased partner
10. The power of expulsion of a partner
11. The arbitration clauses i.e. how the disputes amongst partners should be resolved.

DISSOLVING PARTNERSHIP

Although the partnership deed or articles of partnership contain the regulations of termination/dissolving partnership nevertheless in the absence of or subject to , these regulations , a partnership may be dissolved in the following ways

1. When the fixed time, if any, as stated in the articles of partnership. Or partnership agreement or deed, has expired but it can continue as a partnership at will
2. If the partnership was specifically entered into for a given venture, transaction, or undertaking, the completion or achievement of such will automatically dissolve the partnership.
3. If the partnership is a partnership “at will” (ie for no fixed period) it can be dissolved by any partner **giving notice to the remaining partner** or partners of his intention to dissolve the partnership
4. By mutual consent of all partners
5. By **bankruptcy** or **death** of any given partner
6. If any one partner allows his share in the partnership to be charged or **attached under court order** for private debts
7. If any event occurs which makes the partnership **business illegal to carry on.** This applied, irrespective of the contents of the partnership agreement or deed which will in this case be “frustrated”

AUTOMATIC OR COMPULSORY DISSOLUTION OF A PARTNERSHIP

Section 39 of the partnership Act lays down the following grounds under which a partnership will be compulsory dissolved by the courts of law: -

1. If anyone of the partners becomes **insane** or of a **permanent unsound mind.**
2. If any one partner becomes **permanently incapable of performing** his partnership duties, e.g. through **incapacitation due to accident** or any other **disability**
3. Where a partner has **acted in a manner which is prejudicial to the carrying of the firms business** and his discontinued association with the partnership business would bring the name of the firm into disrepute .

4. Where a partner has been found to be guilty of a **breach of the partnership contract**
5. Where the firm has been operating at a loss.
6. When any circumstance arises which renders it fair and equitable that the partnership business be dissolved, e.g. a situation of mutual hostility is incompatible with partnership spirit.

LIMITED PARTNERSHIP

By virtue of the **limited partnership act**, the liabilities of certain specific partners may be limited to some extent. The provisions of this Act are as follows: -

1. The number of partners in a limited partnership is restricted to twenty.
2. In a limited partnership there must be one or more general partner who are liable for all the debts and other liabilities of the firm
3. In addition to the general partner or partners, there will be one or more limited partners. In the case limited partners are persons who at the time of commencement of the partnership business, contributed money or property, taken at a certain value as capital , and are not liable for the debts and other liabilities of the firm beyond such amounts as they will have contributed.

However, a limited partnership must be registered as such with the registrar of businesses and failure to do this will expose limited partners to unlimited liabilities as in the case with general partners .In all, the dissolution of the usual partnership business does not apply to limited partnership.

Advantages

1. Usually the business can benefit from the talent of individual partners, which are pooled together to ensure utmost efficiency and a profitable business
2. Since a partnership will be owned by a number of partners such can poll their savings together to boost the capital base of the partnership and thus enable it to undertake its financial operation
3. Decision making process in a partnership business is done by unanimous stand of all the partners and this may lead to sound decisions. This will boost the profitability of partnership business, as it will ensure efficient and sound business policies and practices
4. Partnership have high growth as opposed to sole proprietorships because not only will the business benefit from different managerial talents of individual partners but also the ambition of partners to make maximum profits from their ventures
5. Such businesses are usually able to raise more finances than sole traders due to the goodwill or financial influence of one or more of the partners, and this can enable the business to expand its operation and earn more profits for its partners

Disadvantages

1. There is a likelihood that partners may not pool their talent equally and this may lead to apathy among partners who put in more effort in the running of their business than others and yet may be sharing in profits in equal proportions. This may frustrate active partners and usually lead to dissolution in a number of partners
2. There may be lack of mutual trust amongst partners in particular among silent partners who will view active partners with suspicion. This may create discord among partners, which may also lead to its dissolution
3. In some cases partners may disagree over important policy matters and such disagreements may delay the decision making process of the business. This may interrupt the smooth running of the business, which may lead to reduced efficiency and thus low profitability
4. Some of the active partners may use the partnership assets to achieve their personal gains at the expense of the interest of dormant or limited partner
5. Partnership business may have a short life span in that it may be dissolved due to a number of factors e.g. death, disability and bankruptcy of a partner. Which may lower the morale of partners. This may also reduce the goodwill of such a business from third parties point of view e.g. lenders, investors etc who may be reluctant to commit their money in such partnership at least in the long run
6. For an unlimited liability type of partnership the unsound actions or conduct of any one partner can put the interests of other partners at stake and in the extreme such actions may lead to the dissolution of the partnership, thus making other partners suffer for actions of one partner

COMPANIES

Companies may be mainly in two groups: *registered* and *statutory companies*.

(i) Registered companies

Those that are formed and registered under **Companies Act, 1962, cap 486.** These are also known as **limited companies**. A limited company comes into existence by complying with the provision of the companies Act (Cap. 486) . A limited company may be either **Private** or **Public Limited Company**.

(ii) Statutory companies

Created by an act of parliament in East Africa, the government owns most statutory companies; the powers and functions of these companies are defined by the acts that create them.

TYPES OF REGISTERED COMPANIES

Registered companies may be further classified into the following groups:-

a) Public or Private Companies.

b) Limited or Unlimited companies.
c) Limited companies may be limited by shares or limited by guarantee.

PRIVATE OR PUBLIC COMPANIES

(a) A Private Limited Company

Registered by two or more persons but it is not allowed to call upon the public for funds in the form of shares or debentures.

These have the following main characteristics

i. This may consist of a minimum of two members but the maximum may not exceed fifty (exclusive of past and present employees who become member)
ii. A private company is not allowed to call upon the public for funds in the form of shares or debentures
iii. Any transfer of shares is restricted it must be approved by the board of directors

.

(b) A Public Limited Company

Registered by seven or more persons and it offer its shares to the general public freely.

These have the following main characteristics

i. A public company is one whose membership is not less than seven but no maximum limit is imposed
ii. Expansion can be achieved through the sales of shares to the public. The restriction in private companies does not apply.
iii. Shares are freely transferable and thus more funds can be raised by sales of shares on the stock exchange

LIMITED OR UNLIMITED COMPANIES

(a) A limited company

One the liability of unlimited of those members is limited to a stated amount. The liability of unlimited companies is unlimited like those of sole trader and general partners.

(b) Unlimited Company

There are, however, no unlimited companies in East Africa . It is therefore common to talk of joint stock companies as limited companies.

LIMITED BY SHARE OR GUARANTEE

(a) Limited by share

Limited companies may or may not have a share capital. if they have a share capital, the liability of their share holders is limited to the face value of the share held by them.

(b) Limited by guarantee

If the company has no share capital, the liability of its members may be limited to a sum guaranteed by them

FORMATION OF A LIMITED COMPANY

For a company to be formed there must be some people who bring out the idea of forming one and setting it in operation. Such founder members are known as *Promoters*. To form a private company, it requires two and a public company seven promoter

The promoters are required to submit to the Registrar of companies the following documents

i. Memorandum of Association
ii. Articles of Association
iii. List of directors
iv. A declaration that all necessary requirements have been duly complies with and the directors agree to act as such. This declaration may be signed by the secretary or by one of the directors or promoters of the company

MEMORANDUM OF ASSOCIATION

The promoters have to make an application to the registry of companies that they need be formed into a company. This application must be signed by all of them. The document states:-

i. The name of the company with the word "**Limited**" as the last word in the name ie serve as a remainder to the people dealing with the company that the liability of its members is limited.
ii. The country and town in which the registered office is situated
iii. The objectives of the company being formed.
iv. A statement that the liability of the members is limited
v. The nominal authorized capital of the company.

The following information is given

a. The total amount of the share capital
e. The units (share) into which the share capital is divided
f. The value of each share
g. Type of share

The purpose of the memorandum of association is thus to define the companies objectives, powers and serves as a guideline to the outside public

ARTICLES OF ASSOCIATION

This is the second document that must be made signed by the promoters and sent to the registrar. Its very essential in the case of a private company but a public company may if it wishes adopt the standard set of articles known as "Table". Contained in articles of association are:-

i. The issue of share capital
ii. Borrowing powers of the company's directors
iii. Appointment, remuneration and powers of the company's auditors
iv. Meetings and how these can be called
v. voting powers of shareholder
vi. Appointment and remuneration of the company's directors
vii. Nature and ways of paying dividends to shareholders

The Article of Association thus serves as a guideline to the internal management of the company

When the required documents are presented to the Registrar of companies and everything is found satisfactory the registrar may ask the promoters to pay registration fees. On receipt of these fees he issues a **Certificate of incorporation**. This brings the company into existence as a separate legal entity.

A company also needs **a trading license**. The trading license is a document, which is issued by the licensing authority in an area to carry out a particular business in a specified are.

A private limited company can commence its business as soon as it is in the possession of certificate of incorporation and the trading license.

A public limited company cannot commence the business until a certain minimum amount of capital has been raised. If a company does not commence business within one year of its incorporation the court may order it to be wound up

WINDING UP OF A COMPANY

If a company is wound up, it discontinues its business. The winding up of a company brings the existence of a company to an end. The winding up of a company is either **voluntary** or **compulsory**.

(a) A voluntary winding up

This is initiated by the members of a company. This case, a liquidator is appointed to realize all the assets and discharge all fallibilities.

(b) A compulsory winding up

Takes place by the order of the court, usually on a petition of a creditor. This case the liquidator is appointed by the court. The liquidator disposes of the assets and discharge the liabilities of the company

RAISING CAPITAL

Joint stock companies in particular public companies are open to a wide range of finances from such sources as

1. Ordinary share
2. Retained earning
3. Preference share capital
4. Debenture finance
5. Loan of all terms from banks and other financial institutions
6. Hire purchase finance
7. Factoring
8. Invoice discounting
9. Trade credits
10. Lease finance
11. Provision for depreciation
12. Provision for taxation

Questions

1. Outline five documents, which people and promoters wishing to register a company must give to the register of companies
2. i. Define a partnership
   ii. Explain four ways through which a partnership can be terminated
3. a) Explain the distinguishing features of each of the following
   ii. Sole proprietorship
   iii. Partnership
   iv. Limited Liability Company
   b)_ State three ways of raising capital for business.
   c). Outline five circumstances under which partnerships may be dissolved.
4. a) Outline four circumstances which may lead to illegal partnership
   b) Outline five requirements of registering limited partnership
5 a.) Compare the difference between a general partnership and a registered Company.
   b. Explain the following
   ii. Memorandum of association
   iii. Articles of association
   iv. Debenture
6 a. Outline the contents of the following
   i. Memorandum of association
   ii. Articles of association
7. a) Explain five advantages that an entrepreneur derives from operating sole Proprietorship business.
   b. Outline five documents which people/proprietor wishing to register a company must give to the registrar of companies.
8. a) State five functions of a wholesaler
   b) Describe THREE methods of pricing product.

LAW OF CONTRACT

In business quite *often promises are made at one time and the performance follows later*. The law of contract *lays down the legal rules relating to promises, their formation, their performance and their enforceability*.

NATURE CONTRACTS

A contract is *an* ***agreement or promise, which is legally binding or enforceable by law***.

A contract has been defined by Sir William Anson in the word "A *legally binding agreement between two or more parties, by which rights are acquired by one or more to act or forbearances on the part of the other or others".*

The *law of contract imposes an obligation* on every person to *honor his legally enforceable promise*, f*ailure to do which renders him liable to compensate the injured party or otherwise attorn for his conduct*. What is intended here is to promote commercial relations. The obligation imposed by a contract is created by the parties themselves and must act within the ambit of the law.

ESSENTIALS OF A VALID CONTRACT/ELEMENTS OF A CONTRACT.

The essential elements of valid contract follow:-

1. **Offer and Acceptance.**
   There must be a **lawfu**l **offer** and a **lawful acceptance** resulting into an agreement and satisfy the requirements of the *Contract Act* in relation thereto.

2. **Intention to create legal relation.**
   An intention by the parties that the agreement should be attached by legal consequences and creates legal obligations. *Agreements of a social or domestic nature do not contemplate legal relations, and such they do not give rise to a contract*. E.g. *an agreement to dine at a friends house or promise to buy a gift for wife are not contract because they don't create legal relationship.*

3. **Lawful Consideration.**
   A price paid by one party for the promise of the other. I.e. an agreement is legally enforceable only when each of the parties to it gives something and gets something.

4. **Capacity of Parties.**
   The parties to an agreement must be competent to contract; otherwise it cannot be enforced by a court of law. i.e. the parties must be of the *age of majority* and of *sound mind* and must *not be disqualified* from contracting by any law to which they are subject.

5. **Free Consent.**
   The parties must have agreed upon the same thing in the same sense and the agreement is induced by *(i) coercion, (ii) undue influence (iii) fraud (iv) misrepresentation (mistake).*

6. **Lawful Object.**
   For valid contract parties to an agreement must agree for a lawful object. I.e. *object must not be fraudulent, illegal, and immoral*. Or opposed to public policy.

7. **Possibility of Performance.**
   A valid contract must be capable of performance. If the act is impossible in itself, physically, legally, the agreement cannot be enforced at law.

CLASSIFICATION / TYPES OF CONTRACTS

1. **Express and Implied Contract**

   Express contract
   The parties specifically agree about the nature and terms of their relationship .E.g. *A agrees to sell his goods at sh 10,000 and B agrees to buy the goods at that price*.

   Implied Contract.
   There is no specific agreement. The conduct of the parties, as well as the surrounding circumstances must be taken into account to ascertain whether or not a contract exists. E.g. *A hires a taxi and boards it there is*

an implied contract that the taxman shall convey A up to his destination and that A shall pay such fare as is usually paid for that trip.

2. Unilateral and Bilateral Contract

Unilateral contract
Only one party is bound. E.g. *A offers a reward to any one who will recover his lost property*, no one is bound to recover the lost property but A himself is bound to give the promised reward to anyone who might recover the property.

Bilateral contract
Both parties are bound. E.g. *A agrees to sell his goods to B and B agrees to buy them at a stated price. A is bound to deliver the goods to B and B is bound to accept them and to pay the price*.

3. Valid, Void and Voidable Contracts

A valid contract
An agreement enforceable by law. i.e. when all the essentials of a contract are present.

A void contract
An agreement, which is not binding or enforceable by law, because it has no legal effect at all. i.e. both parties were mistaken, or where it is prohibited by law or where it's entered without consideration.

A Voidable contract.
Contract becomes Voidable when consent of one of the parties to the contract is obtained by undue influence, misrepresentation or fraud. The aggrieved party is entitled to void it within reasonable time. E.g. A notifying the other party B that he does not intend to be bound by the contract. Where not feasible to give notice A can effectively terminate it by doing everything possible to show that he does not intend to be bound by the contract like to make report to police.

(i) *Car and Universal Finance Co V Caldwell (1965) case*
(ii) *Newton's of Wembley , Ltd V Williams (1965) case*

4. Specialty Contract and Simple Contract

***Specialty* contract**
A contract under seal. It is an *instrument in writing signed and sealed by the party to be bound by it and delivered by him to the person for whose benefit it was made*. Thus, *writing*, *signature*, *sealing* and *delivery* are the four essential characteristics of this type of contract.

Simple contract
An agreement, express or implied which give rise to legal obligation. It may be in writing or agreed orally or even implied from the conduct of the parties.

(i) *Vincent V Premo Enterprise Ltd (1969) Case*

The following contracts must be in writing
(a) Bills of Exchange/Promissory notes
(b) Credit worthiness/Character
(c) Acknowledgement of status barred debts

The following must be evidenced by writing
(a) contract of guarantee
(b) contract for the sale of land
(c) contract for the sale of goods over she 200
(d) Employment contract over 1 month
(e) Hire purchase contract
(f) Money lending contracts.

5. Illegal Contracts and Unenforceable Contract

Illegal contract
One which is prohibited by law or which contravenes a provision of law, or one, which is contrary to public policy. Where both parties are guilty of the illegality they are said to be in *pari delicto* and none of them can enforce the contract. But where only one of the party is guilty of the illegality the contract may in certain circumstances be enforced by the innocent party. *An agreement to commit murder or assault or robbery*

would be illegal. All illegal agreement are void but all void agreements are not necessary illegal.

A engages B to murder C and borrows sh. 5000 from D to pay B. We assume D is aware of the purpose of the loan. Here the agreement between A and B is illegal and the agreement between A and D is collateral to an illegal agreement. As such the loan transaction is illegal and void and D cannot recover the Money. But the position will change if D is not ware of the purpose of the loan. This case the loan transaction is not collateral to the illegal agreement and is a valid contract.

An **unenforceable contract**
One which though valid cannot be enforced because none of the parties can sue or be sued.

6. Contracts Uberrimae Fidei

A contract in which only one of the parties has full knowledge of all materials facts, which he is under duty to disclose. *An example is an insurance contract. The insured is possessed of all the facts which are material to the contract but insurer has no possession, and the insured is under a duty to disclose them to him*. *Uberrimae fidei* are said to be *contracts of utmost good faith*. Any failure to exhibit good faith amounts to a breach of contract entitling the other party to be relieved from his own obligation under the contract.

i. Family settlement - *Where full disclosure is required*
ii. Contract for the sale of land. - *Seller must disclose defects relating to title*
iii. Contract of partnership. - *Every partner exhibit utmost good faith in dealing with each other*

7. Contracts of Records

A contract of record consists of the judgment of court. Such contracts are formed by an entry on the court records. The rights and obligations of the parties are put on court record and the resultant relationship between them are said to constitute a contract record.

Contract Include:-

i. **Judgment of a court**

The previous rights under a contract are merged in the judgment of a court. The judgment constitute a contract of record between the parties of the contract

ii. **Recognizance's**

In the criminal cases, the court may bind the accused to be of good behavior and keep peace. The person so bound acknowledges that a specified sum will be paid by him to the state if he fails to observe the terms of recognizance.

8. Executed Contract

Both parties to a contract have completely performed their share of obligation and nothing remains to be done by either party under the contract

9 Executory Contract

Obligations are outstanding, one on either party to the contract, either wholly or in part, at the time of the formation of the contract and have still to perform their share of obligation.

10. Quasi Contract

A contract under certain special circumstances based upon the equitable principle that a person shall not be allowed to retain unjust benefit at the expense of another.eg the *founder of lost money to return them to the true owner or a person to who money is paid by mistake to repay it back.*

VITIATING ELEMENTS OR FACTORS.

A vitiating element is one, which tends to affect the validity of the contract. The vitiating elements consist of: -

1. MISTAKE

An erroneous belief concerning something. It may be of two kinds

i. Mistake of Law

a. Mistake of general law of the country
b. Mistake of foreign law
c. Mistake of private right of a party relating to property and goods

ii. Mistake of Facts

Also known as an operative mistake. Under common law it renders a contract *void initio* i.e. where an operative mistake is proved the legal position is that the parties are in the same position as if the contract was never entered into; the contract was void right from the beginning.

COMMON LAW

Divides mistakes into: -

i. **Common Mistake**
Both parties assume a particular state of affairs, whereas the reality is the other way round. Both parties therefore make exactly the same mistake

ii. **Mutual Mistake**
In relation to a particular matter, one party may assume one thing while the other party assumes a totally different thing, so that they both misunderstand one another

iii. **Unilateral Mistake**
One of the parties to a contract is mistaken, and the other party is aware of the facts.

2. MISREPRESENTATION.

A statement of fact made by one party to the other either before or at the time of contract relating to some matter essential to the formation of the contract with an intention to induce the other party to enter into the contract either innocently or intentionally.

Characteristics

a. It must be a misrepresentation of facts not of law or opinion
b. The facts misrepresented must be a materials fact. i.e. it can be relied upon.

Duty to Disclose

Is there any duty to disclose material facts? The general rule is that mere silence cannot amount to misrepresentation. A party to a contract is therefore under no duty to disclose material facts and the burden is on the other party to elicit from him all facts he considers to be material to the contract in question. Except

a. Fiduciary Relationship
b. Partial Disclosure
c. Contract Uberrimae
d. Supervening Changes

TYPES OF MISREPRESENTATION

i. **Fraudulent**
A statement made without honest belief in its truth or recklessly without caring whether it is true or not. Requires proof of fraud or dishonesty and once proved it’s actionable at common law

ii. **Innocent**
Statement made honestly or without fault on the part of the representor Is not actionable at common law

iii. **Negligent**

Representor made his misstatement negligently. He cannot escape liability for any damages that may have been suffered by the representee as a result of relying in it.

REMEDIES FOR MISREPRESENTATION

Renders a contract Voidable. He is entitled to damages for loss that may have been suffered by him.

3. DURESS (OR COERCION).

Actual violence or threats of violence calculated to produce fear in the mind of the person threatened. The requirement of agreement in the establishment of a contractual relationship presupposes that each of the parties is a free contracting agent. For a threat to amount to duress it must be a threat to the person not to goods .i.e. to do unlawful thing

4. UNDUE INFLUENCE.

Induces by:-

a. The relations subsisting between the parties are such that one is in a position to dominate the will of the other.
b. He uses the position to obtain an unfair advantage over the other

It should be noted that husband/wife relationships do not raise the resumption of undue influence. It must be specifically proved by the party seeking to rely on it.

5. ILLEGALITY.

One, which is prohibited by law e.g. *making a contract to break into a house to steal goods.* Contracts, which offend against public policy i.e. those which are prejudicial to public morality and public well being:-

a Contract to commit a crime, tort or fraud
b. Contract that are prejudicial to the administration of justice
c. Contracts liable to corrupt public life
d. Contracts that are prejudicial to public safety
e. Contracts to defraud the revenue
f. Contracts that are sexually immoral
g. Contracts that are prejudicial to country's foreign relations

PRIVITY OF CONTRACTS.

A person who is a party to a contract is said to be privity to the contract. In technical terms there is privity of contract between him and the other contracting party.

Only a person who is a party to a contract can derive a benefit from it or have obligations imposed on him by it, and it is only such person who may sue or be sued on the contract. A stranger to a contract cannot derive any benefit from it or have obligations imposed by the contract on him. This is the general rule, commonly referred to as the doctrine of privity of contract.

(i) Tweddle V Atikinson (1861) case
(ii) Dunlop V Selfridge (1915) case

EXCEPTION TO THE PRIVITY DOCTRINE

The general rule is no doubt rigid: once you are not a party to a particular contract you can not enforce it, nor can it be enforced against you. This rule is however subject to certain recognized exceptions

(a) Agency

Under the law of agency, a person who is not a party to a contract may in certain circumstances sue or be sued on it. *Where A , acting for B enters into a contract with C without disclosing the fact that the contract is being made on behalf of B, B is known as an undisclosed principal . Upon discovering the true fact, B has a right to intervene and directly enforce the contract against C. Similarly, C upon discovering the existence of B, has a right to elect whether to sue A the agent or B the principal.* In this way a person not a party to a contract is allowed to enforce it or liable to have it enforced against him.

(b) Statutory provision

A statute may confer rights or impose obligations on a person who is not a party to a particular contract. *Under the married women's property Act 1882 a married person may take out a policy of insurance on his life for the benefit of his children. IN this case the beneficiary of the policy is given rights under the contract of insurance although he was not a party to it.*

(c) The doctrine of constructive trust

Sharma V The Home Insurance Co. (1966)

Where a contract is made with A for the benefit of B, A can sue on the contract for the benefit of B and recover all that B could have recovered if the contract had been made with B himself. The basis of the principle is that A must be regarded as trustee for B under an implied trust.

Under the doctrine, if A fails to enforce the contract, B may sue him and the other party to the contract so as to enforce his right under the implied trust.

(d) Restrictive covenants

It's a negative term of a contract. It is a promise given by one party to another, an undertaking to refrain from doing a particular act. Such covenants are common in contracts relating to the disposition of an interest in land. *Thus where A purchases land from B and promises B that in developing the land he will take care not to obstruct a neighboring plot from light,* Such a promise by A is a restrictive covenant, its an undertaking by A to refrain from obstructing the neighboring plot from light.

Under the law of property, a restrictive covenant is said to "run" with the land. This means that any person who acquires land which is subject to a restrictive covenant is bound by it.

Privity of contract and considerations

Privity of contract is not the same as consideration.

Under the **doctrine of consideration** a person seeking to enforce a contract must prove that some consideration has moved from him. What is emphasized by that doctrine is the element of bargain.

But the **doctrine of privity** of contract emphasizes the identity of contracting parties: the rights and obligations created by a contract are those of the parties to it, not to strangers.

Although the two doctrines are separate and distinct, the application of each one of them leads to the same result.

DISCHARGE OF CONTRACTS

A contract is said to be discharged or terminated when the parties to it are freed from their mutual obligations. A contract may be discharged in any of the following ways

a. Discharge by Performance

When a contract is duly performed by both the parties, the contract comes to a happy ending and nothing more remains.

b. Discharge by Agreement

Where each of the parties is yet to perform his contractual obligation, the parties may mutually agree to release each other from their contractual obligation**.** *Where one party has fully performed his part of the contract, he may agree to release the other party from his contractual obligation*. The discharge is effective only if made under seal or where the party being discharged has furnished consideration for it.

c. Discharge by Frustration

a contract is said to be frustrated if an event occurs which brings its further fulfillment to an abrupt end, and upon the occurrence of the frustration event the contract is immediately terminated and the parties discharged.

i. Destruction of a Subject Matter

Destruction of the subject matter

ii. Death or Incapacity

Death or serious indisposition of a party whose personal services were contemplated by the contract will similarly terminate it.

iii. Frustration of the Common Venture

If the common venture subsequently becomes incapable of fulfillment the contract is frustrated.

vi. Supervening Illegality
After its formation a circumstance arises which renders its further performance illegal e.g. war, change in law

d. Discharge by Breach
Breach of contract by a party thereto is also a method of discharge of a contract because breach also brings to an end the obligations created by a contract on the part of each of the parties. The aggrieved party can sue for damages for breach of contract as per law but the contract as such stand terminated.

A breach of contract may take place when a party
i. Repudiates his liability before performance is due
ii. Disables himself from performing his promise
iii. Fails to perform his obligation

e. Discharge by Operation of law
A contract may be discharged by operation of law in certain cases.

i. Lapse of time
If a contract is made for a specific period then after the expiry of that period the contact is discharged. E.g. partnership

ii. Death
The death of either party to a contract discharges the contract where personal services are involved

iii. Substitution
If a contract is substituted with another then the first contract is discharged

iv. Bankruptcy
When a person becomes bankrupt all his right and obligations pass to his trustee in bankruptcy. But a trustee is not liable on contracts of personal services to be rendered by the bankrupt.

REMEDIES FOR BREACH OF CONTRACT
Whenever there is a breach of contract the injured party becomes entitled for remedies. These includes:-

1. DAMAGES
A monetary *compensation allowed to the injured party of the loss or injury suffered by him as a result of the breach of contract*. The fundamental principle underlying damages is not *punishment* but *compensation*. By awarding damages the court aims to put the injured party into the position in which he would have been had there been performance and not breach and not to punish the defaulter party. As a general rule “compensation *must be commensurate with the injury or loss sustained, arising naturally from the breach” If actual loss is not proved, no damages will be awarded*

CLASSIFICATION OF REMEDIES

(i) Ordinary damages
They are restricted to the proximate consequences of breach of contract and remote consequences are not generally regarded.

(i) Special damages
Damages arising not because of breach of contract, but are those resulting from some peculiar circumstances.

(ii) Exemplary Damages
Arises in breach of promise of marriage to compensate the plaintiff for her injured feelings, but they are seldom granted now in contractual actions, or *where a banker having sufficient funds of his customer does not honors a properly drawn cheque on him, it may*

lead to awarding of exemplary damages, if the customer's reputation has been affected, particularly as a trader.

(iii) Nominal damages
It occurs where the plaintiff has proved a breach of contract without suffering any actual loss.

(iv) Contemptuous damages
Damages awarded by the court when satisfied that the plaintiff should not have brought the action.

(v) Unliquidated damages
Damages assessed by the courts when breach of contract takes place and the innocent party sues the defendant.

(vi) Liquidated damages
Sometimes the parties may themselves in their contract fix the damages to be paid in case either parties commits the breach of contract. If the amount so fixed reflects a genuine pre-estimate of loss likely to result to breach, the innocent party can claim the fixed amount.

Penalty clause
A penalty is sum agreed in a contract to be forfeited on breach of contract. It acts as a security for the performance of the contract.

2. QUANTUM MERUIT
A claim on a quantum meruit in fact is a claim for the value of work done by a party to a contract, whereas a claim for damages is for compensation in respect of loss suffered by a breach of contract.

3. SPECIFIC PERFORMANCE
It is awarded at the discretion of the court to a person who has suffered a legal injury where damages would not be adequate remedy.

Specific performance is usually granted in the following cases
i. Where a contract is for the sale of land
ii. Where the contract is for taking debentures in a company
iii. Where the contract is for the sale of rare goods, which are not easily available in the market, or the value of such could not be measured in money.

Specific performance is not granted in the following cases
i. Where damages would provide an adequate remedy
ii. Where the contract is to render personal services**,**
iii. Where one party to the contract is an infant
iv. Where the contract is to lend money

4. INJUNCTION
An order of the court restraining the doing, continuance or repetition of a wrongful act. It's obtained to enforce a negative contractual term where an order of specific performance would not be available i.e. *where a singer agreed to work only for a certain employer and then in breach of contract, worked for a rival company.*

5. RESCISSION
From legal perspective, rescission of a contract is distinguishable from cancellation of a contract. Rescission reverts the contract to the day it had not been signed as if the contract had not been made. In fact, the rescinded contract becomes a nullity as if it had never existed. As such, it behooves us to ascertain how and when a contract is rescinded and what would be the legal implications of such rescission or lack thereof.

Questions

1. i. Describe the following types of contracts
   a. Void
   b. Avoidable
   ii. Explain four circumstances under which a contract may be rendered illegal
   iii. Explain four ways in which a contract can be discharged (List four methods of discharging contract)
   iv. Explain the following terms as used in the law of contract
   a. Consideration
   b. Voidable contract
   c. Gentlemen's promise
   v. Explain four circumstances under which a contract may be rendered illegal
   .

2 Explain the following remedies awarded to persons due to breach of contract.
   i. Damages
   ii Specific performance

iii injunction

3. a Explain any three ways of executing a contract.

b) Explain three contracts, which must be supported by written evidence in order to be enforced

c) Distinguish between a valid contract and Voidable contract stating the conditions for each

d) Give two examples of void contract

e Give examples, explain the following types of contracts.

i. Contract of record

ii. Contract under deed (specialty contract).

LAWS OF TORTS

Sir F. Pollock has defined a tort as " *" An act which causes harm to a determinate person, whether intentionally or not , not being a breach of duty arising out of a personal relation or contract and which is either contrary to law , or an omission of a specific legal duty or a violation of an absolute right"*

A tort is a civil wrong independent of contract for which the remedy is common law action of unliquidated damages. A civil injury for which an action for damages will not arise is not a tort.

	CONTRACT	TORT
1.	In contract the duties are fixed by the parties themselves	In tort duties are imposed by law e.g. we must not be negligent to others
2..	A contract necessitates privity between, i.e. only the parties to the contract can sue each other	Privity is not needed in tort to maintain an action in tort
3.	In case of contract the duty the duty is owed to definite person or persons	In tort the duty is owed to the community at large
4.	In contract the damages for the breach of it may be liquidated or unliquidated	In tort the damages are always unliquidated i.e. the damages fixed by the court.

It seems that the distinction between the two lies in the nature of the duty that is infringed. In the case of tort the duty is one imposed by the law and is owed to the community at large. In the case of a contract the duty is created by the parties mutually, and is owed to a definite person or persons.

DIFFERENCES BETWEEN A TORT AND A CRIME

	TORT	CRIME
1.	a tort is an infringement of the civil rights belonging to individuals considered as individuals	A crime is breach of public rights and duties which affect the whole community.
2.	In tort the wrong-doer has to compensate the injured party.	In crime he is punished by the state in the interest of the society.
3	. In tort the action is brought in the court by the aggrieved party to obtain compensation	The state counsel in the name of the state conducts the proceedings, and the accused is punished if proved guilty.

ELEMENT OF TORT

To constitute a tort three things must occur:

i. Some wrongful act or omission by the defendant
ii. Legal damage to the plaintiff
iii. The wrongful act must of such a nature as to give rise to a legal remedy in the form of an action for damages

FUNCTIONS OF THE LAW OF TORT

1. **To determine rights between parties to a dispute**
   A party to a dispute may bring an action for a declaration of his rights, and once the court makes a declaration the rights of the parties are determined.

2. **To prevent a continuance or repletion of harm**
   Where the injury complained of is of a continuous nature or likely to be repeated by the tortfeasor, the injured party may be granted an injunction to prevent its continuance or repetition eg in cases of tress pass to land

3. **To protect certain rights recognized by law**
   There are certain rights which every individual is entitled to and which are recognized by law. These rights are protected by the law of torts eg

a person’s reputation or right to good name is protected by the tort for negligence which imposes a duty of care on every other person.

4. **To restore property to its rightful owner.**
   Where property is wrongfully taken away from its rightful owner or otherwise dealt with contrary to his rights, he may seek a restitution of the property or its value since the wrongful act amounts to the tort of tress pass to goods or land.

Legal damages
Any infringement of the plaintiff’s private right or unauthorized interference with his property gives rise to legal damage.

MALICE

Ill will or desire to cause damage to someone . In legal sense , malice means a wrongful act which is done purposefully without having a lawful excuse.In tort the intention or motive for an action is generally irrelevant. The general rule is that a bad intention does not make a lawful action as unlawful and similarly an innocent or good intention is not a defence to a tort.

Bradford Corporation V Pickles (1895)

Wilkinson V Downton (1897)

NATURE OF TORTIOUS LIABILITY

Prof. P.H Winfield assets that “ *tortuous liability arises from the breach of a duty primarily fixed by law, such duty is towards person generally and its breach is redressible by an action for unliquidated damages.”*

Every person is under duty to compensate for his wrongful acts which have resulted in injury to another person. Its this duty to compensate that determines his liability in tort. Generally the plaintiff must prove that he has suffered harm and that there has in consequence been violation of his legal right. Some civil wrong are actionable even if no damage is suffered eg trespass to land. Whether the plaintiff has any remedy in some cases of tort depends on the following two principles of general application.

1. **Injuria Sine Damnum**
   Refers to a situation where a person suffers a violation of his right without actual loss or damages sustained by him. This is especially so in the case of tort which are actionable per se (i.e without proof of any damage) eg trespass to land, libel etc.

   Ashby V White (1703).

   Injuria sine damnum means an infringent of a legal right of the plaintiff without any actual loss or damage sustained by him. In such a situation it is not essential for the plaintiff to prove actual damage suffered by him in order to obtain damages.i.e in cases of assault, battery, false imprisonment, or trespass on land the mere wrongful act is actionable and it is immaterial that the plaintiff has not suffered any damage as a result of it.

2. **Damnum sine injuria**
   Harm without legal injury. Refers to a circumstance where a person has suffered actual harm without violation of his legal right. A person aggrieved in this was has no legal remedy.

   Mogul Steamship Co V McGregor, , Gow & Co (1982).

   Examples Are Loss Resulting From
   1. Ordinary trade competition
   2. Lawful use of one’s own property

1. **Malicious prosecution**
   Where an innocent person is involved in criminal proceedings out of malice by a police officer, he can bring an action against such a police officer for malicious prosecution on his acquittal in the alleged case against him.

2. **Malicious Falsehood**
   When a person makes a deliberate lie about another causing him financial loss can be sued for the tort of malicious false hood

THE FAULT PRINCIPLE

Most torts are based on the fault principle. Under this principle its is necessary to **establish some fault on the part of the wrongdoer** before he can be made liable in tort. A person is said to be at fault where **he fails to live up to some ideal standards of conduct set by law**. Threes elements are relevant in the determination of fault and any one of them may be relied upon**.**

1. **Intention**
   Where a person does a wrongful act desiring that its consequences should follow , he is said to have intended it, and to that extent there is some amount of fault on his part.

2. **Recklessness**
   An act is said to be done recklessly where it is done without caring whatever its consequences might be. Recklessness as such constitute fault on the part of the wrongdoer.

3. **Negligence**
   A person is also at fault where he does a wrongful act negligently i.e. where the circumstances are such that he ought to have foreseen the consequences of his act and avoided it altogether.

GENERAL DEFENSES TO TORT

There are certain justifications which when present will prevent an act from being actionable in the courts. These are:

1. **Volenti Non-Fit Injuria (doctrine of assumption of risk)**
   A person cannot complain of damages resulting from a risk he voluntarily consented to run. i.e. *a wrestler, a surgeon, a footballer or a boxer,* if they incur injury and their opponent played fairly according to the rules of the game, cannot be prosecuted. Before a person could avail himself the protection of this defense, he must prove that the person injured

   a. Knew of the danger involved
   b. Appreciated in all respect
   c. Assumed it voluntarily

2. **Inevitable accidents**
   An inevitable accident which **cannot be prevented by the exercise of ordinary care, caution or skill**. In order to establish the defense of inevitable accident, it is necessary to prove that the alleged accident was not capable of being prevented by ordinary care and diligence.

3. **Act of GOD**
   It's an inevitable accident caused by e**lementary forces of nature, unconnected with human agency.** It happens quite independent of human intervention, and is due to the natural causes such as a *storm, earthquake, lightning* which no kind of human foresight or wisdom can provide against.

4. **Necessity**
   Damages caused deliberately to individuals intended to **prevent a greater evil** or in **defense of the state**. **I**.e. *where a private bridge was destroyed from stopping the enemy invading the country.*

5. **Self Defense**
   Every member has a statutory right to defend himself, property or members of his family against an unlawful harm. But the right must have limits

   a. The force used must not be out of proportion to the harm threatened
   b. The necessity to use such force must be established.

6. **Mistakes**
   It is normally no defense to say that the wrongful act was done by mistake of law, except in certain cases of arrest. Mistake of fact is a defense if **it arises from reasonable suspicion** e.g. *where a police officer arrests a person about to commit a crime or reasonably suspected of a crime that has actually been committed*.

7. **Statutory Authority**
   A government employee or an employee of a local authority does an act, which he is legally obliged to perform under a particular act or bye law. However, when executive officers are vested with special statutory powers, they must exercise strictly in accordance with the provisions of the act, which conferred such powers on them.

CAPACITY OF PARTNERS

As a general rule *all persons are entitled to sue and be sued in tort, but it is subject to several exemptions*. There are certain persons who cannot sue, while there are others who cannot be sued in tort.

(i) The Government

The government proceedings Act (cap 40) provides that the government is subject to all those liabilities in tort to which, if it were a person of full age and capacity. The government is not liable for torts committed by public officers who are appointed and paid by local authorities.

(ii) Foreign Sovereigns and Diplomats

A foreign sovereign is not liable in tort in the courts of law of this country, unless he submits to the jurisdiction of the court, thereby waiving his immunity from legal machinery. Sovereigns are equal as the independent sovereign of the smallest state enjoys the same degree of immunity as the sovereign of the greatest state. I.e. an ambassadors cannot be sued expect in cases in which he submits to the jurisdiction of the local court.

(iii) Corporations

A corporation can sue and be sued in its own name. It can sue for libel or any other wrong affecting its property or business. A corporation is liable for torts committed by its servants and agents, provided a tort is committed in the course of doing an act which is within the scope of the powers of the corporation.

(iv) Trade Unions

Trade unions enjoy special protection. According to **section 23** of the **trade act(cap 233)**, no action shall be brought against a trade union for torts committed by their members or officials acting in furtherance of a trade dispute .The act does not take away the personal liability of an individual who commits a tort on behalf of trade union.

(v) Married Women

At common law as a general rule a married woman is answerable for her wrongful acts, including fraud, and she may be sued in respect of such acts jointly with her husband, or separately if she survives him. Under the **woman's act property ACT 1882**, a married woman shall be capable of being sued by tort in all respect and her husband need not be joined with her as defendant.

(vi) Infants or Minors

As general rule infancy is no defense to an action in tort .Where intentions, malice, or negligence of the wrongdoer form an essential ingredient of tort, the age of infant is relevant.

(vii) Liability of Parents

A father is not liable for the torts committed by his children unless he authorized the tort or if the tort was occasioned by his negligence.

(viii) Judges and Magistrates

Under section 6 of the judicature Act 1969 no action lies for acts done or words spoken by a judge or a magistrate in the exercise of his judicial duties, even if the acts or words are not done or spoken in the honest exercise of his duties.

(ix) Persons of Unsound Mind

A person of unsound mind is generally liable for his tortes e.g. where an insane commits an assault, he shall be liable in trespass.

JOINT FOR TORTFEASORS

When two or more persons assist, or counsel or join in the execution of a wrongful act they are known as joint tortfeasors.

1. Agency

When one person engages another to carry out a certain act, which turns out to be a tort, the principal and the agent may be sued jointly

2. Joint action where two or more persons combine together to commit a tort.
3. Vicarious liability this liability arises from the relationship of *master* and *servant* when the tort is committed by the latter in the course and scope of his employment

VICARIOUS LIABILITY

A liability of one person on behalf of the other person. However a person may assume responsibility for a tort or wrongful acts committed by another person e.g. *an employer may be held responsible for the torts of his employee.* Liability in this case is categorized as vicarious liability

i. There must be master/servant relationship between parties concerned
ii. The servant must have been acting in the course of his employment at the material time

Who is a servant?
A person employed under a contract of service and acts on the orders of his master. Trhe master therefore controls the manner in which the servant's work is done.

Independent contractor
An independent contractor is employed under a contract for services and himself determines the manner in which the work in question is done. An independent contractor therefore doesn't act on the orders of his employers and is his own master as regards the execution of the work he is employed to do.

Course of Employment
An act is said to have been done by a savant in the course of employment where its proved to have been authorized or sanctioned by his master. *Thus, where the master authorizes his servant to do a wrongful act, he will be responsible for the consequences of the servant's wrongful acts. Where the servant is authorized to do a particular act in a proper manner, but does it in a wrongful and unauthorized manner, the master is still responsible for the consequences of the act.* What is important is the fact that the act was authorized by the master. Once master's authority is proved its considered as the responsibility of the master and he is liable for this tort.

STRICT LIABILITIES

Strict liability is an exception to the fault principle. It's a liability without fault. Once the plaintiff is proved to have suffered damage from the defendants wrongful act, the defendant is liable notwithstanding with there may have been no fault on his part. In Absolute liability, a particular wrong is actionable without proof of fault on the part of the tortfeasor and in addition there is no defense whatsoever to the action. In strict liability a particular wrong is actionable without proof of fault but some defenses may be available.

Cases Of Strict Liability

i). **The Rule In Rylands**
The person who for his own purposes brings on his land and collects and keeps there anything likely to do mischief if it escapes, must keep it in at his peril and, if he does not do so, is prima facie answerable for all the damage which is the natural consequence of its escape.

Limits of rule
Conditions necessary to be satisfied before the rules can apply.

i. **Non-Natural User**
There must be a non-natural user of land; i.e the defendant must have used his land in a way that is not ordinarily natural. There must be an artificial accumulation of things not naturally found on the defendant's land.

ii. **Need for escape**

There must be an actual escape from the defendants land. Thus, the non-natural user of land must be accompanied by an escape of the thing which is the source of the mischief in question.

iii. Natural user of land

Where there is a natural user of land , the rule does not apply and the defendant is protected against the rule.

iv. **No escape**

Also given as one of the conditions for the application of the rule is the need for an escape.

DEFENSES IN RULE IN RYLANDS V. FLETCHER

The case of **Rylands v. Fletcher** itself suggested three defenses available to a defendant in an action brought against him under this rule

a. **Plaintiff fault**

Where the escape in question resulted from some fault on the part of the plaintiff, the defendant may plead this as a defense to an action brought against him by the plaintiff under the rule. For in this case the plaintiff has himself brought about his own suffering.

b. Act of God

Act of God is also a defense to an action brought under the rule.

c. Act of stranger

Where the escape is caused by the intervention of person over whom the defendant has no control and whose intervention was not foreseeable, this is a defense to an action brought under the rule, particularly where the strangers act was deliberate or intentional.

iii. **Liability of fire**

The liability for fire due to negligence is actionable in tort. It is also a case of strict liability. Similarly if a fire starts without negligence but it spreads due to negligence of a person then that person will be liable for damages caused by the spread of the fire.

iv. Liability for animals

It may arise in both nuisance and negligence. An occupier of land is liable for damage done by his cattle if they trespass on the land of his neighbours and thereby cause damage. Any person who keeps dangerous animals like loin, leopards, dogs etc is liable strictly for any injury by such animals, even in the absence of negligence.

SPECIFIC TORTS

Civil wrong committed by different persons.

1. TRESPASS

There are three types of trespass

i. **Trespass To Land**

Plaintiff's possession of land is wrongfully interfered with. It's the fact of possession rather ownership, as such the plaintiff may be anyone in possession of the land, whether he is the owner or a tenant.3

Wrongful interference with possession in relation to the plaintiff's land may take the form of wrongfully entering upon it or wrongfully remaining on it or wrongfully placing or projecting any material object on it

a. **Trespass By Wrongful Entry**

This is committed where there is physical contact with the plaintiff land, however slight. It includes acts like encroaching on the land, walking through it without authority, sitting on the plaintiff's fence or putting a hand through his window.

Also an abuse of right of entry may constitute a trespass e.g. a person authorized to enter premises for the purpose of repairing them becomes a trespasser when he picks and eat fruits on the premises without authority

b. **Trespass By Remaining On Land**
A person who having been originally authorized to enter upon land is subsequently asked to leave; such person becomes a trespasser when he fails to leave the land within a reasonable time

c. **Trespass By Placing Things On Land**
Committed by him who places any material things on the plaintiff's land or who allows such, material thing or noxious substance to come into contact with the plaintiff's land.

Trespass is similar to nuisance but the two are different in the following respect

a. In trespass the injury is direct since it affects the plaintiff's possession but in nuisance the injury is indirect because it is the plaintiff's comfort and convenience in the use and enjoyment of his land that is affected rather its possession.

b. Trespass relates to possession of land nuisance relates to the user or enjoyment of land; in trespass the plaintiff's possession is at stake while in nuisance it's the use and enjoyment of the land that is at stake

c. Trespass is actionable per se, whereas nuisance just like negligence is only actionable upon proof of damage.

Continuing Trespass

As long as the act consisting a trespass remains, without the trespasser doing anything to avoid it, there is said to be a continuing trespass. This arises where, for instance the trespasser chooses to remain on the plaintiff land and fails to remove therefrom any matter. Continued trespass may result the plaintiff to invoke actions against the defendant, because as long as the trespass continues, the plaintiff continues to suffer and there is always a fresh cause of action.

Trespass by Relation

The plaintiff possession of land relates back to the time when he first acquired a right to posses the land and he is deemed to have been in possession of it from that time. A possessor of land may therefore sue any person who committed an act of trespass on the land even before he himself took actual possession of it.

Is Trespass a Crime

Trespass to land is normally a civil wrong but it may give rise to criminal proceedings in some cases. The Trespass Act (Cap.294) state that a trespasser can be prosecuted criminally if he enters on somebody's land with an intent to steal goods or commit any offence. Otherwise a trespass to land is a tort and it is actionable per se i.e. without proof of special damages

DEFENSES

a. **Prescription**
Land acquired by possession is also said to have been acquired by prescription. The new owner may plead title by prescription as a defense to an action brought by the previous owner to recover the land. A defendant may also plead prescription as by proving a right of common grazing or right of way over the plaintiff's land

b. **Act of necessity**
The necessity may be pleaded as a defense to an action of trespass to land e.g. entry to put out fire for public safety

c. **Statutory authority**
Where the authority is conferred by law whether by statute or by court order this is also an available defense

d. **Entry By License**
An entry authorized or licensed by the plaintiff is not actionable in trespass unless the authority or license given is abused.

REMEDIES

a. **Damages**
The plaintiff may recover monetary compensation from the defendant, the extent of which depends on the effect of the defendant's act on the value of the land in question

b. **Ejection**

Where a person wrongfully enters or remains on another 's land he may be ejected using reasonable force, unreasonable force may entail liability for assault. An ejectment may also be based on a court order

c. **Action For Recovery Of Land**

The plaintiff may bring an action to recover his land from the defendant where there has been a wrongful dispossession

d. **Injunction**

An injunction may be obtained to ward off a threatened trespass or prevent the continuance of an existing one

e. **Distress Damage Feasant**

In the case of trespass by placing things on land the plaintiff has a right to detain the defendant chattel or animal, which is the cause of the trespass in question

TRESPASS TO THE PERSON

Like trespass to land, trespass to the person is three-fold. It consists of assault, battery, or false imprisonment.

a. **Assault**

A person commits an assault when he threatens to use force against the person of another, thus putting the other person in fear of immediate danger.

b. Battery

It's defined as the tactual application of force against the person of another without lawful justification. Acts can only amount to a battery if it is intentional and voluntary. i.e punching plaintiff nose, smacking his buttons or slapping him.

c. False imprisonment

This is where a person is totally deprived of his freedom without lawful justification, whether physically or otherwise. i.e locking a person in a room whose only exit is the locked door, or telling a person that if he leaves he will be shot using a gun, which he knows, is physically present at that time.

DEFENSES

a. **Parental authority**

A parent has a right reasonably chastise or discipline his children. This means that where a parent beats his child or locks him up in room for some time by way of reasonable chastisement, he cannot be sued for battery or false imprisonment.

b. **Judicial authority**

An act done under order of court is not actionable as a trespass .If a judge orders corporal punishment of a number of strokes, no action for battery can be brought against him or the person administering the strokes.

c. **General authority**

The defendant may also rely on the general defenses already considered. Self-defense is a particularly viable defense to assault and battery.i.e a patient cannot sue a surgeon for trespass.

REMEDIES

a. **Damages**

An award of damage is obvious and usual remedy. A damage awarded depends on the circumstances of each case.

b. **Habeas corpus**

It's a remedy to false imprisonment. A court may order the release of a person if it appears there are not sufficient grounds for detaining him.

TRESPASS TO GOODS

This is committed when a person who directly and intentionally interferes with goods in the possession of another without lawful justification. A plaintiff may be a person either in possession or entitled to immediate possession of goods, the wrongful interference may be constituted by removing the goods from one place to another.

Points to note:

i. The interference must be direct

ii. Its possession rather than ownership that determine the plaintiff cause of action.
iii. The defendant act must be deliberate or intentional.

Conversion
It's based on possession and is actionable only if the defendant's act was intentional but not where the defendant was merely negligent. Constitutes the dealing of goods with a manner that is inconsistent with the rights of the person in possession of the goods entitled to their immediate possession .i.e. where A intentionally sells B'S goods to C without any authority from B.

Detinue
Detinue is committed where goods are wrongfully withheld or detained from a person entitled to their immediate possession, including a withholding by a bailee from a bailor. Detinue has an advantage, in that it entitles the plaintiff to have goods specifically delivered to him and it is only where this is not feasible that damages may be awarded instead.

DEFENSES
Where the defendant has a right to possess the goods he has a good defense

REMEDIES
If the plaintiff succeeds he can recover either the goods or their value. He can claim the full value of goods and damages for any inconvenience suffered by him. The court may also order at its discretion specific restitution of the goods if the award of damages is not an adequate remedy

2. NUISANCE

This tort is committed whenever a person is wrongfully disturbed in the use and enjoyment of his land. It arises from the duties owed by neighboring occupiers of land. Properties should be used **in** a way that they do not affect the neighbor's use of his own land.

Types of Nuisance

a. Private nuisance

Committed when person's private rights in his land are wrongfully disturbed, whether physically or by allowing noxious things to escape on to his land.

b. Public Nuisance –(Also known as **common sense**.)
Its affects the comfort and convenience of a class of persons but not necessarily every member of the public .i .e a *car releasing a large quantity of petrol smoke on the highway.*

Continuing Wrong
Nuisance is actionable only when is a continuing wrong. A disturbance or inconvenience on an isolated occasion will not ordinarily be treated as a nuisance.

The Plaintiff In Nuisance
Since private nuisance generally covers only damage to property or its enjoyment, the plaintiff in an action brought to remedy a nuisance must show that he has title to, or at least some interest in the property which is alleged to have been damaged or whose enjoyment is alleged to have been affected by the nuisance. Otherwise, the action will not succeed.

The Defendant Is Nuisance
A person liable in nuisance is primarily the occupier of the premises, which are the source of the nuisance, including a tenant; liability does not necessarily fall on the owner of the premises, although he too may be successfully sued.

Adapted Nuisance
Where a nuisance is caused by one person but is adapted by another, the person so adapting it is liable and cannot plead that he did not create the nuisance.

DEFENSES

i. **De Minimis Non Curat Lex (Or Triviality)**
A person aggrieved by a nuisance can only maintain an action where the damage suffered by him is substantial.

ii. **Reasonable Use Of Property**

If the defendant can prove that the nuisance complained of resulted from a reasonable use of his property, this will to some extent afford him a defense.

iii. **Prescription**
A prescription right is acquired after two years. Thus where a nuisance has been committed on the plaintiff landform a continuous period of twenty years, the plaintiff cannot thereafter maintain an action in respect of the nuisance.

iv. Public Benefit
Public benefit, as a defense to an action brought to remedy a nuisance, has only a limited application. Private rights must be respected.

v. General defense
Some of the general defenses already discussed e.g. volenti non-fit injuria may be relied upon by a defendant in an action brought against him in respect of a nuisance.

REMEDIES

i. Abatement
This remedy is by way of self-help. A person aggrieved by a nuisance is at liberty to abate it. But the act of abatement must be peaceful. The aggrieved party might in an attempt to abate nuisance, render himself in nuisance instead.

ii. **Injunctions**
It's a remedy granted to the plaintiff to restrain the defendant from committing the nuisance. Awarded where the nuisance already exists or is impending.

iii. **Damages**
The plaintiff is entitled to full compensation in monetary terms, so as to make good the damages caused by the defendant nuisance as far as money can do it.

3. NEGLIGENCE

The omission to do something, which a reasonable man, guided upon those considerations which ordinary regulate the conduct of human affairs, would do, or doing something, which a prudent and reasonable man would not.

As a tort, negligence consists of the following **elements**

i. The duty of care
Duty of care is taking reasonable care to avoid acts or omission reasonably foreseeable as likely to cause injury to your neighbour

ii. **Breach Of The Duty Of Care**
The duty of care is said to be breached where the defendant fails to exhibit that standard of care required of him. The defendant is said to have to have breached his duty of care where a reasonable man in his position would not have done what he did

iii. Injury To The Plaintiff
The plaintiff further proves that he has suffered damage, or injury, as a result of the defendant s breach of his duty of care. The plaintiff can only recover damages for injuries suffered if a reasonable man in the defendants' position ought to have foreseen that his act or omission would result in injury to the plaintiff.

Cases
On negligence generally
The wagon mound (no.1) 1961
The wagon mound (no.2) 1967
Fatal Accidents where the victim of negligence is dead

Proof Of Negligence
The proof of negligence lies on the plaintiff. He must prove that the defendant owed him a duty of care. That the defendant has breached that duty and that he (the plaintiff) has suffered in consequence.

RES IPSA LOQUITUR

Ffact speak for themselves. This is so where an accident occurs in circumstances in which it ought not to have occurred e.g. *where a crane suddenly collapse*

In all cases the accident ought not to occur unless there was negligence on the part of the defendant. An explanation from the defendant is therefore called for. A provision burden is put on the defendant to give a reasonable explanation as to how the accident might have occurred. **Res ipsa loquitur** is a rule of evidence not of law. It merely assists the plaintiff in proving negligence against the defendant. But before it can be applied three conditions must be satisfied:-

i. The thing inflicting the injury must have been under the control of the defendant or someone whom the defendant exercise control
ii. The event must be such that it could not have happened without negligence
iii. There must be no evidence or explanation as to why or how the event occurred

Contributory Negligence

Contributory negligence means any act or conduct of the party injured, which may have contributed to the injuries he received.

Where the plaintiff partly contributed to his own injury in addition to the defendant's act the plaintiff thereby lost his right of action and could not sue the defendant.

Contributory Negligence Of Employees

The factories Act (cap514) makes provisions relating to the guarding of dangerous machinery .If a worker is injured because a machine is not properly guarded, he may sue his employer , but for breach of statutory duty or negligence. The Act imposes many duties on employers but the breach of these does not always give a civil remedy. Any omission by the employer will render him liable to his employees, though he can plead contributory negligence as defense

Negligent Misstatement

Every person is liable of negligent misstatement as opposed to before where a person was only liable of negligent acts.

OCCUPIERS LIABILITY

The occupier's liability to a person coming to his premises was based at common law until the occupier's liability Act 1957 was passed in England. In Kenya the law relating to occupiers liability has been contained in 'the *occupiers' liability Act (Cap. 34).* The main provisions of this act are given below

i. The visitors are persons who have express or implied permission to enter or use the premises of a person. It means they are lawfully on the occupiers premises.

ii. The occupier of premises owes " *the common duty of care* to all his visitors. The common duty of care is also defined as *a duty to take such care as in all the circumstances of the case is reasonable to see that the visitor will be reasonably safe in using the premises for the purposes for which he is invited or permitted by the occupier to be there.*

iii. the duty concerns *danger due to the state of premises or to things or omitted to be done on them e.g. warning about slippery floor.*

iv. The occupier is not liable for negligence of the independent contractor, provided he is satisfied that the contractor was competent and that the work had been properly performed

v. The common duty of care does not impose on an occupier any obligation to a visitor who has willingly accepted a risk.

vi. The circumstances relating to the duty of care should also consider the following

   a. An occupier must be prepared for children to be less careful then adult
   b. An occupier may expect that a person in the exercise of his calling will appreciate and guard against any special risks ordinarily incident to it, so far as the occupier leaves him free to do so.

4. DEFAMATION

Defamation is constituted by the publication of a false statement, without justification, which tends to lower the plaintiff's reputation in the estimation of right thinking members of society or to injure him in his office, trade or profession, or which causes him to be shunned or avoided. No person should therefore publish a false statement, which adversely affects the reputation of another, if such statement is without justification; or he may do so only at the risk of incurring liability for defamation. Instances of defamation are given in the cases cited below.

Elements Of Defamation

1. The defendant must have made a false statement**.** This is important because no action may be maintained by the plaintiff on the basis **of a** true statement
2. The statement must be defamatory. This means that it must be such its effect is to arouse odium, contempt or ridicule from right-thinking members of society.
3. The defamatory statement must refer to the plaintiff. The plaintiff must prone that the statement complained of refers to him
4. The defamatory statement must be published .A cause of action accrues to the plaintiff only upon publication of the defamatory statements.

TYPES OF DEFAMATION

a. Slander

Defamation by word of mouth

The exception

i state imputes a criminal offence punished by imprisonment
ii. Statement imputes a contagious disease
iii. Statement imputes unchastity on a woman
iv. Statement imputes incompetence on the plaintiff in his trade occupation or profession

b. Libel

Defamation in a permanent or non-transient form including written matter like or an article, scandalous pictures, films, or new tapes

Defamation of a Group (or class)

Where a defamatory statement is made of a large group of persons its not actionable

Repetition

Every repetition of defamatory matter constitutes a fresh cause of action and anyone who repeats it may be sued.

Defamation of deceased Persons

It is not a tort but the person responsible may be a prosecuted criminally it is intended to hurt the feelings of the deceased family or near relations

Defamation by Innuendo

The words used may not be clearly defamatory but they could have a defamatory meaning in the light of specific facts known by some persons

DEFENSES

i. **Justification**

Truth or justification may be pleaded as a defense where the matter complained of is true and the defendant can prove that it is true,. Incase of the defendant fails to establish the truth of the matter, the case against him becomes more serious and aggravated damages may be awarded against him

ii. **Fair comment**

Fair comment on a matter of public interest is another defense available to the defendant in defamation. There must be facts truly stated on the basis of which a comment is made, and the facts must not be mixed up with the comment in such a way that it's difficult to distinguish the one from the other

iii. **Absolute Privilege**

Certain matters are not actionable at all in defamation, and are said to be absolutely privileged. They include statements made by judges or magistrates in the course of judicial proceedings as well as those made by members of parliament in the course of a parliamentary debate, and also communications between spouses.

iv. **Qualified Privilege**
When the person who makes the communication has a moral duty to make it to the person to whom he does make it and the person who received it has an interest in hearing it

v. **Apology or offer of Amends**
The defendant is at liberty to offer to make a suitable correction of the offending statement coupled with an apology and or notice to persons to whom the statement has been published that the words are alleged to be defamatory of the plaintiff. Such offer may in appropriate circumstances be relied upon as a defense. But an apology is effective only where it's genuine not where it's equivocal

REMEDIES AVAILABLE FOR TORT OF DEFAMATION

i. Damages
The plaintiff is entitled to recover damages for injury to his reputation and also to his feelings; injury to feelings is usually assumed and the plaintiff should recover damages for mental pain and suffering and anxiety arising out of his fear of the consequences of the publication, in addition to compensation for the insult suffered and the pain of the false accusation as well as the irritation and annoyance experienced as a result of the defamation.

ii. Apology
An apology where it is not equivocal has the effect of correcting the impression previously made by offending statement about the plaintiff.

iii. Injunctions
The court may also grant an injunction i.e. to issue the orders for restraining the publication of a libel. But the plaintiff must first prove that the defamatory statement is untrue and its publication will cause irreparable damage to him.

Limitation of Action

The limitations of Actions Act (cap .22) contain the period limits within which the actions in tort can be brought. This Act provides.

i) An action in tort must be brought within three years of the cause of action occurring. Where the damage arising from the tort does not become immediately apparent, the time begins from the date of the damage accruing.

ii) Where the plaintiff is under disability (such as infancy or insanity) at the time when the tort is committed, time does not begin to run until disability ceases.

iii) Where the tort consists of continuing wrong, anew cause of action arises daily from when the tort is committed, and the plaintiff can recover damages for any damage suffered within the limitation periods.

iv) Where the right of action is based on fraud, limitation will run from the date of discovery, or from the time the plaintiff could have discovered it within reasonable ordinary diligence.

v) An action to recover a contribution from a joint tortfeasor under the LAW Reform (cap.26) cannot be after the end of two years from the date of which that right accrued to the first tortfeasor.

vi) Where there have been successive conversions of goods, the rights of the owner to recover his goods cease after the end of three years from the date of first conversion.

Questions

1. . Explain the elements of a tort of negligence
2. a. Explain three differences between a tort and a crime
   b. Explain the elements of the tort of negligence
   c. Define defamations as applied to the law of tort.
   d Outline three differences between "libel" and "slander"

3. Explain the principles of vicarious liability
4. Explain THREE defenses available to a person who is being sued in nonsense.
5. Explain TWO kinds of trespass to a person
6. Outline THREE differences between contract and tort
7. List four general defenses of a tort

NEGOTIABLE INSTRUMENTS

A **Negotiable Instrument** is a: (1) **written** instrument,(2) **signed** by the maker or drawer of the instrument,(3) that contains an **unconditional** promise or order to pay(4) an **exact sum** of money (with or without interest in a specified amount or at a specified rate) (5) **on demand** or at an **exact future time** (6) to a **specific person**, or to **order**, or to its **bearer**.

TYPES OF NEGOTIABLE INSTRUMENTS.

1. **Draft:**
   An unconditional order to pay by which the party creating the draft (the ***drawer***) orders another party (the ***drawee***), typically a bank, to pay money to a third party (the ***payee***) -- e.g., a **check**.

   - **Check:** A draft ordering a drawee bank and payable on demand.
   - **Time Draft:** A draft payable at a time certain.
   - **Sight Draft:** A draft payable on presentment.
   - **Trade Acceptance:** A draft that is drawn by a seller of goods ordering the buyer to pay a specified sum of money to the seller, usually at a specified future time.The buyer ***accepts*** the draft by signing and returning it to the seller.

2. **Promissory Note:**
   A written promise made by one person (the ***maker***) to pay a fixed sum of money to another person (the ***payee***) on demand or at a specified future time.

3. **Certificate of Deposit:**
   A note by which a bank or similar financial institution acknowledges the receipt of money from a party and promises to repay the money, plus interest, to the party on a certain date.

NEGOTIABILITY: SIGNATURES

- For an instrument to be negotiable, it must be signed by the maker/drawer.
- A signature may be any symbol made by the maker or drawer with the present intention to be a signature.

NEGOTIABILITY: UNCONDITIONALITY

1. **Promise or Order:** A negotiable instrument must contain an express **order or promise** to pay.
   - A mere acknowledgment of a debt is not sufficient without evidence of an affirmative undertaking on the part of the debtor to repay the debt.
   - The exception to this rule is a Certificate of Deposit.

2. **Unconditionality of Promise or Order:** A promise or order is conditional (and, therefore, not negotiable) if it states:

(1) An **express condition** to payment,
(2) That the promise or order is **subject to or governed by** another writing, or
(3) That the rights or obligations with respect to the promise or order are **stated in** another writing.

NEGOTIABILITY: A FIXED AMOUNT

1. The fourth requirement of negotiability is that negotiable instruments must state a **fixed amount** of **money.**

   (a) **Fixed amount** means an amount that can be determined from the face
   of the instrument.

   (i) This requirement applies only to the principal amount of money.
   (ii) The instrument can reference an outside source to determine the rate of interest.

2. **Payable in Money** means the medium of exchange authorized or adopted by the United States or foreign government as part of its currency.

NEGOTIABILITY: TIME FOR PAYMENT

1. **Payment On Demand:** An instrument is payable on demand, “at sight,” or “upon ***presentment***” if it is subject to payment immediately upon being presented to the payor or drawee.

2.

(a) If no time for payment is specified, a negotiable instrument is **presumed** to be payable on demand.

3. **Payment at a Definite Time:** An instrument is payable at a definite time if it states that it is payable (i) on a **specified date**, (ii) within a **definite period** of time, or (iii) on a date or at a time **readily ascertainable** at the time the promise or order is made.

(a) Such instruments are frequently referred to as **time instruments**.

(b) **Acceleration Clause:** A clause that permits a payeeor other holder of a time instrument to **demand payment of the entire amount or balance due**, with interest, if a certain event occurs, such as default in the payment of an installment when due.

(c) **Extension Clause:** A clause in a time instrument that permits the **date of maturity** to be extended.

NEGOTIABILITY: PAYMENT TO WHOM

1. **Order Instrument:** A negotiable instrument that is payable "to the order of" an identified person or "to" an identifiable person "or order."

2. **Bearer Instrument:** A negotiable instrument payable "to bearer" or to "cash," rather than to an identifiable payee.

(a) **Bearer:** The person possessing a bearer instrument.

(b) Any instrument payable to the following is a bearer instrument:

(i) "Payable to the order of bearer";
(ii) "Payable to Jane Smith or bearer";
(iii) "Payable to bearer";
(iv) "Pay cash"; or
(v) "Pay to the order of cash."

FACTORS NOT AFFECTING NEGOTIABILITY

Certain ambiguities or omissions, resolvable by applicable U.C.C. provisions and/or rules, will not make an instrument non-negotiable. For example:

(1) The fact that an instrument is **undated** does not affect its negotiability, unless the date of the instrument is necessary to understand the payment term;

(2) **Postdating** or **antedating** an instrument does not affect its negotiability;

(3) **Interlineation** and other written or typewritten **alterations** need not affect negotiability; n As with other contract terms, handwritten terms "trump" typewritten terms, and typewritten terms "trump" printed terms.

(4) **Words "trump" figures**, unless the words are ambiguous in and of themselves;

(5) If the instrument fails to specify the applicable interest rate, the **judgment rate of interest** (defined by state statute) becomes the interest rate on the instrument.

TRANSFER OF INSTRUMENTS

1. **Assignment:**
Under general contract principles, a negotiable instrument may be transferred to an assignee, who then holds the instrument with all the rights of the assignor.

2. **Negotiation:**
Transfer of an instrument in such a form that the transferee becomes a ***holder***, who has at least the same rights in the instrument as the transferor, and may have more rights than the transferor.

(a) Negotiating Order Instruments:
An order instrument may be negotiated by delivery with any necessary **indorsements.**

(b) **Negotiating Bearer Instruments:**

Unlike an order instrument, a bearer instrument need not be indorsed to transfer the payee’s rights to the transferee. All that is required is **delivery** to the new bearer.

INDORSEMENTS

Indorsement: A signature, with or without additional words or statements (e.g., “for deposit only,” “payable to Jane Smith,” “payable from acct. # 000001,” etc.), made by the ***indorser*** in order to transfer his or her rights to the ***indorsee***.

1. **Blank Indorsement:** An indorsement that **specifies no particular indorsee** and can consist of a **mere signature**.
2.
3. **Special Indorsement:** An indorsement that indicates the specific person to whom the indorser intends to make the instrument payable -- i.e., the indorsee.
4.
5. **Qualified Indorsement:** An indorsement which **disclaims any contract liability** on the instrument (e.g., “without recourse”).
6.
4. **Restrictive Indorsement:** Any indorsement on a negotiable instrument that requires the indorsee to comply with certain instructions regarding the funds involved. **Indorsement for Deposit or Collection:** *“For deposit only.”*

QUESTIONS

11. Explain TWO provisions of the Kenya limited act.

CHAPTER 8. WAGES AND WORKING CONDITIONS

WAGE
These are the payments made by an employer to the efforts put in by the workers towards production. A wage determines the standard of living and it should represent a fair return for the effort of the worker and also wages should be able to satisfy the primary and secondary needs of the worker. They should be enough to provide him a reasonable standard of living

WAGES PAYMENT AND CONTROL
The system of wages is of great importance as it affects every employee in an organization. It also forms the biggest element in the cost of production. It's therefore essential to keep accurate records and controls over the payment of wages. In any case state laws require all employers to keep detailed payroll records. Time records must be maintained, employee earnings and deductions must be recorded, payroll cheques must be prepared and tax reports submitted

Characteristics of a Good wage System

i. A good wage system should be acceptable to both employees and management
ii. It should guarantee a minimum wage to the employee
iii. It should provide a scope for employees to get reward for their additional or extra effort
iv. It should be consistent and should not be altered frequently
v. Should believe in equal work and equal pay
vi. The system should be simple and understood by all concerned
vii. Proper encouragement should be given to utilize the full potential of employees
viii. Should make the work challenging and interesting

TYPES OF RENUMERATIONS

i. Wages
Payment made by the employer to employees usually monthly for work performed or services rendered. Wage earners are paid on specified hourly basis on work performed. He has the maximum number of hours, usually 40 hours, he works in a week. Anything over that limits is considered overtime pay on weekends and in public holidays. This renders the calculations of wage more complex than salaries. The term wage is commonly used when referring to workers of a factory

ii. Salaries
Payments made or received by a worker usually monthly, for regular employment on a yearly basis. He is paid one twelfth of his annual pay at the end of each month. In most cases salary earners are not paid overtime. The term salary refers mostly to executives, supervisors' department heads pay.

iii. Allowance
An amount of money given or allotted usually at regular intervals for a specific purpose.

iv. Bonus scheme
This may be extra payment usually paid to executives who receive no overtime.

v. **Unions and management agreements** BILATERAL negotiation between the labour union and the management to reach an agreement is an important periodical activity in an organization, and is sanctioned by the law

vi. Commission
Reward earned by agents for services rendered. Such agents are brokers, salesmen etc

COMMON REMUNERATION SYSTEMS

TYPES OF WAGES

There are basic methods of wage payment

1. Time Rate

Wages are paid to the employee based on the time for which he works. The wage rates are predetermined in terms of Rs. Per month. Rs/day of employment. In this system the workers are paid on time they work irrespective of the output. This system is applicable where output is not quantifiable and its not the criteria of payment where work is of repetitive type

Advantages

i. System is easy to understand and simple to operate
ii. Reduces the problems of industrial relations
iii. The quality of the work is maintained, as employees are not in a hurry to increase quantity
iv. The workman can show his efficiency and workmanship without loss to himself
v. There is a scope for improvement in work methods

Disadvantages

i. Does not provide any incentive to ambitious and more efficient employees
ii. The output will be lowered in the absence of stick supervision
iii. The basis for wage is time and not the output or efficiency. So it happens that less efficiency workers are paid equal to efficient workers
iv. Employer will gain or loose by increase or decrease in output

2. Piece Rate

Wages are paid to the employees in relation to the output produced. This method is very convenient where each individual worker is capable of performing his work without any dependence on the other individual and the output produced will be quantifiable. This method can be applied where output is standardized. The work is of repetitive nature

Advantages

i. . it provides incentives to efficient workers
ii. Cost of supervision is low compared to time based system
iii. Higher speed increases the production rate and hence reduces the cost per unit
iv. Increases the utilization of production facilities
v. Workers innovates new ways and methods of doing the work in order to reduce the time per unit
vi. Motivates workers to produce more

Disadvantages

i. Workers in order to increase their wages through faster working, may neglect the quality
ii. Because of speed, workers may be prone to accidents as its possible that he may neglect precautions and safety measures
iii. The security for the workers is low and this may seriously punish the aged and inefficient workers

3. Commission and Target Bonuses

Conditions Of Employment

i. Hours of work/over time
ii. Holidays
iii. Sickness/absence procedures
iv. Fringe benefits
- Direct benefits
- Indirect benefits

4 Flat Rates

Flat rates are the wages where a worker accepts a certain work regardless of the time it takes.

5. Commission

Reward earned by agents for services rendered . Such agents are brokers, salesmen etc

WAGES SYSTEM

A wages system depends upon the size of the business. In a small business one clerk may distribute wages to staff, while in a larger enterprise a payroll will be prepared. A wages system includes the following:

1. Giving all employees a pay number which could be used as a means of identification, and as a check against fraud
2. Checking on attendance and time cards
3 certificate of attendance and performance of staff by each section/department head
4. Calculation of gross pay
5. Entry of deduction from gross salary
6. Calculation of net pay
7. Preparations of pay slips
8. Preparation of tax record cards
9. Preparation of cheques or credit or credit slips
10. Putting money into envelops
11. Paying income tax to the income tax department

Dummy wages

Dummy wages refer to the payment of money to non-existent workers entered on the pay-roll with false names. It is common method of embezzling funds from firms. Such embezzlement can avoided can be avoided by:

a. Checking the names on the pay-roll with the staff records
b. Undertaking an internal audit at regular intervals
c. Obtaining a signature for all wages paid out.
d. Paying by cheque or credit transfer

Where wages are paid on cash basis and have to be collected from the bank it is essential that all possible precautions should be taken such as varying the routes, avoiding careless talk, drawing wages during normal working hours, using different vehicles form time and so on. It is also important to make sure that cash in transit is insured for and the use of the available security services is very important.

MECHANISATION OF WAGES SYSTEM

The following machines and equipment are used in connection with wages.

a. Time recorder for recording time and attendance
b. Calculation machines and adding machines for computation of wages.
c. Typewriters adding/listing machine and addressing machines for preparing pay-roll information such as calculating, gross pay, deductions and calculating net pay
d. Cheque writing or cheque signing machine for crawing and getting wage cheques signed
e. Note counting and coin counting machine for checking cash in bank and allocating exact amount to each group of wage clerks.
f. Coin sorting machine for placing money and pay slips into pay envelopes

MAJOR TYPES OF EMPLOYMENT AND THE IMPLICATIONS OF EACH

Casual Employment

- Engaged and paid on a daily basis
- Suitable for companies with seasonal business patterns
- Casual employees are not entitled to many of the usual rights and benefits of employment

Fixed –Term/Temporary Employment

- By oral or written agreement, the employee is engaged for a fixed period on agreed terms
- Suitable for companies with seasonal business patterns or jobs for limited periods
- Contract can be renewed
- During the contract period, the employee is entitled to all rights and benefits of employment, and where agreed on, may be paid gratuity at the end of his contract.
- Statutory deductions (PAYE, NSSF and NHIF) should be made and remitted

Permanent Employment

- Employment contract or Offer Letter sets the duration of employment to a set retirement age
- Employee is entitled to all statutory rights and benefits as well as those put in place by employer either voluntarily or under a Collective Bargaining Agreement

Probation

- Prospective employee is put on a job and ability and suitability are assessed. If the employer is satisfied, the employee can be confirmed to the position
- During the probation period, person is not entitled to the usual legal rights and benefits of employment such as leave and off days
- Statutory deductions (PAYE, NSSF and NHIF) should be made and remitted

IMPORTANCE OF EMPLOYMENT CONTRACTS AND OTHER RECORDS OF EMPLOYMENT

- Statutory requirement. The **Employment Act (Chapter 226**, Laws of Kenya) requires that contracts for a period of six months or more are reduced into writing and be signed by the employee
- Under the **Employment Act (Cap 226**), employers are obligated to maintain Employee Registers with a list of employees and terms of employment. Penalty for entering false information on Employment Register is Ksh 1,000/= or 6 months imprisonment or both
- Other records employers should maintain for all employees include Casual **Workers Employment Cards, Employee Attendance Registers** and **Accident Registers**
- Contracts and records can help to resolve labor disputes or industrial accident claims

TERMS OF EMPLOYMENT CONTRACTS

- Basic terms are negotiated and can be expressly agreed or implied
- Implied terms to an employment contract are imposed by Acts of Parliament and any rules and regulations made thereunder , e.g. Employment Act (Cap 226), Regulation of Wages and Conditions of **Employment Act (Cap 229), Factories Act (Cap 514), Workmen's Compensation Act (Cap236)**
- Other terms are based on common law, and company/industry practices
- Where employees are members of a registered trade union, their terms of employment may from time to time be influenced by **Collective Bargaining** Agreements between the employer and the union representing employees
- An employment contract cannot purport to deny **the employee rights that are granted by law or by a Collective** Bargaining Agreement. These even when absent in an employment contract constitute implied terms to the contract

Determination of Wages and Salaries

- Minimum wages and conditions of employment for certain industries are imposed by the Government under the Regulation of Wages and Conditions of Employment Act (Cap 229)
- Employees are entitled to these minimum wages and conditions of employment even if their contacts of employment state otherwise
- Failing to adhere to guidelines on minimum wages and conditions of employment is a criminal offence. Penalty is Ksh 400/= and payment of the amount that is due the employee (difference between minimum wage and the actual wages)
- In case of payments below minimum wages, legal proceedings against employer can be instituted by a labour officer/inspector
- Minimum Wage Guidelines once set by the Minister are published in the Kenya Gazette and can be obtained at the Government Press at Ksh 200/=
- Where employees are members of a registered trade union, their remuneration is also influenced by Collective Bargaining Agreements between the employer and
- the union
- Negotiation and employer's current practices also determine the upper limit and nature of remuneration. Issues to consider include inflation rates and industry standards
- Payable in cash or kind. There can be fringe benefits such as housing or house allowance, payment for children's education, e.t.c.

Pay As You Earn (PAYE)

- The Income Tax Act places on employers an obligation to deduct and remit monthly, income tax for resident employees earning above Ksh 10,164/= per month. Employers are required also to tax benefits such as use of company vehicles
- Annual income tax returns should be made by employers for ALL employees whether subject to PAYE or not
- Penalty for failing to comply is 25% of the amount of tax involved or 10,000 shillings, whichever is greater. The employer is also subject to proceedings for the recovery of that tax plus interest thereon at 2 % per month. Directors and managers are also liable to a fine of not less than 10,000 shillings but not more than 200,000 shillings or to imprisonment for a term not exceeding two years or to both

NSSF Deductions

- Registration of Employers and Employees under the National Social Security Fund Act (Cap 258) and the National Hospital Insurance Fund Act (Act No. 9 of 1998) is a statutory requirement
- Standard NSSF contribution is Ksh 200/= deducted from employee's salary, with employer contributing an equal amount. Failure to comply is a criminal offence subject to a penalty equal to five per cent of the amount payable and a fine of up to Ksh 15,000/=

NHIF Deductions

- NHIF contribution is deducted from employee's salary and depends on the salary. Failure to comply is a criminal offence subject to a penalty equal to five times the amount of that contribution

Workmen's Compensation for Death, Injury or Disease in the Course of Duty

- Employers have a duty under both common law and statutory law to provide safe working conditions and to take reasonable care to ensure the health and safety of employees
- Employers with factories should observe the health and safety regulations imposed by the **Factories Act (Cap 514)**
- Compensation for death, injury or disease is based on the Workmen's **Compensation Act (Cap 236)** and Common law
- Compensation under the Act excludes employees (not being manual laborers) who earn over Ksh 33,333/= per month
- Compensation under the Act is calculated on the basis of the workman's earnings and the degree of injury resulting in the employee being incapacitated
- In case of fatal injuries, compensation is paid to dependants
- Compensation can be made under both the Act and Common law. However any compensation received under the Act will be deducted from any damages awarded in a common law suit
- Employers can take insurance cover for payment of claims

Employment Rights and Benefits

- All fixed-term and permanent employees are entitled to a minimum **of 21 working days** per year of leave with full pay
- Where employment is terminated after two or more months of service, payment for one and three quarters days of leave for each completed month of service
- Women are entitled to two months maternity leave with full pay (in lieu of annual leave)
- Sick leave (at least **7 days with full pay**, thereafter **7 days with half-pay)** in each year. This may vary by industry
- Public holidays and weekly rest days (one per week) on full pay in addition to leave days. Where employees work on public holidays they are entitled to payment at **double their wage** rate in addition to their normal wage
- House allowance
- Overtime payments are stipulated for some industries under **Cap 229**
- Severance pay in case of redundancy
- Safe working conditions

Text questions

1. List four types of payments made to employees showing clearly their difference

2 List and describe four statutory deductions on salaries from gross pay

3. Enumerate indicating the purpose of each to an employee, the types of voluntary deductions made from the gross pay.

4. Why is a family relief of great importance to any married employee?

5. What is PAYE? Who pays it? Who benefits from it?

6. Name and describe the three documents used in the payments of wages and salaries.

Why are such documents important?

7. What are the usual methods of payments for the different types of workers?

8. What is a time card? What are the advantages of using the time card?

9. What is a payroll? What is the purpose of a payroll?

10. What are the types of machines used for speeding payroll operations?

11. Suggest some of the precautions that may be necessary in collecting and planning to pay cash to employees

Questions

1 a) Describe the straight time rate method of remunerating labour.

b) Outline THREE disadvantages of piecework system of payment to

i) Employers

ii) Employees

C) Explain THREE factors considered when deciding the most suitable methods of remunerating employees.

d) Explain THRE limitation of job Evaluation

e) Explain the following terms as applied in costing

i Marginal cost

ii. Fixed overhead

2 a) Distinguish between a wage and a salary

b) Highlight THREE advantages of using TIME RATE method of remuneration.

3 a) State four guidelines followed when establishing wages and salaries in an Industry

i. Wages

ii. Salaries

iii. Allowance

4. a) Describe FOUR types of remunerations

b) (i) With aid of hypothetical examples explain two types of bones schemes

(ii) State advantages and disadvantages of each bonus scheme

5 Explain the following remuneration methods

i) TIME RATE

ii) PIECE RATE

6 a) list four advantages of paying salaries by cheque.

b) Explain any four types of information required when computing wages payable to employees in an organization.

c) Explain FOUR non-financial incentives that can be offered to all employee in an organization..

INDUSTRIAL RELATIONS

HISTORY OF TRADE UNION MOVEMENT IN KENYA

Trade Union

A trade union is an association of workers. According to Webb "**A trade union is a continuous association of wage earners for the purpose of maintaining and improving the conditions of their employment"**

A trade union is an organization of workers who come together with an objective of getting higher wages and better conditions of work for its members

Trade Union Regulation

The formation, structure and organization of trade unions in independent Kenya is clearly provided for in various national instruments, namely, *Trade Unions Act, Trade Disputes Act and the Industrial Relations Charter*. The Taskforce on the review of labour law has recently submitted a draft *Labour Relations Act*, which repeals the two former acts when it is adopted.

Formation and Registration

The *Trade Unions Act* provides for the formation of staff associations, employees associations and employees' organizations for the registration and control of trade unions. Under the **Act, section 2 (1)(a) a trade union** is defined as *an association or combination, whether temporary or permanent of more than six persons, whose principle objects are to regulate the relations between employees and employers*. Under this arrangement it is presumed that all employees in both the public and private sector have the freedom to join and form associations of their choice

Objectives

i. To increase the wage of workers
ii. To increase the productivity of workers
iii. To provide appropriate training facilities to workers
iv. To demand better working conditions on behalf of workers
v. To negotiate with employers on behalf of workers
vi. To approach employers to provide workers with housing, medical and other facilities that facilitates workers welfare
vii. To make the arrangements for providing educational facilities to workers children
viii. To help and provide facilities to take care of workers during sickness and unemployment
ix. To control the supply of labour in order to be more effective in demanding better terms and conditions for workers from employees

HOW DOES A TRADE UNION OPERATE?

A trade union acts as a monopoly (single seller) of a particular type of labour. To **negotiate for higher wages** and **better conditions of work**, a trade union uses the weapon of **strike** where all labour to employer is withdrawn or a **go slow** where its only part of the labour that is withdrawn. In each case the worker's action would impose an economic loss to the employer. The employer is thus persuaded or forced to agree with the union demand s.

Collective Bargaining

The process whereby workers negotiate collectively through a trade union for a common wage rate

On the other hand employers respond by forming an *Employers' Association* with a common wage policy thus, acting as single buyer of labour e.g. **FKE** – Federation of Kenya Employers

If we have in the market a single seller of labour (Trade Union) and a single seller of labour (Employer Association) then we have bilateral monopoly bargaining will continue until the equilibrium wage rate is established. There are various factors a trade union should look at when bargaining for a wage increase

A trade union just like that of monopoly can only determine the price or the quality demand or supply but not both.

CONSIDERATIONS BEFORE NEGOTIATION FOR HIGHER WAGES

1. Trade union considers whether there have been changes in the cost of living which provide a good reason for wage increase
2. The amount of profits being made by the employer. The employer is going to give the additional wage from his profits. This will help the trade union to decide if the employer will be able to sustain a pay rise

3. There should also take into account the aftermath of a wage increase e.g. reduction of labour force or buy or hire the machines
4. Trade Union should consider the present wage rate paid by other employers. If the wages they are receiving is lower you can always demand for more
5. There should be respect and recognition. Trade Unions are not troublemakers and the employers are not exploiters. So respect from both sides will facilitate smooth running of business

Additional Notes On Labour And Trade Union
The following are the laws governing the terms and conditions of employment in the Kenya labour market.

1. The Employment Act (Cap. 226)
2. The Trade Union Act (Cap. 233)
3. The Trade Disputes Act (Cap. 234)
4. The Regulations of wages and conditions of Employment Act (Cap. 229)
5. The Industrial Training Act (Cap. 237)
6. The Workman's Compensation Act (Cap. 236)
7. The Shop Hours Act (Cap. 231)
8. The National Social Security Fund Act (Cap. 258)
9. The National Hospital Insurance Act (Cap. 255)

Although these Acts deal with different aspects of labour problems, their main purpose is to provide the protection of workers and to enhances their welfare and conditions of work

FUNCTION OF A TRADE UNION

1. To increase the wages of its members
2. To improve the fringe benefits for its members
3. To protect workers against unfair dismissal
4. To advise the government on labour matters

Problems Encountered by Trade Union

i. Trade union leadership is often beset with insincerity, corruption, malpractices and wrangling among themselves
ii. They often use their position for their own benefits at the expenses of their electorates
iii. In some cases, workers are not united and as a result they are not able to achieve their objectives
iv. Generally the workers representatives bargaining powers do not effectively match those of the employers
v. Workers are susceptible to their employers threats etc because if fear of losing their jobs

BRIEF HISTORICAL SURVEY OF TRADE UNION MOVEMENT IN KENYA

All Kenya Trade Unions are registered according to the **Trade Union Act (Cap 233),** which was first established and enacted on the 1st August 1952. Since then a lot of amendments and changes have been made in the Act

All Kenyan Trade Unions are affiliated to one umbrella union known as **COTU** (**Central Organization of Trade Unions**), which was registered and came into being in 1966

Employers Organization (FKE – Federation of Kenya Employers)
Employer's organizations are associations of employers. Their main objective is to protect the rights of employers and consequently to effect a united force to face trade unions pressures.

Furthermore, employers organization.

i. Adopt uniform polices pertaining to wages working hour and other employment conditions
ii. Approach the government behalf of all employers in and of one industry whenever there are difficulties
iii. Make decisions concerning the promotion of their sales as well as the fixing of prices etc. In the Kenyan situation all employers associations are spearheaded by their umbrella body known as FKE, which was established in 1960

KENYA INDUSTRIAL COURT

The Kenya Industrial court was established in accordance with the provisions of the Trade Disputes Act (Chap 234). Its main objective is to give judgments in trade disputes between employees and employers. Cases dealt with by the court include inter alia:-

i. Dismissal of employees
ii. Non payment of dues to employees
iii. Workers demand s regarding terms and conditions of work

The judges of Kenya Industrial Court is appointed by the president while the minister for Labour appoints four other members of the court

COMMON CAUSES OF INDUSTRIAL DISPUTES

i. Terms of Services
ii. Leadership
    - Top
    - Medium
    - Shop floor
iii. Breakdown of communication
iv. Lack of incentives

PROCEDURES FOR SOLVING INDUSTRIAL DISPUTES

i. Shop Stewards

A union steward or shop steward

Is an official within the organizational hierarchy of a labor union. Rank-and-file members of the union hold this position voluntarily (through democratic election by fellow workers or sometimes by appointment of a higher union body) while maintaining their role as an employee of the firm. As a result, the Union Steward becomes a significant link and conduit of information between the union leadership and rank-and-file workers.

The duties of a union steward vary according to each labor union's constitutional mandate for the position. In general, most union stewards perform the following functions:

- Monitor and enforce the provisions of the collective bargaining agreement (labor contract) to ensure both the firm and union worker are not violating the terms of the agreement.
- Ensure that the firm is in compliance with all federal, state and local laws and regulations.
- Represent and defend fellow workers whom the firm believes violated company policy or the terms and conditions of the collective bargaining agreement, often through the grievance process.
- Communicate and disseminate official union policy, memos and directives to workers in the shop.
- Popularize and promote union consciousness and values in the workplace

ii. Collective Bargaining

a process between employers and employees to reach an agreement regarding the rights and duties of people at work. Collective bargaining aims to reach a collective agreement which usually sets out issues such as employees pay, working hours, training, health and safety, and rights to participate in workplace or company affairs.

During the bargaining process, employees are typically represented by a trade union.[2] The union may negotiate with a single employer (who is typically representing a company's shareholders) or may negotiate with a federation of businesses, depending on the country, to reach an industry wide agreement.

A collective agreement functions as a labor contract between an employer and one or more unions. Collective bargaining consists of the process of negotiation between representatives of a union and employers (generally represented by management, in some countries[which?] by an employers' organization) in respect of the terms and conditions of employment of employees, such as wages, hours of work, working conditions and grievance-procedures, and about the rights and responsibilities of trade unions. The parties often refer to the result of the negotiation as a collective bargaining agreement (**CBA**) or as a collective employment agreement **CEA.**

iii. Joint Consultation

Joint consultation, or co-operation between employers and employees, is prescribed either in **the Act on Co-operation** within Undertakings, in sectoral agreements between the central confederations or in sectoral agreements, depending on the industry.

The purpose of joint consultation is
to further co-operation between the employer and the personnel and among members of personnel to provide personnel with the opportunity to influence matters relating to their work and workplace and to develop the operations of companies and corporations and their working conditions. Joint consultation increases the personnel's readiness to accept changes and contributes to successful development work and the maintenance of a good atmosphere at work. Joint consultation is a part of management.

Parties to joint consultation

The parties to joint consultation are the employer and the personnel.
Joint consultation can be either **direct** or **representative**.

i. Direct joint consultation
Refers to situations where issues concerning work and the activities of the work community are discussed by supervisors and personnel. Joint meetings are arranged at the workplace for this purpose. Direct joint consultation is also part of daily routines, management and good supervisory work.

ii. Representative joint consultation
Is carried out by a separately appointed co-operation body, to which the personnel elect their own representatives. Personnel representatives are usually shop stewards and occupational safety delegates.

Matters handled by means of joint consultation
The purpose of joint consultation is to allow personnel to participate in decision-making before the matter is settled, that is, already at the preparatory stage. At this stage it is still possible to discuss the grounds for and effects of the matter in question, and any alternatives there may be. According to the Act on Co-operation within Undertakings and the joint consultation agreements, the employer must inform the personnel of issues such as the company's development perspectives and economic situation, and provide sufficient information to enable the matter to be dealt with. The Act and both the agreements concluded by the central confederations and sectoral agreements also contain more detailed information on what additional matters are to be settled by means of the joint consultation procedure. A continuous negotiation procedure is the best way to ensure that the goals of joint consultation are reached. Providing information is an important and crucial part of joint consultation both before and after the actual joint consultation procedure. Good joint consultation action is based on providing information on a continuous basis

SECTIONS OF FACTORIES ACT RELEVANT TO WORKERS ENVIRONMENT

i. **Registration Of Factories**
- Application for registration
- Welfare
- Legal requirements
- Economic
- Social

ii. Safety Requirement
- Steam boilers and high pressure vessels
- Fencing of machines
- Use of hoists, lefts and cranes
- Fire safety

Questions

1. i. Define a Trade Union and state three of its effects on the manage net of and
Organization
ii. Explain four benefits of collective bargaining
iii. State the meaning of the following terms as used in industrial relations
a. Joint consultation
b. Wage
c. Salary
iv. Describe three causes of industrial disputes

2. i. Explain five problems faced by trade unions in Kenya
ii. Outline five common causes of industrial disputes in an organization

3. Outline five ways in which an organization can improve its workers employment conditions
4. i. State four ways through which manage net can improve industrial relation in
   an organization
   ii. Outline four measures that are observed in the formation of an effective joint consultation committee
   iii. State the roles of trade unions
   iv. State three factors that arise from work environment, which may influence employees to join unions
5. i. Outline the procedures for solving industrial disputes
   ii. Explain three problems likely to occur when joint consultation is poorly administered
   iii. Explain four common causes of industrial disputes
   iv. Explain the term shop steward and state four of their duties in the labour movement
6. i. State any three modes of termination of contract of employment
   ii. State four functions of a trade union
   iii. Explain three methods used by organizations to pay employees
   iv. Outline three methods used to prevent wage payment fraud in an organization
   v. Define the term trade dispute in reference to industrial relation
   vi. Explain four benefits of collective bargaining .
7. a) List four objectives of a trade union
   b) Describe the role of a shop steward in grievances handling
   c) Explain the importance of workman’s compensation Act

CHAPTER 9.	ESTIMATING AND COSTING

MANUFACTURING ACCOUNT

An account in which the Production cost is calculated..

The preparation of financial reports in a businesses operating in a manufacturing environment, including among others the following:-

- Computation of **Prime Cost**
- Computation of **Production Cost**
- Adjusting the manufacturing account in respect of **work in progress**

Manufacturing is the transformation of materials into other goods through the use of labor and factory facilities.

CLASSIFICATION OF COST OF MANUFACTURING

The cost of goods manufactured comprises of all resources used, **directly** or **indirectly**, in the manufacture of goods.

Manufacturing costs can be classified into **direct costs** and **indirect costs**

a. Prime Cost/Direct Cost

Costs **directly** involved in the manufacture of goods. i.e. sum of all the direct costs incurred in a manufacturing process. Direct costs are cost which can be traced to the particular item being manufactured.

Direct costs are:

Direct cost consists of the following:-

- Direct materials (Cost of materials used in producing good)
- Direct labour
- Direct expenses. .
  - Wages of workers,
  - Carriage inwards on raw materials

Prime cost = Direct materials + Direct labour + Direct expenses

b. Factory Overhead/Indirect Cost

Costs not directly related to production. Ie Indirect costs which occur in the factory where production is carried out. Indirect costs are costs of making an item which cannot easily be traced to the item being manufactured.

Indirect costs include:-

- Factory/plant rent,
- Factory power,
- Depreciation of plant and machinery, etc.
- Water charges,
- Electricity charges,
- Rent and rates of factory
- wages of plant Forman/manager

c. Administrative Expenses

Cost of operations of the organization expenses but do not relate to the manufacturing process.

Examples include:

- CEO's salary
- Legal and accounting/audit cost
- Depreciation of office machinery
- Secretarial services

d. Selling and Distribution Expenses & Financial Charges

Expenses relating to sale of goods manufactured and are not considered **direct cost** as they are incurred after the completion of the production process.

Examples of sales and distribution are:

- Sales commission
- Carriage outwards
- Depreciation of delivery van
- Advertising expenses

(e) Work in progress (WIP)

Goods which are **partly completed** at the end of a financial year. At the year end, the double entry of **WIP** i.e the **CLOSING STOCK** of goods not completely produced will be:-

DR Workin in Progress account

CR Manufacturing account

WIP account is a **STOCK ACCOUNT** of the partly completed goods. The entries required for the **OPENING STOCK** and **CLOSING WORK IN PROGRESS** are the same as those for the finished goods.

- Add **cost work-in-progress** from the previous year computed in the current year

- Deduct **cost of work-in-progress** of the current period not yet completed (into finished goods)

Work in Progress = Opening WIP – Closing WIP

Cost of Production = Prime Cost + Factory Overheads + Opening Work in Progress – Closing Work in Progress

STEPS TO CACULATE PRODUCTION COST

1. Add **opening stock** of raw materials **purchases** and subtract the **stock of raw materials**. This is to get the **cost of materials** used during the period.
2. Add in all the **direct costs** to get the **prime costs**
3. Add all the **indirect manufacturing costs**.
4. Add the **opening stock of WIP** and subtract the **closing stock WIP** to get the **Production cost** of all goods completed in the period. This is because WIP cannot be sold and therefore should not be included in the trading account.
5. The manufacturing account when completed shows the total that is available for sale during the period. This will be used in trading account in place for purchases.

- **ABC COMPANY LTD**

MANUFACTURING ACCOUNT FOR THE YEAR ENDING 31.1.2008

		RM	RM	RM	
Raw materials:	Stock at 1.2.2007		12000		
	Purchases		75000		
	Carriage inwards	11000			
		86000			
Less	Stock at 1.1.2008		13000		
			73000		
	Cost of Materials used				85000
Add	Direct wages				13000
	Prime Cost				**98000**
Add:	Factory overhead (**IM+IL+IE)**				**77000**
				175000	
Add:	WIP at 1.2.2007			9000	
Less:	WIP at 1.1.2008			(9800)	
				(800)	
Cost of goods produced transferred to trading A/C					**174200**

ABC COMPANY LTD

MANUFACTURING ACCOUNT FOR THE YEAR ENDING 31.1.2008

		RM		RM	
	Sales			700000	
Less:	Cost of sales				
	Cost of finished goods		35000		
	Cost of goods produced		174200		
			209200		
Less:	Closing stock		13000		
	Cost of sales				196200
	Gross profit				**503800**
Add:	Other income				150000
	Total Income			**653800**	

Less:	Selling & Distribution Exp. 40000		
	Admin. Exp.	89000	
	Finance Cost	11000	
	(140000)		
Net Profit			**513800**

Questions

1. **a)** Distinguish between direct material cost and indirect determination.

   b) The following balances were extracted from the books of MUCHIRA

PRODUCTION ON 31 DECEMBER 1992		
PURCHASE OF raw material		38000
Manufacturing wages		20000
Carriage inward	2000	
Stocks1-1-92 Raw materials		8000
Work in progress	3000	
Finished goods	14000	
Factory expenses	12000	
Depreciation: plant and machinery		7000
Factory power		6000
Sales	135000	

Prepare a statement to show

i. Prime cost
ii. Production
iii Gross profit

2. **a)** The following information was extracted from **United Millers**

   Company Limited books of accounts on 13st December 2002.

Sales	250000	
Purchases	75000	
Purchase Return	4000	
Carriage inward	6000	
Factory Labour	60000	
Indirect labour	8000	
Lighting and heating's	6000	
Rent and rates	4000	
Repair and maintenance	4500	
Machinery Depreciation:	5000	
Printing and stationary		3000
Opening stock on 1st	40000	
Closing stock on 31st dec 2002		30000

Prepare a statement to show

i. Prime cost
ii. Production
iii Gross profit

REFERENCE TEXT BOOK:

1. **Industrial Engineering and Production Management**
   By Martand Telsang 1998

2. **A text of Office Practice and Organization**
   By Robert Gichira 1993

3. **K.A.T.C. Cost Accounting and Budgeting**
   N.A. Saleemi

4. **Principles of Marketing**
   By Philip Kotler

5. **Commercial knowledge and communication in East Africa**
   By N.U. Din

6. **Elements of Law Simplified**
   By N.A.Saleemi and T.K.Ateenyi

7. **A textbook of Business Finance**
   By Paul Manasseh

8. **Essentials of Commerce in East Africa**
   By S.A. Butt

9. **Fundamental Of Marketing**
   An African Perspective
   By Francis N. Kibera And B. Chege Waruingi

10. **Internet**