Participant Handbook

Sector
Food Processing

Sub-Sector
Fruits and Vegetables

Occupation
Processing

Reference ID: **FIC/Q0106, NSQF Level 4**

Fruit Pulp Processing Technician

> "Skilling is building a better India. If we have to move India towards development then Skill Development should be our mission."

Shri Narendra Modi
Prime Minister of India

Certificate

**COMPLIANCE TO
QUALIFICATION PACK – NATIONAL OCCUPATIONAL
STANDARDS**

is hereby issued by the

Food Industry Capacity & Skill Initiative

for

SKILLING CONTENT : PARTICIPANT HANDBOOK

Complying to National Occupational Standards of

Job Role/ Qualification Pack: **'Fruit Pulp Processing Technician'** QP No. **'FIC/ Q 0106 NSQF Level 4'**

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Acknowledgements

About this book

This book is designed for providing skill training and/or upgrading the knowledge and basic skills to take up the job of 'Fruit Pulp Processing Technician' in 'Food Processing' sector. All the activities carried out by a specialist are covered in this course. Upon successful completion of this course, the candidate will be eligible to work as a Fruit Pulp Processing Technician.

This Participant Handbook is designed to enable training for the specific Qualification Pack (QP). Each National Occupational Standards (NOS) is covered across Unit/s.

Key Learning Objectives for the specific NOS mark the beginning of the Unit/s for that NOS.

- Prepare and maintain work area and process machineries for production of fruit pulp
- Prepare for production of fruit pulp
- Produce fruit pulp from various fruits
- Complete documentation and record keeping related to production of fruit pulp
- Food safety, hygiene and sanitation for processing food products

Symbol Used

| Key Learning Outcomes | Steps | Exercise | Tips | Notes | Objectives |

Table of Contents

1. Introduction

Key Learning Outcomes

At the end of this unit, you will be able to:

1. Explain the purpose of training;

2. Discuss the National Occupational Standards and Qualification Pack;

3. Define food processing;

4. List the various sectors of the food processing industry;

5. Describe the various stages of food processing for converting raw materials to food products;

6. State the need for fruit and vegetable processing;

7. State the common methods of fruit and vegetable processing;

8. State the roles and responsibilities of a fruit pulp processing technician;

9. State how to conduct yourself at a workplace;

10. Undertake a self assessment test;

11. Identify personal strengths and weaknesses.

UNIT 1.1: Introduction to the Training Programme

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. Explain the purpose of training;
2. Discuss the National Occupational Standards and Qualification Pack.

1.1.1 Purpose and Benefits of the Training Programme

This training programme is developed to impart specific skills to individuals who wish to be a Fruit Pulp Processing Technician. The training programme is based upon the National Occupational Standards for the food processing sector. The National Occupational Standards have been described in the following subsection of this chapter.

The training programme will enable an individual to:

• produce fruit pulp from various fruits using machineries as per specifications and standards of the organisation;

• select and use relevant tools and equipment for sorting, washing, cutting/slicing, deseeding/ destoning, pulping, pre-cooking, sterilising, packaging or canning and storing;

• work effectively in a team to deliver desired results at the workplace;

• plan and organise production of fruit pulp to meet expected outcomes;

• work according to personal health, safety, and environmental protocol at the food processing site.

After successful completion of training and passing the assessment, you will be issued a certificate.

Fig. 1.1.1. Skill cards

1.1.2 Introduction to QP and NOS

This training programme is intended for imparting basic skill and knowledge relevant to the job role, required to perform at a food processing industry. This programme is based on qualification pack called Fruit Pulp Processing Technician. The Qualification Pack Code for Fruit Pulp Processing Technician is FIC/Q0106. This is also called a QP.

A QP consists of a set of National Occupational Standards (NOS). NOS specify the standard competency a worker must achieve when carrying out a function at the workplace.

Under Fruit Pulp Processing Technician QP, there are five NOSs which detail the functions to be performed at work site as a Fruit Pulp Processing Technician.

NOS Code	Major Function/Task
FIC/N0120	Prepare and maintain work area and process machineries for production of fruit pulp
FIC/N0121	Prepare for production of fruit pulp
FIC/N0122	Produce fruit pulp from various fruits
FIC/N0123	Complete documentation and record keeping related to production of fruit pulp
FIC/N9001	Food safety, hygiene and sanitation for processing food products

UNIT 1.2: Introduction to the Food Processing Industry

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. Define food processing;
2. List the various sectors of the food processing industry;
3. Describe the various stages of food processing for converting raw materials to food products.

1.2.1 Food Processing

Agriculture is the backbone of the Indian economy. The produce from various agriculture-based occupations is primarily used for consumption within the country. It is exported to different parts of the world as well. Agricultural produce is also used as raw material in the food processing industry.

Food processing is the method used to convert raw materials into food products. They could be processed foods, ready-to-eat foods, food additives or foods used to prepare other food products. Besides food processing, the food industry also relies on food preservation as an important method to store food products for longer periods of time.

The food processing industry in India is divided into several sub-sectors. They are:

Whole milk powder, skimmed milk powder, condensed milk, ice-cream, butter and ghee, cheese, etc.

Dairy

Snack foods, namkeen, biscuits, ready-to-eat foods, alcoholic and non-alcoholic beverages

Consumer foods

Beverages, juices, concentrates, pulps, slices, frozen and dehydrated products, potato wafers, pickles, etc.

Fruit and vegetable processing

Sub-Sectors of Food Processing Industry

Biscuits, breads, buns, cakes, confectionery, pastries, cookies, etc.

Bread and bakery

Flour, bakeries, starch glucose, cornflakes, malted foods, vermicelli, beer and malt extracts, grain-based alcohol, etc.

Grains and cereals

Meat and poultry processing

Fisheries

Frozen and packed meat, egg powder, etc.

Fish oil, frozen and canned products

Fig. 1.2.1. Sub-Sectors of food processing industry

The Indian food industry is a star sector in India with a bright prospect for growth and development. Indian food and grocery market is the sixth-largest in the world. Food industry, particularly the food processing sector in India, has shown immense potential due to its quick-paced growth. Food processing ranks fifth in the country in terms of its production, growth, export, and consumption. One of the recent trend that is seen in this sector is ordering food online. Even though this segment is still in its early stages of development, it is growing at an increasingly fast pace.

Food industry is implementing stringent food safety and quality measures in order to attract more investors and ensure the safety of its existing consumers. All these factors will have a positive impact on the way the sector functions and also on the job market in the country.

Women have always been associated with preparing food for the family or the household, but in modern times women are breaking this stereotype and turning entrepreneurs in this sector. Women are also becoming professional chefs and bakers, and contributing to the economy and towards the sector.

1.2.2 Journey of Food from Harvest to Consumer

The following chart shows the journey food material goes through to become a final, consumable product to various customers.
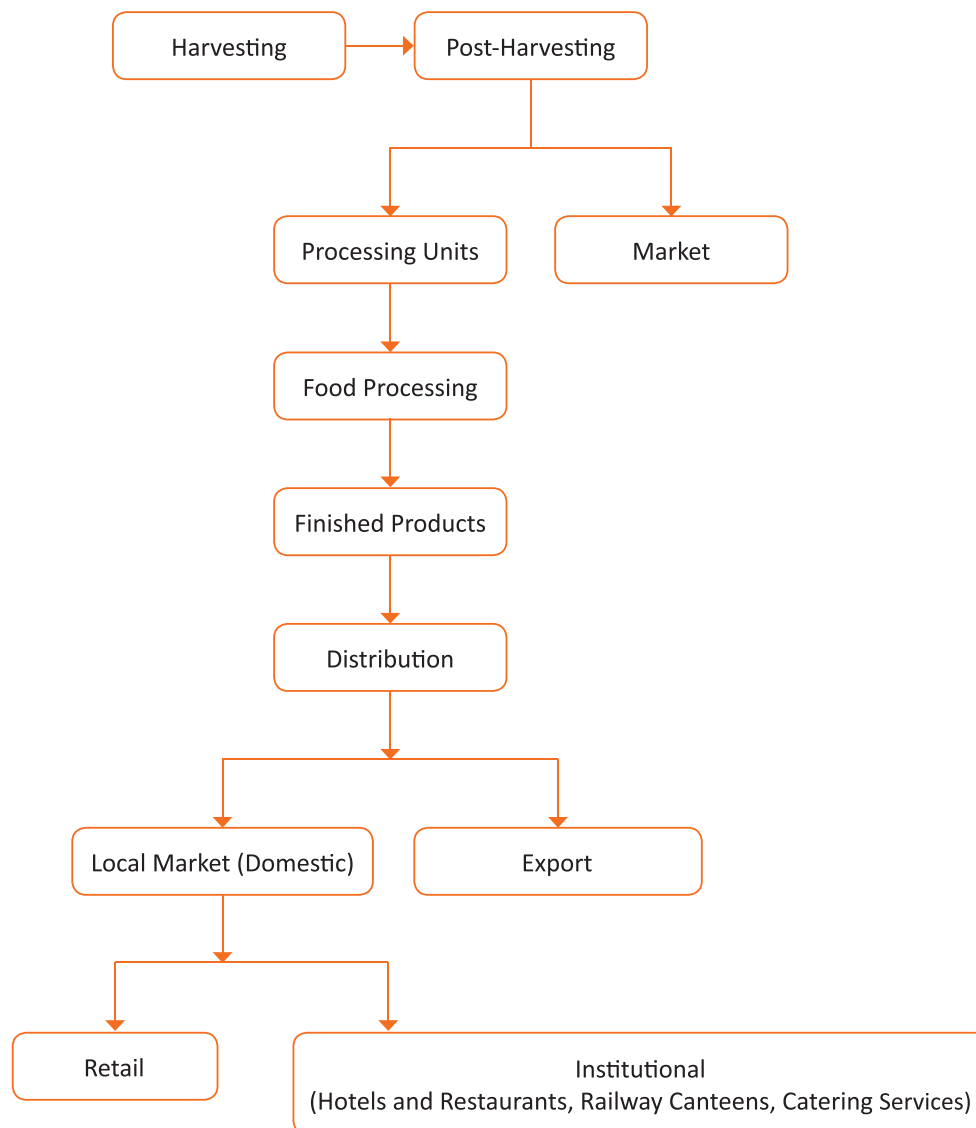
Fig. 1.2.2. Journey of harvested food

UNIT 1.3: Introduction to Fruit and Vegetable Processing

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. State the need for fruit and vegetable processing;
2. State the common methods of fruit and vegetable processing.

1.3.1 Overview of the Fruit and Vegetable Sub-Sector

The fruit and vegetable processing sub-sector deals with processed foods, semi-processed foods, and packaged foods that are made from fruits and vegetables. This includes:

Fig. 1.3.1. Juices

Fig. 1.3.2. Jellies

Fig. 1.3.3. Pulps

Fig. 1.3.4. Jams

Fig. 1.3.5. Frozen foods

Fig. 1.3.6. Wafers

Fig. 1.3.7. Pickles

There are certain parameters that are important to consider when selecting a fruit/vegetable for processing. They are:

• Demand for processed food made from that vegetable/fruit;

• High quality produce;

• Continuous supply;

• Huge supply in case of seasonal fruits/vegetables.

These parameters are important to ensure that raw materials withstand the processing and preservation process.

1.3.2 Methods of Processing Fruits and Vegetables

Some common methods of processing fruits and vegetables are:

Fig. 1.3.8. Drying

Fig. 1.3.9. Concentration

Fig. 1.3.10. Heating

Fig. 1.3.11. Fermentation

Fig. 1.3.12. Sterilisation

Fig. 1.3.13. Pasteurisation

Fig. 1.3.14. Blanching

Fig. 1.3.15. Canning

UNIT 1.4: Attributes of a Fruit Pulp Processing Technician

Unit Objectives ⦿

At the end of this unit, you will be able to:

1. State the roles and responsibilities of a fruit pulp processing technician.

1.4.1 Roles and Responsibilities

Roles	Responsibilities
Handle raw material from the time of receipt till it reaches the process line	• Check the raw material for quality • Ensure minimum loss of raw material
Record-keeping and documentation	• Document and maintain records of raw materials, production schedule, and process • Document and maintain records of finished products
Hygiene and sanitation maintenance	• Adopt safety and sanitation-related measures • Follow food safety norms and practices
Inspect machines and troubleshoot issues	• Ensure smooth operation of machinery to complete the production line • Optimise the use of machinery • Attend to minor repairs of tools and machinery when required • Ensure that safety rules and regulations are observed • Prevent accidents • Inform issues to the supervisor
Plan and execute pulping process	• Examine products at different stages of fruit pulping • Adhere to Good Manufacturing Practice (GMP) • Ensure the products meet the quality standards set by the organisation
Inspect intermediate as well as finished products	• Check fruits and vegetables' ripening quality, intermittent and finished products for quantity, quality, and salt equilibrium • Ensure conformance of quality as per organisational standards
Follow storage and packaging norms	• Ensure safe and proper storage of raw material, packing material, and finished goods

UNIT 1.5: Workplace Ethics

Unit Objectives

At the end of this unit, you will be able to:

1. State how to conduct yourself at a workplace.

1.5.1 How Should you Conduct Yourself at a Workplace?

Workplace ethics are a set of guidelines that are followed to ensure smooth and effective functioning of a workplace. Some important ones to remember are:

- Address seniors, assistants, and workers with respect
- Follow the processes laid out in the manufacturing unit
- Follow food safety norms at all times
- Do not compromise with the quality of the product at any given cost
- Perform your work with complete honesty
- Perform your roles and responsibility with integrity
- Be a team player

Fig. 1.5.1. Workers taking orders

Fig. 1.5.2. Checklist

Cleaning and Sanitising

1. Pre-cleaning - scrape and rinse to remove left over food items

2. Wash - use cleaning agent to remove stuck-on food.

3. Rinse - to remove food and cleaning agents

4. Sanitise - to kill bacteria and viruses

5. Air Dry - allow to dry

Fig. 1.5.3. Cleaning and sanitising process

UNIT 1.6: SWOT Analysis

Unit Objectives

At the end of this unit, you will be able to:

1. Undertake a self assessment test;
2. Identify personal strengths and weaknesses.

1.6.1 Self-Assessment

Strengths	Weaknesses
Opportunities	**Threats**

Exercise

1. **Fill in the blanks with the correct option**

    a. Food _____ is the method used to convert raw materials into food products.

    i.   proofing   ii.   dispersing
    iii. processing   iv.   picking

    b. Food _____ is an important method to store food products for longer periods of time.

    i.   preparation   ii.   preservation
    iii. consumption   iv.   allocation

    c. _____ sub-sector produces juices, jellies, pulps, pickles, jams etc.

    i.   Dairy   ii.   Grains and cereals
    iii. Fisheries   iv.   Fruit and Vegetable processing

    d. Journey of food from harvest ultimately reaches the _____ .

    i.   consumers   ii.   bankers
    iii. builders   iv.   builders

    e. Fruit selected for processing should be of _____ quality.

    i.   high   ii.   rotten
    iii. sun scorched   iv.   damaged

    f. The process to create _____ is called pulping.

    i.   juice   ii.   jam
    iii. squash   iv.   pulp

    g. A soft, moist mass after removal of skin, seeds, pith, and fibrous particles is called _____.

    i.   juice   ii.   jam
    iii. squash   iv.   fruit pulp

    h. To handle raw material from post-harvest storage to the process line is one of the _____ of pulp processing technician.

    i.   description   ii.   job role
    iii. responsibility   iv.   function

    i. Workplace ethics are set of _____ that are followed to ensure smooth and effective functioning of a workplace.

    i.   guidelines   ii.   rules
    iii. principles   iv.   standards

    j. Fruit Pulp Processing Technician should not compromise on the _____ of the product at any cost.

    i.   quantity   ii.   quality
    iii. quality and quantity   iv.   characteristics

2. **Arrange the steps for pulp extraction**

Procedure/ Steps	Order the steps (as 1, 2, 3, 4, 5, 6 and 7)
a. Wash and sort fruits	
b. Pulp fruits and cook pulp	
c. Receive and ripen fruits	
d. Post production cleaning	
e. Sorting & seed separation	
f. Canning of fruit pulp	
g. Peel, deseed/destone fruits	
h. Aseptic sterilisation and packaging of fruits	

Notes

2. Food Safety Hygiene and Sanitation for Processing Food Products

Unit 2.1 – Sanitation and Hygiene

Unit 2.2 – Safety Practises

Unit 2.3 – Good Manufacturing Practices (GMP)

Unit 2.4 – Hazard Analysis and Critical Control Point (HACCP)

Unit 2.5 – Introduction to Food Microbiology, Food Spoilage and Food Preservation

Key Learning Outcomes

At the end of this unit, you will be able to:

1. State the personal hygiene and sanitation guidelines;
2. State the food safety hygiene standards to follow in a work environment;
3. List the different sanitisers used in the process area and equipment;
4. Follow health and safety practices in the work area;
5. State the importance of safety, hygiene, and sanitation in the fruit pulp processing industry;
6. Follow the industry standards to maintain a safe and hygiene workplace;
7. State the storage and stock rotation norms;
8. Follow HACCP principles to eliminate food safety hazards in the process and products;
9. State the types of food microbes;
10. State the causes for food spoilage;
11. State the process for food spoilage;
12. State the criteria to check food spoilage;
13. State the need for food preservation;
14. State the different types of food preservation processes.

UNIT 2.1: Sanitation and Hygiene

Unit Objectives

At the end of this unit, you will be able to:

1. State the personal hygiene and sanitation guidelines;
2. State the food safety hygiene standards to follow in a work environment;
3. List the different sanitisers used in the process area and equipment.

2.1.1 Personal Sanitation

Sanitation and hygiene are the most important aspects to take care of when working in a food processing area. Some important sanitation and hygiene practices that must be followed are:

Maintain a high standard of personal cleanliness viz. have a bath every day and wear clean clothes to work.

Wear Personal Protective Equipment (PPE) such as aprons, mouth mask, head cover, face mask, hand gloves, gum boots, and beard cover mask at all times during work hours.

Always keep your finger nails trimmed.

Always keep your hair trimmed and wear a hair net while working.

Fig. 2.1.1. Personal sanitation

Fig. 2.1.2. Washing hands with soap and water

Wash your hands and feet at the designated area or wash stations provided.

Wash your hands with soap and water each time before you enter the production area.

Refrain from smoking, spitting, chewing paan, sneezing or coughing over any food when in the production area.

Do not handle food when suffering from a disease, illness, burns, injury or infection.
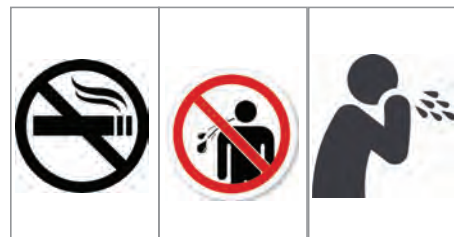
Fig. 2.1.3. Do not smoke, spit, cough

Take proper and timely medical treatment when you are ill or if you have met with an accident.

Visit a registered medical practitioner at regular intervals to keep a check on your health.

Fig. 2.1.4. Timely medical treatment

2.1.2 Sanitisers

Sanitisers are used to reduce the number of pathogens that may be found on food service equipment to safe levels. Chemical sanitisers and hot water sanitisation are both approved methods for sanitising equipment. Approved chemical sanitisers and concentrations include:

- Chlorine (bleach): 50-100 ppm (200 ppm is the maximum concentration permitted; above 200 ppm is considered toxic)
- Quaternary ammonium: 200 ppm (unless otherwise specified by the manufacturer)
- Iodine: 12.5-25 ppm (Above 25 ppm is considered toxic.)
    - Minimum 10-second contact time required with chlorine sanitisers and 30 seconds for quaternary ammonia or iodine
    - Test strips must be used to check for proper sanitiser concentrations

For hot water sanitising the surface of the dishes must reach 160°F. This usually means the dial must reach 180^0F.

Fig. 2.1.5. Hot water sanitisation

Fig. 2.1.6. Chemical sanitisation

UNIT 2.2: Safety Practises

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. Follow health and safety practices in the work area.

2.2.1 Symbols

There are some symbols that you must know and understand to ensure safety in case of an emergency or fire. They are:

Caution	Danger Fragile Roof	Dangerous Chemicals
Do Not Enter	Danger Scaffolding Incomplete	Beware of Electric Shock
Electric Hazard	Never put your Hand Inside During the Operation	Highly Flammable
Hot Surface Do Not Touch	Mind Your Head	Never Open the Cover During the Operation
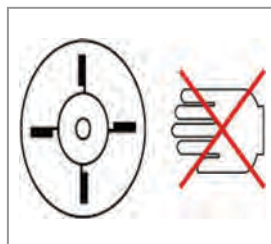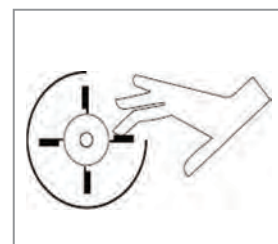
Use the Dustbin	Never Touch Moving Part	Wear Eye Protection
Wear Protective Clothing	Warning Slippery Floor	This is a Tobbacco Free Workplace
Assembly Point	Fire Exit	

Fig. 2.3.1. Safety symbols

2.2.2 Emergency Measures

During an emergency, you must follow certain measures to tackle the situation in an organised manner. These measures are:

- Do not panic
- Respond to your senior immediately or inform the matter to the concerned person
- Prepare against the emergency situation by keeping a fire bucket and a water source handy
- Evacuate the work area

After the emergency, you must:

- Report the situation to a senior or the concerned authority
- Undertake recovery measures

Fire Safety Measures

Just like emergency measures, some common fire safety measures must be followed in case of a fire. They are:

- Press the closest fire alarm button (if available)
- Call the fire brigade
- Assemble at the assembly point or designated area for safety
- Evacuate the building from the closest fire exit

Types of Fire and Fire Extinguishers

Choosing the right extinguisher can prevent property damage and save lives					
Types of Fire Extinguishers → Types of Fire ↴		Water	Foam	CO$_2$	Dry Chemical
Class A: Paper, Wood, Plastic Fabric, Rubber, Trash		✓	✓	✗	✓
Class B: Oil, Petrol, Some Paints and Solvents		✗	✓	✓	✓
Class C: Electrical Equipment, Appliances, Computers		✗	✗	✓	✓

Fig. 2.2.2. Types of fire and fire extinguishers

How to use the Fire Extinguisher?

2. Squeeze the handle

1. Pull the Pin

3. Aim nozzle at base of fire

4. Sweep nozzle side to side
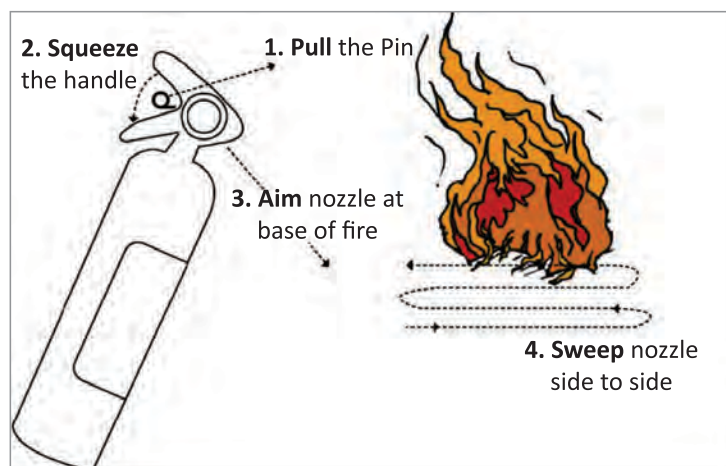
Fig. 2.2.3. Fire extinguisher

How to use the Fire Buckets?

Use the fire bucket filled with sand/water → Dump the sand/water on the fire → Refill the fire buckets
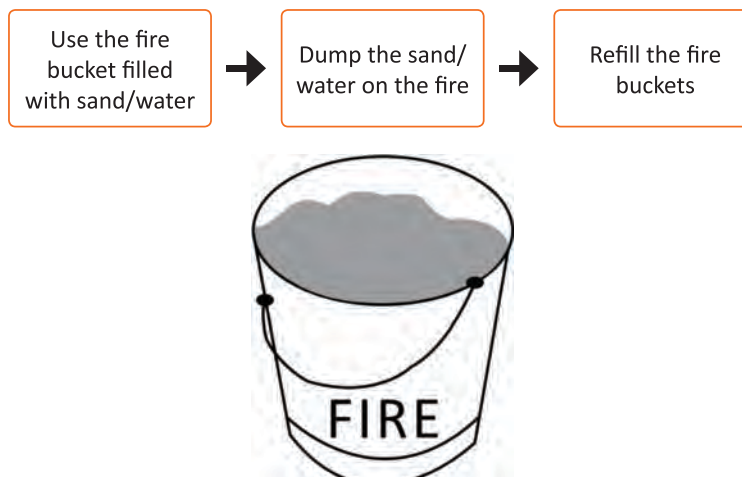
Fig. 2.2.4. Fire bucket

UNIT 2.3: Good Manufacturing Practices (GMP)

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. State the importance of safety, hygiene, and sanitation in the fruit pulp processing industry;
2. Follow the industry standards to maintain a safe and hygiene workplace;
3. State the storage and stock rotation norms.

2.3.1 Good Manufacturing Practices (GMP)

GMP is a set of guidelines proposed by the Food Safety Standards Authority of India (FSSAI) to ensure the production of high quality and safe processed foods. It requires a qualitative approach towards manufacturing to reduce chances of microbial contamination, spoilage, and errors.

```
                        GMP – Areas of Focus
        ┌──────────────┬──────────────┬──────────────┐
Personnel hygiene   Process validation   Maintenance of   Sanitation of the
                                         equipment        work area
```

Area of focus	GMP
Personnel hygiene *Fig. 2.3.1. Personnel hygiene* *Fig. 2.3.2. Facilities for toilets*	• Your organisation follows strict hygiene and sanitation guidelines • You are provided training on Good Manufacturing Practices (GMP) • You are in a sound health condition during working hours • You follow high standards of cleanliness • Your processing unit has enough facilities for toilets and wash stations
Sanitation of the work area *Fig. 2.3.3. Designated area for keeping utensils* *Fig. 2.3.4. Sanitisation of the work area*	• The processing unit where you work is located in a clean, pollution-free area • The entire processing unit is well ventilated and has adequate lighting • The entire work area follows high standards of cleaning and sanitisation • There is a designated area for keeping utensils and equipment. It is kept clean and pest-free at all times

Equipment maintenance	• The equipment used for processing foods is protected against contamination from lubricants, metal fragments, fuel, and contaminated water

Fig. 2.3.5. Equipment maintenance   Fig. 2.3.6. Monthly schedule

• The equipment used for processing foods is protected against contamination from lubricants, metal fragments, fuel, and contaminated water

• The cleaning and maintenance of tools, materials, and equipment is an easy process

• The organisation follows a cleaning and sanitising drill as per daily, weekly, and monthly schedules

Process validation

Stage 1: Process Design

Stage 3: Continuous Process Verification

Stage 2: Process Qualification
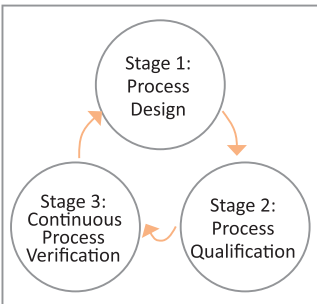
Fig. 2.3.7. Process validation   Fig. 2.3.8. Quality checks
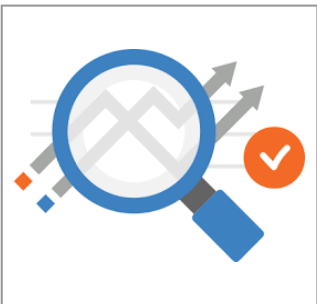
• All processes of production, like raw material procurement, execution, storage, packaging, and logistics follow strict organisational parameters

• Quality checks are conducted at each step of production. This helps to ensure that food quality is maintained as per prescribed norms and standards

• The stock rotation of finished product follows the FEFO and FIFO methods. This is to ensure that there is a minimum chance of food spoilage. It will also help to retain the taste of processed foods

UNIT 2.4: Hazard Analysis and Critical Control Point (HACCP)

Unit Objectives

At the end of this unit, you will be able to:

1. Follow HACCP principles to eliminate food safety hazards in the process and products.

2.4.1 What is HACCP?

Hazard Analysis and Critical Control Point (HACCP) is an international food safety regulation that is followed to reduce the risk of hazards in a fruit pulp processing unit. It is a system that identifies possible hazards and controls them at various points of the production process. The HACCP is based on seven principles. They are:

Conduct a hazard analysis

- Evaluate the production process and identify the points where hazards (physical, chemical, and biological) may be introduced

Identify critical control points

- Identify the critical points in the process plan where a hazard may occur
- Plan preventive measures at that critical point to control the risk

Establish critical limits

- State the boundary line between safe and unsafe processes
- State the limit until which a critical point maybe controlled

Establish a monitoring system

- State the process of monitoring critical points and critical limits

Establish corrective measures

- Specify the corrective actions that should be followed when critical limits are crossed

State verification procedures

- State the verification process to check whether HACCP principles are applied and followed
- Test the HACCP plan and ensure compliance on a regular basis
- Check whether the HACCP plan helps to prevent hazards effectively

Follow record-keeping procedures

- Keep records of all the critical points
- Maintain a log of situations when critical limits were exceeded
- State the corrective measures that were applied
- Include records of the development and maintenance of the system

Example of an HACCP Plan

Operational step	Hazard	Control measure	Critical limit	Monitoring method	Corrective action	Responsibility	Record
Procurement of raw material	Physical (dirt, stone particles)	Supplier guarantee specifications established by quality assurance department	As per company internal specifications	Supplier guarantee certificate is visually confirmed	Reject materials if not accompanied by supplier guarantee	Store manager	Supplier guarantee
	Chemical (toxins, pesticides from raw material)	Relative humidity of the store to be maintained					
	Microbiological (high microbiological load of raw materials, presence of pathogenic bacteria)	FIFO system should be established		Monitor temperature and humidity of storage			Store temperature logs

UNIT 2.5: Introduction to Food Microbiology, Food Spoilage and Food Preservation

Unit Objectives

At the end of this unit, you will be able to:

1. State the types of food microbes;
2. State the causes for food spoilage;
3. State the process for food spoilage;
4. State the criteria to check food spoilage;
5. State the need for food preservation;
6. State the different types of food preservation processes.

2.5.1 What is Food Microbiology?

Food microbiology is the study of microorganisms found in food products. Microorganisms are classified as:

Good

- Helps in processing food
  e.g. fermented foods

- Helps in preserving food
  e.g. food preservaties

- Works probiotics
  e.g. culture in curd

Harmful

- Leads to food borne diseases
  e.g. dysentery caused due to pathogenic microorganisms

- Leads to food spoilage
  e.g. food decay
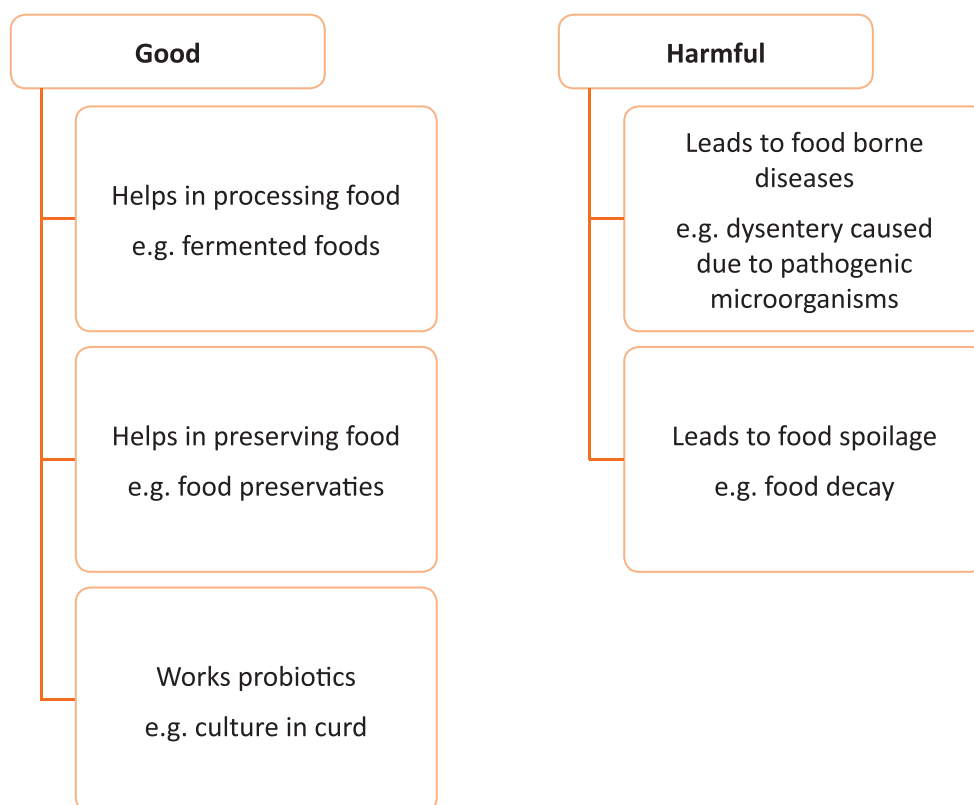
2.5.2 Types of Food Contaminants

Food spoilage is the process by which the original nutritional value, texture, flavours, and the form of food is damaged. The food then becomes harmful and unsuitable for human consumption.

Some types of contaminants in foods are:

Types of contaminants	Examples
Microbial	Bacteria, moulds, yeasts, viruses, etc. Fig. 2.5.1. Microbial Contaminants Fig. 2.5.2. Microbial Contaminants
Biological	Hair, excreta, bone splinters, etc. Fig. 2.5.3. Biological Contaminants Fig. 2.5.4. Biological Contaminants
Chemical	Pesticide residues, detergents, etc. Fig. 2.5.5. Chemical Contaminants Fig. 2.5.6. Chemical Contaminants
Physical	Bolts from machinery, stones, glass, etc. Fig. 2.5.7. Physical Contaminants Fig. 2.5.8. Physical Contaminants

Process of Food Spoilage

The following process chart shows how food spoilage takes place:

```
┌─────────────────────────────────────┐
│     Microorganisms enter food        │
└─────────────────────────────────────┘
                 ↓
┌─────────────────────────────────────┐
│ Microorganisms use food as source of │
│       nutrients and multiply         │
└─────────────────────────────────────┘
                 ↓
┌─────────────────────────────────────┐
│ Microorganisms produce enzymatic     │
│            changes                   │
└─────────────────────────────────────┘
                 ↓
┌─────────────────────────────────────┐
│ Enzymatic changes affect the         │
│ flavours, texture, shape/form,       │
│ colour and odour of the food         │
└─────────────────────────────────────┘
                 ↓
┌─────────────────────────────────────┐
│        Leads to food spoilage        │
└─────────────────────────────────────┘
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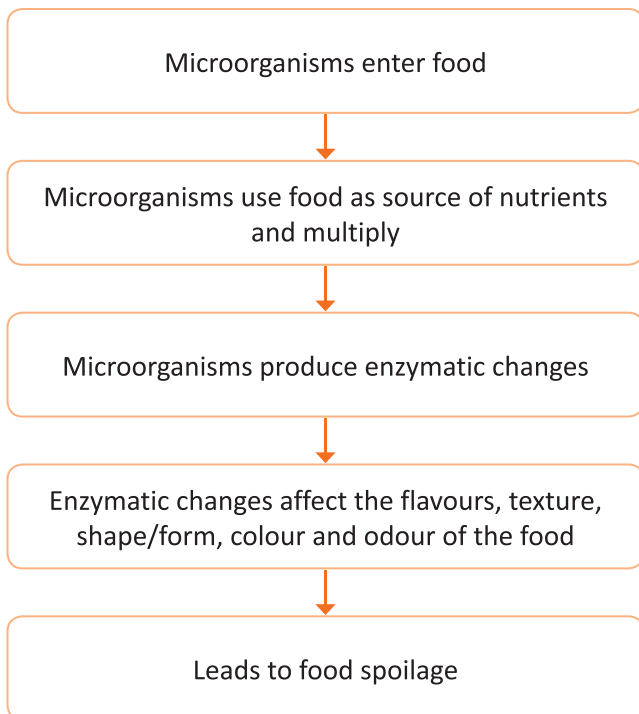

Fig. 2.5.9. Moulds on vegetables

Fig. 2.5.10. Moulds on fruits

Classification of Food Based on Spoilage

The following table shows how food is classified based on spoilage:

Non-perishable foods	Semi-perishable foods	Perishable foods
Does not spoil unless handled carelessly E.g.: Sugar	Spoils only if handled carelessly or stored improperly E.g.: Potatoes	Spoils readily and needs to be stored with special preservatives/processes E.g.: Milk

Parameters to Check Food Spoilage

Following parameters will help you to check food spoilage:

- Odour
- Texture (formation of slime)
- Colour
- Parameters
- Flavour
- Shape/form
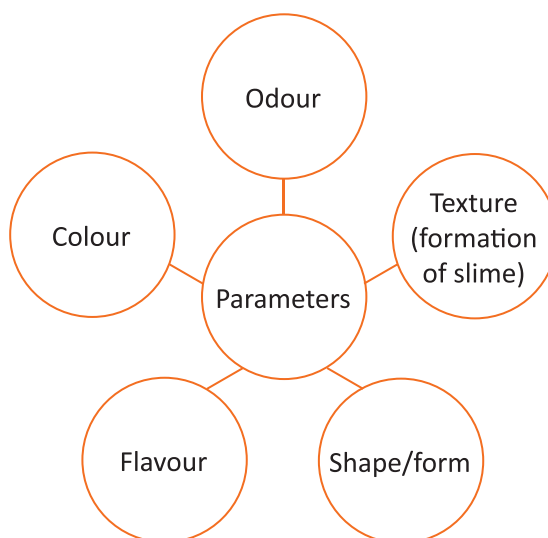
2.5.3 What is Food Preservation

Food preservation is the process by which processed and unprocessed food is protected against microbes, spoiling agents, and contaminants. The objective of preserving processed food is to:

- Retain the original nutritive value
- Retain the original colour
- Retain the original flavour
- Retain the original texture of the food
- Extend the shelf life of the food
- Ensure year-round availability
- Prevent or delay spoilage

Common Methods of Food Preservation

The most commonly followed methods of food preservation are:

- Fresh storage
- Cold storage
- Freezing
- Drying/dehydration
- Concentration
- Chemical preservation
- Preservation with sugar
- Pasteurisation
- Sterilisation
- Filtration
- Irradiation
- Curing;
- Fermentation
- Salting

Exercise

1. **Identify the food contact and non-food contact surfaces. Mark a tick against the correct option**

a.	Work tables	Food contact surface	☐
		Non-food contact surface	☐
b.	Overhead structures	Food contact surface	☐
		Non-food contact surface	☐
c.	Utensils	Food contact surface	☐
		Non-food contact surface	☐
d.	Air conditioner	Food contact surface	☐
		Non-food contact surface	☐
e.	Ventilating systems	Food contact surface	☐
		Non-food contact surface	☐

f.	Lighting equipment	Food contact surface	☐
		Non-food contact surface	☐
g.	Refrigeration equipment	Food contact surface	☐
		Non-food contact surface	☐
h.	Walls and ceilings	Food contact surface	☐
		Non-food contact surface	☐
i.	Tools like knives	Food contact surface	☐
		Non-food contact surface	☐
j.	Machines that process food	Food contact surface	☐
		Non-food contact surface	☐

2. **Arrange the right sequence of food spoilage.**

Procedure/ Steps	Order the steps (as 1, 2, 3 ,4 ,5, 6 and 7)
a. Leads to food spoilage	
b. Microorganisms produce enzymatic changes	
c. Microorganisms enter food	
d. Enzymatic changes affect the flavour, texture, shape/form, colour, and odour of the food	
e. Microorganisms use food as a source of nutrients and multiply	

3. **Match the columns**

Hazard Analysis	HACCP Principle
a. Plan preventive measures at that critical point to control the risk	i. Follow record-keeping procedures
b. State the boundary line between safe and unsafe processes	ii. State verification procedures
c. Specify the corrective actions that should be followed when critical limits are crossed	iii. Establish critical limits
d. Test the HACCP plan and ensure compliance on a regular basis	iv. Establish a monitoring system
e. Maintain a log of situations when critical limits were exceeded	v. Conduct a hazard analysis
f. Evaluate the production process and identify the points where hazards may be introduced	vi. Identify critical control points
g. State the process of monitoring critical points and critical limits	vii. Establish corrective measures

Notes

3. Prepare and Maintain Work Area and Process Machineries for Production of Fruit Pulp

Unit 3.1 – Equipment Used for Fruit Pulping

Unit 3.2 – Sanitisation of Work Area

Unit 3.3 – Cleaning Processes

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Key Learning Outcomes

At the end of this unit, you will be able to:

1. Identify the different equipment, tools, and machineries used for fruit pulping process;

2. State the materials and equipment used in cleaning and maintenance of the work area and machineries;

3. List the various cleaning chemicals required;

4. State the cleaning processes used to clean the work area and process machineries.

UNIT 3.1: Equipment Used for Fruit Pulping

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. Identify the different equipment, tools, and machineries used for fruit pulping process.

3.1.1 Pulp-Processing Equipment

The equipment used in a pulp-processing unit are:

Name of equipment	Usage
Ripening chamber with ethylene doser	Used for ripening fruit/vegetables by passing ethylene gas
Fruit washing machine	Used for fruit/vegetable washing
Sorting and grading machine	Used for fruit/vegetable segregation as per size and firmness
Conveyer belt	Used for visual inspection of mango tips and for sorting fruits and vegetables
Peeler	Used for removing fruit/vegetable skin
Deseeder/destoner	Used for removing fruit seeds and stones in mangoes
Core cutter	Used for cutting fruit core, especially in pineapple
Crusher/chopper/shredder	Used for crushing/chopping/shredding of fruit/vegetables
Blancher/hot break system	Used to heat the fruit/vegetable to facilitate pulping process
Pulper	Used to extract pulp and separate fruit fibre, skin, seed, and grits from pulp
Steam jacketed kettles with tanks	Used for cooking pulp
Decanter	Used to remove fibre, grits, black and brown specks, extraneous matters, dust and other impurities from pulp
De-aerator	Used to remove air and dissolved gases from the pulp
Evaporator/concentrator	Used to evaporate water from pulp
Steriliser	Used for sterilising pulp by boiling it
Aseptic filler	Used for aseptic filling of processed pulp in aseptic bags
Can reforming unit	Used for forming cans
Empty can steriliser	Used for sterilising cans by heating it
Can filler	Used for filling cooked pulp in cans
Seamer	Used for can reforming
Continuous can filling pasteuriser	Used for pasteurising cans by heat process

Name of equipment	Usage
Retorts	Used for sterilisation of filled cans
Can cooling tanks	Used for cooling of sterilised cans
Batch coder	Used for coding can coding
Labelling machine	Used for labelling packaged packets
Strapping machine	Used for combining smaller packets for easy transportation

Fig. 3.1.1. Fruit/vegetable washing machine

Fig. 3.1.2. Sorting and grading machine
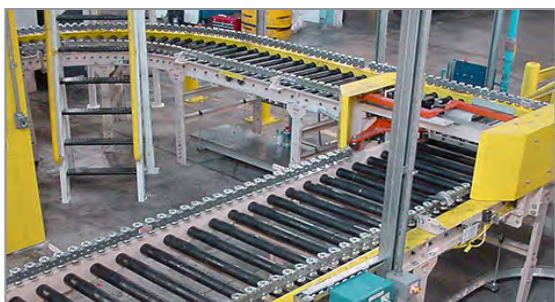
Fig. 3.1.3. Conveyer belt

Fig. 3.1.4. Peeler
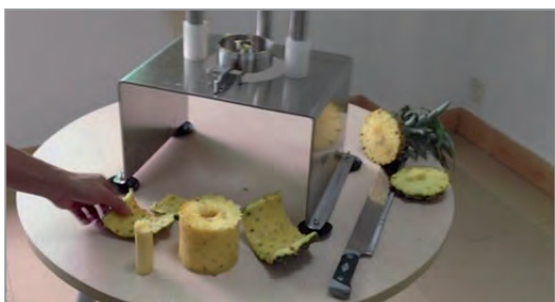
Fig. 3.1.5. Core cutter

Fig. 3.1.6. Crusher/chopper/shredder

Fig. 3.1.7. Blancher/hot break system

Fig. 3.1.18. Aseptic filler

Fig. 3.1.9. Decanter

Fig. 3.1.10. De-aerator

Fig. 3.1.11. Evaporator/concentrator

Fig. 3.1.12. Steriliser

Fig. 3.1.13. Retorts

3.1.2 Precautions and Safety Measures to Follow

- Avoid direct spillage of water on electrical components
- Clean the tools and equipment before and after each operation
- Ensure regular maintenance of tools and machinery
- Do not open machines with sharp knives during operation. It is safe to open a machine when it is unplugged from an electrical source
- Check machines like the steam-jacketed kettles regularly for efficiency of valves
- Ensure the build-up of pressure in machines is always under control
- Ensure the controls of all the machines are set to prescribed limits

UNIT 3.2: Sanitisation of the Work Area

Unit Objectives

At the end of this unit, you will be able to:

1. State the materials and equipment used in cleaning and maintenance of the work area and machineries;
2. List the various cleaning chemicals required.

3.2.1 Cleaning and Sanitisation

Cleaning and sanitisation of the work area is extremely important for every food-handling operation. Hence, it is important to know:

- What types of materials and equipment must be used to clean the work area?
- How to use these materials and equipment?
- The method of cleaning the work area
- The frequency of cleaning the process machineries

The food processing industry follows standard procedures for cleaning the work area. This is to ensure that there is no bacterial growth due to presence of leftover food particles. For cleaning purposes, the work area is divided into two. They are:

Food contact surfaces	Non-food contact surfaces
Work tables	Overhead structures
Utensils	Walls, ceilings, and shields
Equipment	Lighting equipment
Tools like knives	Refrigeration equipment
Machines that process foods	Air conditioning, heating or ventilating systems

Zone 4
Non-Food Processing Area

Zone 3
Next to Non-Food Contact Area

Zone 2
Non-Food Contact Area

Zone 1
Food Contact Area
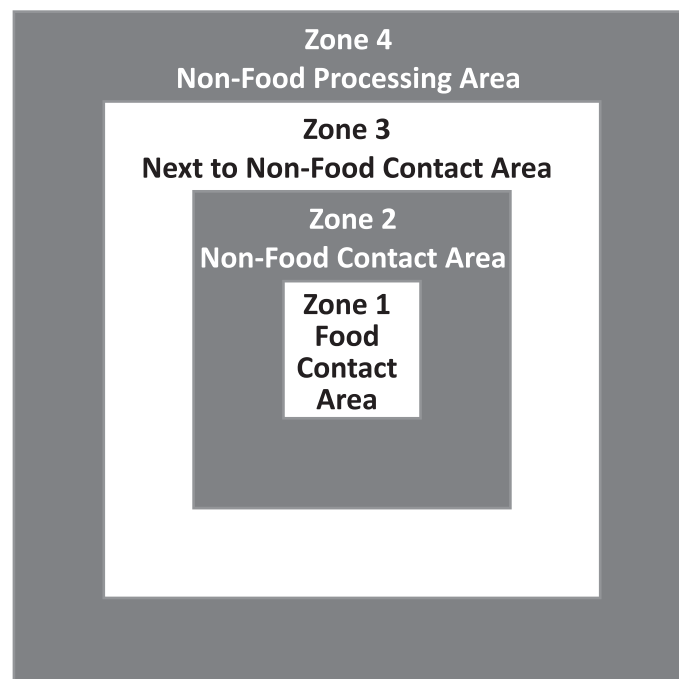
Fig. 3.2.1. Food contact and non-contact zones in a production area

Equipment, Chemicals, and Sanitisers Used for Cleaning

Every organisation in the food processing industry follows a cleaning schedule. For instance, a processing unit may follow a weekly, monthly or yearly cleaning schedule. To clean the processing unit, the following equipment and tools are used:

- Cleaning or washing tank
- Cleaning knives and spoons
- Cleaning or sanitising agents
- Cleaning brushes and scrubbers
- High spray nozzle jets

Fig. 3.2.2. Cleaning knives and spoons

Fig. 3.2.3. Cleaning agents and equipments

Fig. 3.2.4. Cleaning in washing tanks

Fig. 3.2.5. Cleaning floors of production area

Fig. 3.2.6. Cleaning equipment parts

Some common types of cleaners and sanitising agents to clean the food contact and non-food contact surfaces are:

Cleaning agents	Used for	Risk	Safety measure
Hypochlorites like potassium hypochlorite, sodium hypochlorite, and calcium hypochlorite	Cleaning stainless steel food contact surfaces	Leads to corrosion	Ensure pH and concentration levels are maintained
Liquid chlorine	Internal cleaning of stainless steel equipment and vessels	Leads to corrosion	Ensure concentration levels are maintained

Cleaning agents	Used for	Risk	Safety measure
Hydrogen peroxide	Killing bacterial spores, pathogens, spoilage organisms, and other microorganisms	Has a strong odour	Use in well-ventilated and open spaces
Ozone	Cleaning food-contact and non-food-contact surfaces like equipment, walls, floors, drains, conveyors, tanks, and other containers; Killing microbes	No risk involved since it leaves no residue	Safe to use

Storage of Sanitisers and Disinfectants

Sanitisers and disinfectants are packed and labelled in a proper manner. They are kept in a safe area within the storeroom. The cleanliness of this area is maintained at all times.

UNIT 3.3: Cleaning Processes

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. State the cleaning processes used to clean the work area and process machineries.

3.3.1 Clean-In-Place (CIP)

CIP is a method used for internal cleaning of machineries. It is done without dismantling pipes, vessels, process equipment, filters or fittings. In this process, a sanitising agent is circulated through the entire processing unit with the help of a spray ball. The turbulence created removes soil, ensuring removal of bacteria and chemical residues.

Tips to conduct an effective CIP process:

- Use the right vessels for the right process
- Use the right cleaning and sanitising solutions
- Ensure correct flow rate
- Ensure all connections are clean
- Monitor and verify the entire process

3.3.2 Clean-Out-Of-Place (COP)

COP is conducted at a cleaning station. This method involves dismantling of the equipment. In this process, equipment and units are scrubbed with soap in COP tanks. After this, the tanks are rinsed again to remove residual detergent or chemicals. Equipment and units are reassembled and sanitised once more with heat treatment or sanitising agent.

Tips to conduct an effective COP process:

- Follow the order of tasks
- Use cleaning tanks as much as possible
- Ensure tools used in COP do not lead to contamination

Food processing equipment and units that undergo the COP process are:

- Fittings
- Gaskets
- Valves
- Tank vents
- Grinders
- Pumps
- Knives
- Nozzles

3.3.3 Sterilising-In-Place (SIP)

SIP is the process by which food processing equipment is sanitised after the CIP process. It helps to eliminate any residual microbiological contamination.

SIP is a combination of three processes viz. sterilisation, disinfestation, and sanitisation.

Sterilisation
- • Uses steam or hot water

Disinfestation
- • Uses disinfectants or chlorine solution

Sanitisation
- • Uses soap solution or washing soda
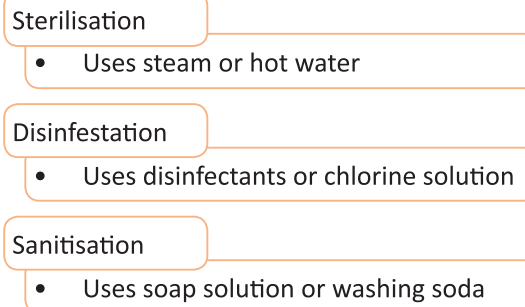
Fig. 3.3.1. Sterilising-In-Place (SIP)

3.3.4 Air-Pressure Cleaning

The food processing industry follows the air-pressure cleaning method to ensure cleanliness of regularly used equipment. The following chart explains the process in detail:

High pressure air is blown towards ovens and converyors → Equipment is removed and wiped → Equipment is oiled and greased → Equipment is refitted

Fig. 3.3.2. Air-pressure cleaning

3.3.5 Process of Cleaning the Work Area

The following chart explains the process of cleaning the work area before production. The dotted boxes explain pest-control measures and methods used for waste material disposal in detail.

Arrange tools, trolleys, crates, utensils, etc. at the designated place

Clean the work area through physical/dry method (e.g. sweeping)

Mop the work area with recommended sanitisers

Follow pest control measures
Ensure fly catchers, fly proofing doors and windows, air curtains, lizard and rat traps, etc. are in working condition

Make the work area pest-free

Remove any debris and dust from the work area

Ensure waste water goes to an Effluent Treatment Plant (ETP)
Ensure solid waste goes to a solid waste treatment plant or for organic composting

Dispose waste material appropriately as per the law

Clean and sanitise the work area

Fig. 3.3.3. Process of cleaning the work area

3.3.6 Process of Cleaning Machineries, Tools and Equipment

The chart explains cleaning of machineries, tools, and equipment used in the fruit pulp processing industry. The dotted chart states the techniques used for mechanical cleaning of equipment.

Gather tools, equipment, and machineries for cleaning and maintenance

- Use cleaning tools and equipment
- Use CIP/COP/SIP technique of cleaning

Clean the machines mechanically

Maintenance of tools and equipment

Sanitise using sanitising agents

Attend to minor repairs and faults (e.g. oiling and greasing parts after checking machinery)

Set controls for the process

Fig. 3.3.4. Process of cleaning machineries, tools and equipment

Exercise

1. **Fill in the blanks with the correct option.**

   a. The cleaning agent used to clean stainless steel food contact surfaces that can lead to corrosion if pH concentrations are not maintained is _____ .

      i. water
      iii. hypochlorite

      ii. ozone
      iv. brine solution

   b. Sanitisation leads to _____ of all pathogenic and almost all non-pathogenic organisms.

      i. addition
      iii. deposition

      ii. destruction
      iv. concentration

   c. The full form of SIP is _____ .

      i. Sterilising-In-Place
      iii. Sanitisation-In-Pipes

      ii. Sanitisation-Inward-Place
      iv. Side-In-Place

d. The cleaning process used for internal cleaning of machineries without dismantling pipes is ▁▁▁▁▁▁▁▁ .

i. CIP   ii. COP

iii. SIP   iv. sanitisation

e. The two types of microorganisms are ▁▁▁▁▁▁▁ and ▁▁▁▁▁▁▁.

i. good, harmful   ii. biological, physical

iii. healthy, sick   iv. biological, harmful

f. The ▁▁▁▁▁▁▁ method of cleaning involves dismantling of the equipment.

i. CIP   ii. dry

iii. COP   iv. SIP

2. **Match the columns.**

Machine	Usage
a. Retorts	i. Expels air from pulp
b. Seamer	ii. Extract pulp from fruit
c. De-aerator	iii. Can sterilisation before filling
d. De-stoner	iv. Processing and sterilising filled cans
e. Concentrator	v. Can reforming
f. Pulper	vi. Remove mango stones
g. Steam jacketed kettles	vii Remove core of pineapple
h. Aseptic filler	viii Filling of pulp into aseptic bags/packs
i. Can sterilisers	ix. Cooking pulp to make concentrate
j. Core cutter	x. Used for cooking pulp

Notes

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45

4. Prepare for Production of Fruit Pulp

Unit 4.1 – Basic Calculations

Unit 4.2 – Raw Material: Selection and Handling

Unit 4.3 – Production Planning Process and Sequence

Key Learning Outcomes

At the end of this unit, you will be able to:

1. Use basic mathematics for various calculations in day-to-day processes;

2. Identify the raw materials required for production as per production schedule and formation;

3. Organise quality raw material as per production process and company standards;

4. State the methods for storing raw material for later use;

5. Check the raw material for quality and grade;

6. Prepare the raw material for production;

7. Plan the production schedule as per organisational standards and instructions;

8. Organise for raw material, packaging materials, manpower, equipment, and machineries for the scheduled production;

9. Plan the production sequence to maximise capacity utilisation of resources, manpower, and machineries;

10. Calculate the batch size based on the production schedule and machine capacity;

11. Prioritise urgent orders based on the production schedule;

12. Check the conformance of raw material quality to company standards.

UNIT 4.1: Basic Calculations

Unit Objectives

At the end of this unit, you will be able to:

1. Use basic mathematics for various calculations in day-to-day processes.

4.1.1 Measurements

- **Relative humidity**: A unit used to measure moisture content in air
- **Brix to acid ratio**: A unit used to describe the total soluble solids content in a pulp/juice. The higher the Brix, the greater the sugar concentration in the juice; the higher the "Brix to acid ratio" the sweeter and less tart is the juice
- **pH**: Acidity levels to be checked for fruit-based product as they are acidic in nature

4.1.2 Calculation

- To calculate the yield of a particular fruit product, it is important to know Brix and pH levels of final product.
- The calculation is done as follows:

$$\text{Yield} = \frac{\text{TSS of all raw materials}}{\text{Percentage of TSS in final products}} \times 100$$

- Given below is an example to show how to calculate the yield for a mango beverage.

  Mango pulp TSS inclusive of sugar = Fruit: Sugar = 70:30.

  Required Brix of mango beverage = 40

  10 kg of fruit at 10 % TSS = 1.000 kg

  10 kg of sugar = 10.000 kg

  80 g of acid = 0.080 kg

  Total =1.000 + 10.000 + 0.080 = 11.08 kg

  $$\text{Yield} = \frac{11.08 \times 100}{40} = 27.7 \text{ kg}$$

UNIT 4.2: Raw Material: Selection and Handling

Unit Objectives

At the end of this unit, you will be able to:

1. Identify the raw materials required for production as per production schedule and formation;
2. Organize quality raw material as per production process and company standards;
3. State the methods for storing raw material for later use;
4. Check the raw material for quality and grade;
5. Prepare the raw material for production.

4.2.1 Selection of Raw Material

Raw Material Procurement and Storage

It is important to choose only those fruits/vegetables that are in the best condition during procurement.

The fruit processing industry for pulp manufacturing in India uses a wide range of fruits/vegetables. Some of the commonly used are mango (totapari, alphonso), guava, papaya, banana, etc. Vegetables used for commercial pulp manufacturing are tomato, carrot, etc.

Fruit selection depends on following factors:

- Tree or crop type
- Growing practices
- Degrees of maturity and ripeness
- Region where the crop has grown as per weather
- Location of the crop
- Method of pulping/harvesting

After procuring raw material, it goes to the processing unit for production. Ripened fruits have to be processed quickly. Hence, the manufacturing unit and the processing area are located close. This is because:

- There is continuous demand for raw materials
- Delay in production may lead to losses

In case of other fruits/vegetables, excess raw material and raw material that maybe processed later is stored in clean, airy, well ventilated, cold storage areas within the food processing unit.

Shown below is a chart of crop season, raw materials, and their time of availability:

Crop Season	Fruits/vegetables (raw material)	Availability
One	Mango	January to May
	Apple	July to September
	Lime	November to February
	Orange	December to March
	Pear, peach, and apricot	April to July
	Strawberry	February to April
	Eggplant/aubergine (brinjal)	October to March, July to September
	Tomato	October to April
	Carrot	October to March
Two	Pineapple	November to January and June to July
	Guava	November to January and June to July
	Papaya	November to January and June to July
No season	Banana	Throughout the year
	Lemon	Throughout the year

4.2.2 Handling of Raw Materials

How to Handle Raw Materials

Before starting with the actual process, it is important to understand how to handle raw materials that are procured from the farmer/supplier. Given below is a simple chart that shows the process the raw materials undergo before the pulping process:

Quality check	
Check for maturity of fruits/vegetables, colour, and size	Discard damaged, rotten fruits/vegetables and those with foreign particles

Sorting and grading	
Sort fruits and vegetables on a rope grader	Grade fruits and vegetables of similar sizes and qualities together

Cleaning and sizing	
Wash vegetables and fruits in the washer to remove stones, debris, leaves, and dust	Cut, peel, slice, shred, cube, dice vegetables/ fruits as per requirement

UNIT 4.3: Production Planning Process and Sequence

Unit Objectives

At the end of this unit, you will be able to:

1. Plan the production schedule as per organisational standards and instructions;
2. Organise for raw material, packaging materials, manpower, equipment, and machineries for the scheduled production;
3. Plan the production sequence to maximise capacity utilisation of resources, manpower, and machineries;
4. Calculate the batch size based on the production schedule and machine capacity;
5. Prioritise urgent orders based on the production schedule;
6. Check the conformance of raw material quality to company standards.

4.3.1 Production Plan

The following chart provides an overview of the production planning process:

Read and understand the production schedule
→
Check the availability of raw material
→
Check the availability of manpower and machinery
→
Check the working condition of tools, equipment, and machinery
→
Plan production sequence (efficient utilisation of resources, prioritise urgent orders)
→
Calculate batch size, machine capacity, and raw material quantity
→
Check the performance of equipment required for the process
→
Plan and allot responsibilities to trained manpower
→
Execute the pulp making process

4.3.2 Planning the Production Sequence

The following chart provides an overview of the production planning process:

Group
- Group raw material as per the type of fruit pulp to be made
- Group products that require the same process
- Group raw materials that do not impact the quality of the other

Plan
- Use the same equipment and machinery for various products
- Plan maximum capacity utilisation of machinery
- Consider the process time as per the desired fruit pulp

Prioritise
- Plan efficient utilisation of resources and manpower
- Prioritise urgent orders
- Uses of fruit/vegetables as per their ripening/maturity stage, stock

Calculate
- Ripened fruit/vegetables in stock
- Weight of fruit requirement as per the batch
- Packaging materials
- Manpower requirement

Check
- Performance of equipment and machinery
- Availability of fruits
- Packaging material, ingredients and chemical, power and fuel, and water

Organise
- Ripened fruit and equipment as per formulation chart
- Work responsibilities and allot them to workers and helpers

Exercise

1. **Match the column**

Name of fruit	Time of availability
a. Strawberry	i. December to March
b. Lemon	ii. February to April
c. Papaya	iii. Throughout the year
d. Mango	iv. January to May
e. Orange	v. November to January and June to July

2. **Fill in the blanks**

While planning the production sequence one must:

a. _____ raw material as per the type of fruit pulp to be made

b. _____ maximum capacity utilisation of machinery

c. _____ urgent orders

d. _____ weight of fruit requirement as per the batch

e. _____ the availability of fruits

f. _____ ripened fruit and equipment as per formulation chart

Options:

1. Prioritise
2. Calculate
3. Check
4. Group
5. Plan
6. Organise

Notes

_____

_____

_____

_____

_____

_____

_____

_____

_____

5. Produce Fruit Pulp from Various Fruits

Unit 5.1 – Fruit Pulping Process

Unit 5.2 – Ripening of Fruit

Unit 5.3 – Fruit Pulping Procedure and Sterilisation

Unit 5.4 – Quality Analysis of Fruit Pulp

Unit 5.5 – Packing, Packaging and Storage of Products

Unit 5.6 – Post Production Cleaning and Maintenance

Key Learning Outcomes

At the end of this unit, you will be able to:

1. Define fruit pulping;
2. List the various fruits used for pulping;
3. Describe the pulping process;
4. Explain the process of pulping fruit;
5. Define ripening;
6. Explain fruit ripening process;
7. State the procedures used to create fruit pulp;
8. Describe sterilisation process for fruit processing industry;
9. State the methods of sterilising fruit pulp;
10. List the quality control parameters for checking fruit pulp;
11. State the basic categories of packing;
12. State the various types of packaging materials used for packing fruit pulp;
13. State the factors for selecting packaging materials;
14. State the storage procedures for finished goods;
15. Explain the rules for stock rotation of finished goods;
16. Explain aseptic packaging in fruit processing industry;
17. Define canning and its purpose;
18. State the process of canning;
19. Arrange for proper cleaning of production area, equipment, tools and equipment used;
20. Organise periodic maintenance of all production machineries;
21. Arrange for proper cleaning of production area, equipment, tools and equipment used;
22. Organise periodic maintenance of all production machineries.

UNIT 5.1: Fruit Pulping Process

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. Define fruit pulping;
2. List the various fruits used for pulping;
3. Describe the pulping process;
4. Explain the process of pulping fruit.

5.1.1 Pulp and Pulping

What is Fruit Pulp and Pulping?

A soft, moist mass of a fruit after removal of skin, seeds, pith, and fibrous particles is called a fruit pulp. The process to create pulp is called pulping. This is performed under a controlled environment where the temperature, pressure, heat, etc. are monitored. The resulting product is a shapeless mass and acidic in taste. It is further processed for make a range of products like:

Fig. 5.1.1. Jams

Fig. 5.1.2. Juices

Fig. 5.1.3. Nectars

Fig. 5.1.4. Syrups

Fig. 5.1.5. Cordials

Types of Products Made from Pulp

The table below provides the various products made fruit pulp:

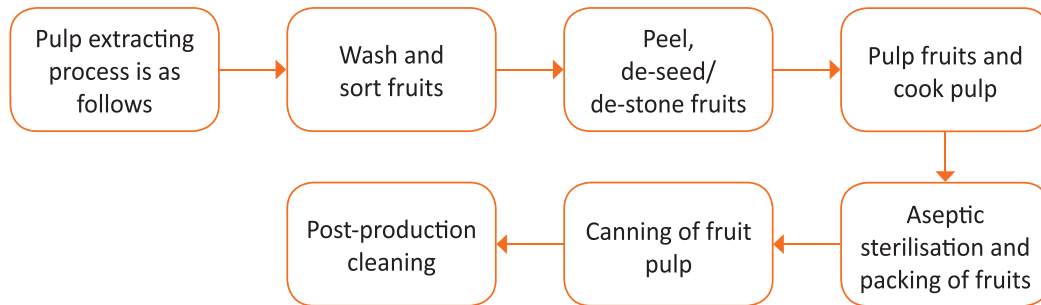| Name of fruit and vegetable	Products made	Name of fruit and vegetable	Products made
Mango	• Beverage • Jam • Mango leather • Pulp powder	Apple	• Beverage • Jelly • Jam • Juice powder • Baby food
Guava	• Beverage • Jelly • Jam • Pulp powder	Pear	• Beverage • Jelly • Jam
Papaya	• Beverage • Jelly • Jam • Pulp powder	Strawberry	• Beverage • Jam • Jelly • Ice cream • Pulp powder
Banana	• Beverage • Jam • Pulp powder • Baby food	Tomato	• Tomato paste • Ketchup • Sauces
Pineapple	• Beverage • Jelly • Jam • Pulp powder	Carrot	• Beverage • Powder • Baby food
Orange	• Beverage • Jelly • Jam • Pulp powder	Brinjal	• Culinary food

5.1.2 Pulping Process

Terminology Used in Process

• TSS (Total Soluble Solids): It is the extracted mass of fruit, which contains fibres and fruit sugar.

• Refractometer: It is a tool used for measuring TSS.

• pH indicator: A numeric scale to check acid levels in pulp/juice. It is between 2.5 to 4.
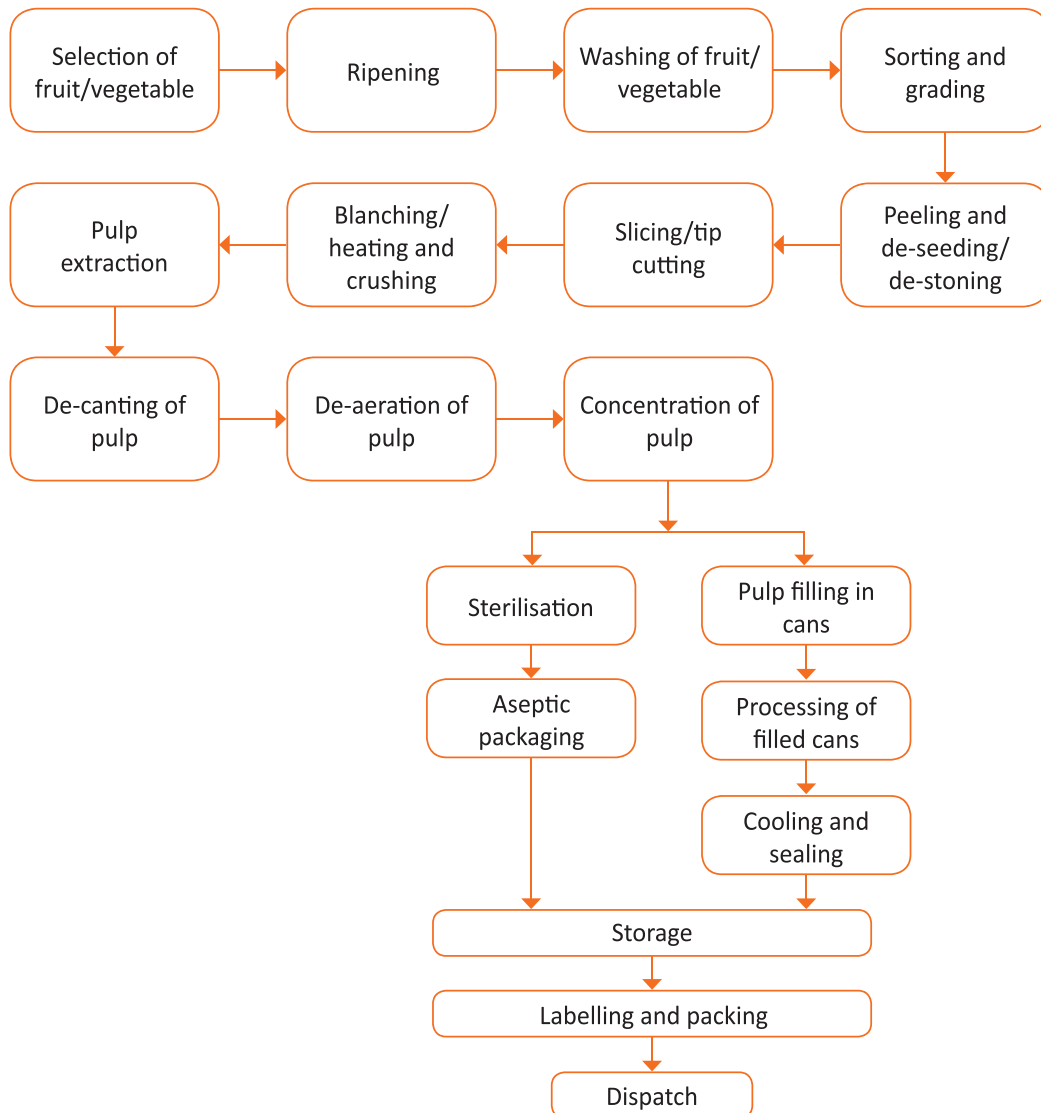
Overview of the Pulp Extracting Process

Pulp extracting process is as follows:

```
┌─────────────────┐     ┌─────────────┐     ┌──────────────┐     ┌─────────────────┐
│ Pulp extracting │ ──> │ Wash and    │ ──> │ Peel,        │ ──> │ Pulp fruits and │
│ process is as   │     │ sort fruits │     │ de-seed/     │     │ cook pulp       │
│ follows         │     │             │     │ de-stone     │     │                 │
│                 │     │             │     │ fruits       │     │                 │
└─────────────────┘     └─────────────┘     └──────────────┘     └─────────────────┘
                                                                          │
                                                                          ▼
┌─────────────────┐     ┌─────────────┐     ┌──────────────────────┐
│ Post-production │ <── │ Canning of  │ <── │ Aseptic              │
│ cleaning        │     │ fruit pulp  │     │ sterilisation and    │
│                 │     │             │     │ packing of fruits    │
└─────────────────┘     └─────────────┘     └──────────────────────┘
```

5.1.3 Production Process of Fruit Pulp

Pulping Process

The following chart gives a detailed overview of the process of pulping:

```
┌──────────────┐   ┌───────────┐   ┌───────────────┐   ┌──────────────┐
│ Selection of │ ─>│ Ripening  │ ─>│ Washing of    │ ─>│ Sorting and  │
│ fruit/       │   │           │   │ fruit/        │   │ grading      │
│ vegetable    │   │           │   │ vegetable     │   │              │
└──────────────┘   └───────────┘   └───────────────┘   └──────────────┘
                                                               │
                                                               ▼
┌──────────────┐   ┌──────────────┐   ┌──────────────┐   ┌──────────────┐
│ Pulp         │<─ │ Blanching/   │<─ │ Slicing/tip  │<─ │ Peeling and  │
│ extraction   │   │ heating and  │   │ cutting      │   │ de-seeding/  │
│              │   │ crushing     │   │              │   │ de-stoning   │
└──────────────┘   └──────────────┘   └──────────────┘   └──────────────┘
       │
       ▼
┌──────────────┐   ┌──────────────┐   ┌──────────────┐
│ De-canting of│ ─>│ De-aeration  │ ─>│ Concentration│
│ pulp         │   │ of pulp      │   │ of pulp      │
└──────────────┘   └──────────────┘   └──────────────┘
                                             │
                          ┌──────────────────┴──────────────────┐
                          ▼                                     ▼
                   ┌──────────────┐                    ┌──────────────┐
                   │ Sterilisation│                    │ Pulp filling │
                   │              │                    │ in cans      │
                   └──────────────┘                    └──────────────┘
                          │                                    │
                          ▼                                    ▼
                   ┌──────────────┐                    ┌──────────────┐
                   │ Aseptic      │                    │ Processing of│
                   │ packaging    │                    │ filled cans  │
                   └──────────────┘                    └──────────────┘
                          │                                    │
                          │                                    ▼
                          │                             ┌──────────────┐
                          │                             │ Cooling and  │
                          │                             │ sealing      │
                          │                             └──────────────┘
                          │                                    │
                          └──────────────┬─────────────────────┘
                                         ▼
                          ┌──────────────────────────────┐
                          │ Storage                      │
                          └──────────────────────────────┘
                                         │
                                         ▼
                          ┌──────────────────────────────┐
                          │ Labelling and packing        │
                          └──────────────────────────────┘
                                         │
                                         ▼
                          ┌──────────────────────────────┐
                          │ Dispatch                     │
                          └──────────────────────────────┘
```

UNIT 5.2: Ripening of Fruit

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. Define ripening;
2. Explain fruit ripening process.

5.2.1 What is Fruit Ripening?

What is Fruit Pulp and Pulping?

Ripening is a process where fruit is transformed into a palatable state. It is a link in achieving optimal eating quality for many types of fruits. This process is speeded up using ripening agents.

Based on the ripening behaviour, fruits are classified as climacteric and non-climacteric fruits.

Climacteric Fruits	Non-climacteric Fruits
• Fruits which continue to ripen after harvesting • Cannot withstand travelling hence ripened near consumption area • Ethylene helps in ripening • Examples: Mango, banana, plum, papaya, guava, pear, etc.	• Fruits which ripen only on plant • Can withstand travelling and hence transported • Ethylene helps in removal of green colour of fruits • Examples: Orange, grapes, watermelon, litchi, strawberry, etc.

Ripening agents

The substance used to speed up the ripening process is called ripening agent. Commonly used ripening agent is ethylene gas. Under natural conditions, ethylene, a ripening hormone produced by the plant, plays a major role in the ripening process.

Methods of ripening

Given below are common methods for ripening of fruit:

- A simple method practiced in households is to keep un-ripened and ripened fruits together inside an airtight container.
- Another method is to place the fruits intended for ripening inside an airtight room and inducing charcoal smoke in the room.
- Another process is to dip the fruits in a solution that is 1 ml ethrel solution in 1 litre of water, and wiped dry. After that, each fruit spread out on a newspaper without touching each other and covered with a thin cotton cloth. The fruit ripens in two days.
- Spreading unripe fruits in layers over paddy husk or wheat straw for a week to ripen them is another alternative.
- Some ethylene releasing fruits such as papaya and banana are also kept in the same room with unripe fruit. Since ethrel is a plant hormone, it hastens the ripening process by releasing ethylene in the atmosphere. This practice is the safest method.
- Calcium carbide is also used for ripening, but it makes the fruit poisonous and such fruit should not be consumed.

UNIT 5.3: Fruit Pulping Procedure and Sterilisation

Unit Objectives

At the end of this unit, you will be able to:

1. State the procedures used to create fruit pulp;
2. Describe sterilisation process for fruit processing industry;
3. State the methods of sterilising fruit pulp.

5.3.1 Procedures Involved in Pulping

Decanting

It is a filtering/removal process. All the rotten fruit particles (black and brown skin and extraneous matter), larva, eggs, sand from the fruit extract, etc. is separated out. The extracted fruit pulp is raw, pure fruit pulp. It is done by centrifugation process. The raw extracted pulp is rotated at high speed to remove the layer of black specks and unwanted particles.

De-aeration

It is a process of expelling air from the product before sterilisation and filling.

In crushing, pressing, separation, and decanting, the raw fruit pulp extract is subjected to considerable aeration. The inclusion of oxygen can promote enzymatic browning, destroy nutrients, modify flavour, and otherwise damage quality. Hence, ensure caution and care to protect the material.

De-aeration methods

- Rapid heating and heated pulp transferred into a vacuum chamber: Rapid heating at high temperature removes some undesirable volatile aroma and air. The heated pulp is passed into vacuum chamber for storing/further processes

- Inert gas bubbling: In the extracted, raw, pre-cooked pulp, nitrogen or carbon dioxide gas is bubbled prior to storing it under an inert atmosphere. After the removal of air, pulp needs protection from the atmosphere in all subsequent processing steps. It is done in vacuum conditions with the aid of a pump

Concentration

It is a process to cook fruit pulp in order to remove water content from the product. The fruit pulp is boiled, and it becomes thick after water evaporates from it. The processed fruit pulp is called concentrate. It is done in an evaporator under controlled conditions of pulp flow, temperature, and boiling time. Low temperature evaporators operate at a maximum temperature of 50°C.

5.3.2 Sterilisation of Fruit Pulp

Sterilisation Process

It is a process to kill all harmful microorganisms present in the product. It is done to increase the product life.

Methods of sterilising fruit pulp

Given below are two methods used for sterilisation in fruit processing industry:

Retort	Tube-in-tube
Batch process	Continuous process
Filled cans are put on rack and loaded into retort	Passed through series of tubes placed within a tube
Steam is trapped in retort	Steam is passed through the outer tube
Sterilisation technique is done on the basis of cooking in a cooker	High Temperature Short Time (HTST) technique used for sterilisation
Cooling is done separately	Cooling is done by the extension of tube at filling temperature

UNIT 5.4: Quality Analysis of Fruit Pulp

Unit Objectives

At the end of this unit, you will be able to:

1. List the quality control parameters for checking fruit pulp.

5.4.1 Quality Control

It is an optimum standard maintained continuously as per the company norms to produce quality product along with specific guidelines from the government. If the quality standards are not maintained, it could lead to fatal consequences.

5.4.2 Quality Parameters of Fruit Pulp

Every step involved in the process requires monitoring inclusive of food safety and personal hygiene. In fruit pulp, quality check is done on basis of technical specification and organoleptic, which differ from fruit to fruit.

1. pH: Each fruit has its own acidity level. The processing company maintains it as per their requirement.

2. TSS: Each fruit product has its own Brix ratio. The processing company maintains it as per their requirement.

3. Viscosity: It is measured by refractometer as per the need

4. Taste/flavour, colour, and texture: It is checked by tasting the pulp

Given below is a chart of common fruit pulp requirements:

Fruit	pH (Acidity %)	TSS (Brix degrees)
Mango	0.6 % to 0.7 %	14^0
Papaya	0.2 %	10^0 to 12^0
Pear	0.3 %	10^0
Peach/apricot	0.2 % to 0.3 %	10^0 to 12^0
Pineapple	0.4 % to 0.6 %	10^0 to 12^0
Litchi	0.3 % to 0.5 %	10^0 to 12^0
Banana	0.2 % to 0.3 %	24^0
Apple	0.15 % to 0.2 %	10^0 to 12^0
Tomato	0.5 % to 0.6 %	4^0

UNIT 5.5: Packing, Packaging and Storage of Products

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. State the basic categories of packing;
2. State the various types of packaging materials used for packing fruit pulp;
3. State the factors for selecting packaging materials;
4. State the storage procedures for finished goods;
5. Explain the rules for stock rotation of finished goods;
6. Explain aseptic packaging in fruit processing industry;
7. Define canning and its purpose;
8. State the process of canning;
9. Arrange for proper cleaning of production area, equipment, tools and equipment used;
10. Organise periodic maintenance of all production machineries.

5.5.1 Packing and Packaging

Packing of Finished Products

The finished product is filled in containers meant for packaging. Depending on the demand, the market and the size of the industry packing is categorised as follows:

Packing

Primary packing
- Comes in direct contact with food
- E.g. Pouches, bottles, sachets, drums

Secondary packing
- Comes in contact with the primary packing material
- E.g. Cartons (filled with bottles)

Fig. 5.5.1. Primary packing

Fig. 5.5.2. Secondary packing

When selecting the packaging material to pack the finished products, one must ensure that the packaging material is:

- Non-toxic and compatible with food
- Offers sanitary protection
- Protects the product from moisture, gas, and odour
- Protects the product from light, temperature, humidity, and rain
- Protects the product from insects, mites, bacteria, rodents, and birds

- Is transparent and tamper-proof

- Offers ease of opening, pouring, resealing, and disposing

- Is compatible with the size, shape, and appearance standards set by the organisation

- Is low on cost

5.5.2 Storage of Finished Products

Methods of Storing Finished Products

The fruit industry follows the JIT (Just-In-Time) system. Here, finished product is dispatched to the distributor, retail industry or institution as soon as the product is ready. A carton of processed pulp can be stored for a long time in the storehouse.

The two most common, stock rotation systems like FIFO and FEFO are applied to finished product.

- FIFO (First-In-First-Out) is a stock rotation system that dispatches processed food depending on the order in which it is produced.
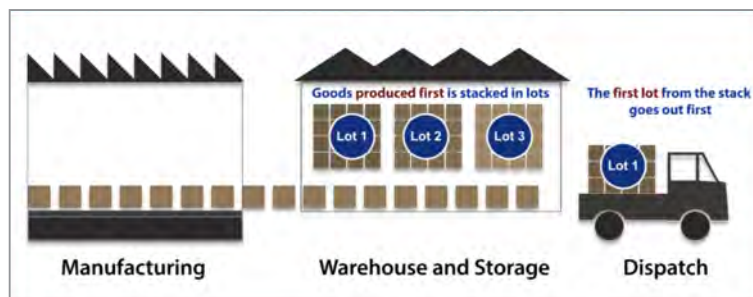
Fig. 5.5.1. FIFO stock rotation

- FEFO (First-Expired-First-Out) is a stock rotation system wherein products that need to be consumed earlier are shipped first.
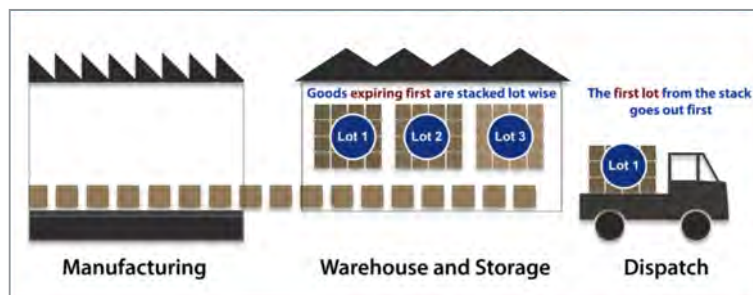
Fig. 5.5.2. FEFO stock rotation

5.5.3 Aseptic Packaging

Aseptic Packaging

Packaging ensures that processed food is sterile and protected from harmful microorganisms. Packaging done in a germ free environment is called aseptic packaging. It is the final steps in aseptic food processing. Food product is sterilised continuously ensuring that either food decay and/or food poisoning does not occur. Aseptic packaging ensures that the containers for the food are sterilised continuously and that the food is inserted into the container in a completely sterile environment.

The packaging material used is multi-layered. Paper, polyester, and metal liners are pre-sterilised products. Examples of aseptic packaging are milk tetra packs/cartons, juice pouches, boxes, etc.

The common methods of aseptic packing are:

Fig. 5.5.3. Form-fill seal

Fig. 5.5.4. Bag-in-box
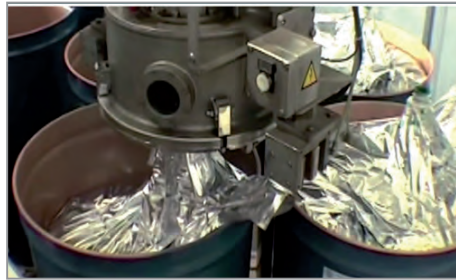
Fig. 5.5.5. Bag-in-drum

5.5.4 Canning of Fruit pulp

What is Canning?

Canning is a food preservation technique. Processed food is filled into sterilised cans/bottles for preservation. This filled product along with cans/bottles undergoes pasteurisation/sterilisation using heat. The purpose of canning is:
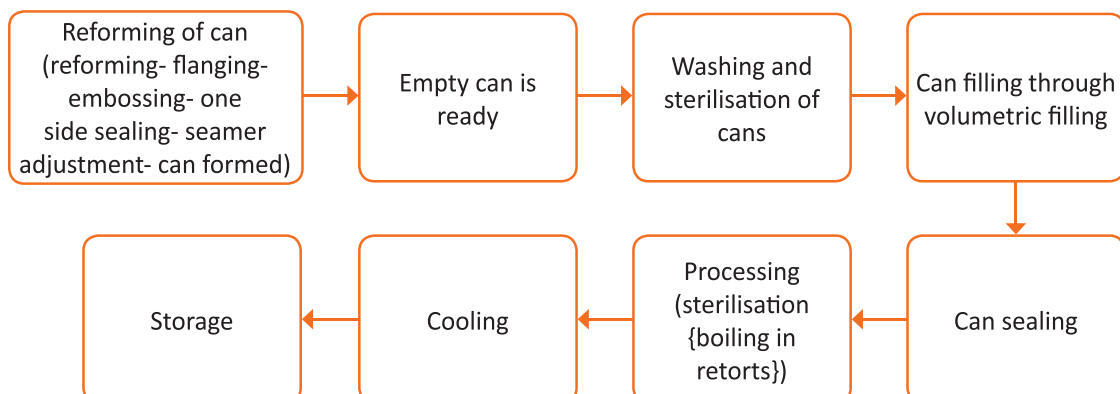
• Canned foods are a way to store fruit/vegetables in an optimum way and to retain the oxygen.

• Canned foods are also used to supply foods to the defence and scarce areas where it may not be available.

Canning can be done in three ways given below:

1. Static canning followed by freezing under pressure
2. Sterilisation under high pressure
3. Sterilisation under hyper heating

Process of Canning

Following are the steps for canning:

Reforming of can (reforming- flanging- embossing- one side sealing- seamer adjustment- can formed)	→	Empty can is ready	→	Washing and sterilisation of cans	→	Can filling through volumetric filling

Storage	←	Cooling	←	Processing (sterilisation {boiling in retorts})	←	Can sealing

UNIT 5.6: Post-Production Cleaning and Maintenance

Unit Objectives

At the end of this unit, you will be able to:

1. Arrange for proper cleaning of production area, equipment, tools and equipment used;
2. Organise periodic maintenance of all production machineries.

5.6.1 Post Production Cleaning Method

This explains the method of cleaning the work area after production.

```
Clean machineries with          Clean equipment and             E.g. knives,
recommended sanitisers    →     tools with recommended          pans, buckets,
                                sanitisers                      trolleys
                                      ↓
Clean the work area as per  ←   Attend to minor repairs and     E.g. oiling
norms                           maintenance work                and greasing
                                                                machines

Ensure work area is free    →   Maintain equipment daily/
from pests                      weekly as per supplier's
                                instruction manual
                                      ↓
                                Ensure periodic
                                maintenance by AMC
                                (Annual Maintenance
                                Contract) personnel
```

Exercise

1. **Select the correct answer.**

   a. Ripening is a process in the transformation of fruit into a _____ state.

      i. smelly   ii. rotten
      iii. palatable   iv. oily

   b. A unit used to describe the total soluble solids content in a fruit pulp/juice is _____ ratio.

      i. TSS   ii. Brix to acid
      iii. soluble solid   iv. soluble liquid

c. Two methods of sterilising fruit pulp are _____ and _____.

i. boiling and retort
ii. retort and tube-in-tube
iii. tube-in-tube and boiling
iv. boiling and cooling

d. The functions of a package are to _____ the quality and freshness of food, to add appeal to the food to attract consumers, and to facilitate its storage and distribution.

i. preserve
ii. enhance
iii. maintain
iv. observe

e. Packaging undertaken in a germ-free environment is called _____ packaging.

i. homogenized
ii. germ-free
iii. sterilised
iv. aseptic

f. De-canting is a _____ process in which all rotten fruit particles are removed.

i. filtering
ii. aeration
iii. sterilisation
iv. aseptic

2. **Arrange the following in the correct sequence**

a. Canning process

i. Storage
ii. Can sealing
iii. Sterilisation of cans
iv. Cooling
v. Empty can is ready
vi. Reforming of can
vii. Washing
viii. Volumetric filling

b. Fruit pulping process

i. Fruit selection
ii. Blanching
iii. Sterilisation
iv. Tip cutting
v. Aseptic packaging
vi. Washing
vii. De-aeration
viii. Decanting
ix. Concentration
x. Storage
xi. Pulp extraction
xii. Ripening

Notes

_____

_____

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6. Complete Documentation and Record Keeping Related to Production of Fruit Pulp

Unit 6.1 – Documentation and Record Keeping

Unit 6.2 – Field Visit

Key Learning Outcomes

At the end of this unit, you will be able to:

1. State the need for documenting and maintaining records of raw materials, process, and finished products;
2. State the method of documenting and recording the details of raw material to final finished product;
3. Observe the various facilities, machineries and fruit pulp process in the food processing industry.

UNIT 6.1: Documentation and Record Keeping

Unit Objectives

At the end of this unit, you will be able to:

1. State the need for documenting and maintaining records of raw materials, process, and finished products;
2. State the method of documenting and recording the details of raw material to final finished product.

6.1.1 Need for Documentation

Every organisation has to maintain records of raw material procurement, production processes, and sales. This is to ensure that the business runs effectively and is profitable. Listed below are some reasons why there is a need for documentation:

- It gives detailed knowledge about running of the business.
- It helps to control product quality.
- It helps to keep track of the money invested in the business.
- It helps to identify the separate costs of raw material or product ingredients.
- It helps to identify the production cost of a particular process.
- It helps to ensure that quality assurance procedures are followed.
- It helps to ensure that the production unit is running smoothly/effectively.
- It works as an evidence for legal procedures.
- It helps to set an appropriate product price.
- It helps to take corrective measures at the right time.

6.1.2 How to Keep Records?

Every food processing organisation follows a more or less similar way of keeping records. Production records keep a log of:

- The quantity and type of raw materials
- The quantity and type of ingredients used
- The processing conditions in which production took place (e.g. the temperature set or the air pressure applied)
- The product quality

Product quality can be maintained only when:

- The same quantity and quality of ingredients and raw materials are mixed in every batch
- A standard formulation is used for every batch
- Standard process parameters are applied for every batch

Every batch of food is given a batch number. This number is recorded in:

- Stock control books (where raw material procurement is noted)
- Processing log books (where production process is noted)
- Product sales records (where sales and distribution is noted)

The batch number must correlate with the product code number, which is printed on labels. This helps the processor to trace any fault found in a batch back to the raw material used or the production process.

Example of a stock control book:

• Product Name			• Batch Number	
• Raw material*	• Supplier	• Results of inspection for:		
		A	B	C

UNIT 6.2: Field Visit

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. Observe the various facilities, machineries and fruit pulp process in the food processing industry.

6.2.1 Field Observation Sheet

Field Observation Sheet				
#	Date of Visit	Name of the Industry and Location	Brief Description of the Industry Visited	Facilities Visited	Observations

Exercise

1. **Tick the correct options**

   a. What is the need for documentation?

       i. It gives detailed knowledge about the running of a business. ☐

       ii. It helps to control product quality. ☐

       iii. It helps to keep track of the money invested in the business. ☐

       iv. It helps to identify the separate costs of raw material or product ingredients. ☐

       v. It helps to identify the production cost of a particular process. ☐

       vi. It helps in raw material storage. ☐

       vii. It helps to ensure that quality assurance procedures are followed. ☐

       viii. It helps to ensure that the production unit is running smoothly/effectively. ☐

       ix. It works as an evidence for legal procedures. ☐

       x. It helps to clean the food handling equipment and machineries. ☐

       xi. It helps in sending the produce to the market. ☐

       xii. It helps to set an appropriate product price. ☐

       xiii. It helps to take corrective measures at the right time. ☐

   b. Production records keep a log of _____.

       i. the quantity and type of raw materials. ☐

       ii. the amount of finished products stored. ☐

       iii. the quantity and type of ingredients used. ☐

       iv. the processing conditions in which production took place (e.g. the temperature set or the air pressure applied). ☐

       v. the product quality. ☐

2. **Match the columns**

Column A	Column B
a. Every production process completed is given a number	i. Stock control books
b. The details of raw material procurement is noted	ii. Batch number
c. The details of production process is noted	iii. Quality procedures are followed
d. The details of product sales is recorded	iv. Legal evidence
e. Records serve as	v. Processing log books
f. Properly maintained records help to identify whether	vi. Sales and distribution log

3. **Complete the process of documentation and maintaining records of production and finished products. Fill in the blanks with the correct options given below.**

   a. Document and maintain the records of ⎯⎯⎯⎯⎯⎯⎯⎯ .

   b. Document the finished products details ⎯⎯⎯⎯⎯⎯⎯⎯ .

   c. Maintain the record of ⎯⎯⎯⎯⎯⎯⎯⎯ related to finished products.

   d. Verify the documents and ⎯⎯⎯⎯⎯⎯⎯⎯ in case of quality concerns and for quality management system audit.

   e. Document process details such as type of raw material used, process parameters (temperature, time, etc. as applicable) for entire process handled ⎯⎯⎯⎯⎯⎯⎯⎯ for all products produced.

   Options:
   1. in process chart or production log
   2. as per company standards
   3. finished products
   4. track from finished product to raw materials
   5. observations or deviations (if any)

Notes

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7. Employability and Entrepreneurship Skills

Unit 7.1 – Personal Strengths and Value Systems

Unit 7.2 – Digital Literacy: A Recap

Unit 7.3 – Money Matters

Unit 7.4 – Preparing for Employment and Self Employment

Unit 7.5 – Understanding Entrepreneurship

Unit 7.6 – Preparing to be an Entrepreneur

Key Learning Outcomes

At the end of this unit, you will be able to:

1. Explain the meaning of health
2. List common health issues
3. Discuss tips to prevent common health issues
4. Explain the meaning of hygiene
5. Discuss the purpose of Swacch Bharat Abhiyan
6. Explain the meaning of habit
7. Discuss ways to set up a safe work environment
8. Discuss critical safety habits to be followed by employees
9. Explain the importance of self-analysis
10. Discuss motivation with the help of Maslow's Hierarchy of Needs
11. Discuss the meaning of achievement motivation
12. List the characteristics of entrepreneurs with achievement motivation
13. List the different factors that motivate you
14. Discuss the role of attitude in self-analysis
15. Discuss how to maintain a positive attitude
16. List your strengths and weaknesses
17. Discuss the qualities of honest people
18. Describe the importance of honesty in entrepreneurs
19. Discuss the elements of a strong work ethic
20. Discuss how to foster a good work ethic
21. List the characteristics of highly creative people
22. List the characteristics of highly innovative people
23. Discuss the benefits of time management
24. List the traits of effective time managers
25. Describe effective time management technique
26. Discuss the importance of anger management
27. Describe anger management strategies
28. Discuss tips for anger management
29. Discuss the causes of stress
30. Discuss the symptoms of stress
31. Discuss tips for stress management
32. Identify the basic parts of a computer
33. Identify the basic parts of a keyboard
34. Recall basic computer terminology
35. Recall the functions of basic computer keys
36. Discuss the main applications of MS Office
37. Discuss the benefits of Microsoft Outlook
38. Discuss the different types of e-commerce
39. List the benefits of e-commerce for retailers and customers
40. Discuss how the Digital India campaign will help boost e-commerce in India
41. Describe how you will sell a product or service on an e-commerce platform

42. Discuss the importance of saving money
43. Discuss the benefits of saving money
44. Discuss the main types of bank accounts
45. Describe the process of opening a bank account
46. Differentiate between fixed and variable costs
47. Describe the main types of investment options
48. Describe the different types of insurance products
49. Describe the different types of taxes
50. Discuss the uses of online banking
51. Discuss the main types of electronic funds transfers
52. Discuss the steps to prepare for an interview
53. Discuss the steps to create an effective Resume
54. Discuss the most frequently asked interview questions
55. Discuss how to answer the most frequently asked interview questions
56. Discuss basic workplace terminology
57. Discuss the concept of entrepreneurship
58. Discuss the importance of entrepreneurship
59. Describe the characteristics of an entrepreneur
60. Describe the different types of enterprises
61. List the qualities of an effective leader
62. Discuss the benefits of effective leadership
63. List the traits of an effective team
64. Discuss the importance of listening effectively
65. Discuss how to listen effectively
66. Discuss the importance of speaking effectively
67. Discuss how to speak effectively
68. Discuss how to solve problems
69. List important problem solving traits
70. Discuss ways to assess problem solving skills
71. Discuss the importance of negotiation
72. Discuss how to negotiate
73. Discuss how to identify new business opportunities
74. Discuss how to identify business opportunities within your business
75. Explain the meaning of entrepreneur
76. Describe the different types of entrepreneurs
77. List the characteristics of entrepreneurs
78. Recall entrepreneur success stories
79. Discuss the entrepreneurial process
80. Describe the entrepreneurship ecosystem
81. Discuss the purpose of the Make in India campaign
82. Discuss key schemes to promote entrepreneurs
83. Discuss the relationship between entrepreneurship and risk appetite
84. Discuss the relationship between entrepreneurship and resilience
85. Describe the characteristics of a resilient entrepreneur

86. Discuss how to deal with failure
87. Discuss how market research is carried out
88. Describe the 4 Ps of marketing
89. Discuss the importance of idea generation
90. Recall basic business terminology
91. Discuss the need for CRM
92. Discuss the benefits of CRM
93. Discuss the need for networking
94. Discuss the benefits of networking
95. Discuss the importance of setting goals
96. Differentiate between short-term, medium-term and long-term goals
97. Discuss how to write a business plan
98. Explain the financial planning process
99. Discuss ways to manage your risk
100. Describe the procedure and formalities for applying for bank finance
101. Discuss how to manage your own enterprise
102. List important questions that every entrepreneur should ask before starting an enterprise

Unit 7.1: Personal Strengths and Value Systems

Unit Objectives

At the end of this unit, you will be able to:

1. Explain the meaning of health
2. List common health issues
3. Discuss tips to prevent common health issues
4. Explain the meaning of hygiene
5. Discuss the purpose of Swacch Bharat Abhiyan
6. Explain the meaning of habit
7. Discuss ways to set up a safe work environment
8. Discuss critical safety habits to be followed by employees
9. Explain the importance of self-analysis
10. Discuss motivation with the help of Maslow's Hierarchy of Needs
11. Discuss the meaning of achievement motivation
12. List the characteristics of entrepreneurs with achievement motivation
13. List the different factors that motivate you
14. Discuss the role of attitude in self-analysis
15. Discuss how to maintain a positive attitude
16. List your strengths and weaknesses
17. Discuss the qualities of honest people
18. Describe the importance of honesty in entrepreneurs
19. Discuss the elements of a strong work ethic
20. Discuss how to foster a good work ethic
21. List the characteristics of highly creative people
22. List the characteristics of highly innovative people
23. Discuss the benefits of time management
24. List the traits of effective time managers
25. Describe effective time management technique
26. Discuss the importance of anger management
27. Describe anger management strategies
28. Discuss tips for anger management
29. Discuss the causes of stress
30. Discuss the symptoms of stress
31. Discuss tips for stress management

7.1.1 Health, Habits, Hygiene: What is Health?

As per the World Health Organization (WHO), health is a "State of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity." This means being healthy does not simply mean not being unhealthy – it also means you need to be at peace emotionally, and feel fit physically. For example, you cannot say you are healthy simply because you do not have any physical ailments like a cold or cough. You also need to think about whether you are feeling calm, relaxed and happy.

Common Health Issues

Some common health issues are:

- Allergies
- Asthma
- Skin Disorders
- Depression and Anxiety
- Diabetes
- Cough, Cold, Sore Throat
- Difficulty Sleeping
- Obesity

Tips to Prevent Health Issues

Taking measures to prevent ill health is always better than curing a disease or sickness. You can stay healthy by:

- Eating healthy foods like fruits, vegetables and nuts
- Cutting back on unhealthy and sugary foods
- Drinking enough water everyday
- Not smoking or drinking alcohol
- Exercising for at least 30 minutes a day, 4-5 times a week
- Taking vaccinations when required
- Practicing yoga exercises and meditatio

How many of these health standards do you follow? Tick the ones that apply to you.

1. Get minimum 7-8 hours of sleep every night. ☐

2. Avoid checking email first thing in the morning and right before you go to bed at night. ☐

3. Don't skip meals – eat regular meals at correct meal times. ☐

4. Read a little bit every single day. ☐

5. Eat more home cooked food than junk food. ☐

6. Stand more than you sit. ☐

7. Drink a glass of water first thing in the morning and have at least 8 glasses of water through the day. ☐

8. Go to the doctor and dentist for regular checkups. ☐

9. Exercise for 30 minutes at least 5 days a week. ☐

10. Avoid consuming lots of aerated beverages. ☐

What is Hygiene?

As per the World Health Organization (WHO), "Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases." In other words, hygiene means ensuring that you do whatever is required to keep your surroundings clean, so that you reduce the chances of spreading germs and diseases.

For instance, think about the kitchen in your home. Good hygiene means ensuring that the kitchen is always spick and span, the food is put away, dishes are washed and dustbins are not overflowing with garbage. Doing all this will reduce the chances of attracting pests like rats or cockroaches, and prevent the growth of fungus and other bacteria, which could spread disease.

How many of these health standards do you follow? Tick the ones that apply to you.

1. Have a bath or shower every day with soap – and wash your hair with shampoo 2-3 times a week. ☐

2. Wear a fresh pair of clean undergarments every day. ☐

3. Brush your teeth in the morning and before going to bed. ☐

4. Cut your fingernails and toenails regularly. ☐

5. Wash your hands with soap after going to the toilet. ☐

6. Use an anti-perspirant deodorant on your underarms if you sweat a lot. ☐

7. Wash your hands with soap before cooking or eating. ☐

8. Stay home when you are sick, so other people don't catch what you have. ☐

9. Wash dirty clothes with laundry soap before wearing them again. ☐

10. Cover your nose with a tissue/your hand when coughing or sneezing. ☐

See how healthy and hygienic you are, by giving yourself 1 point for every ticked statement! Then take a look at what your score means.

Your Score

0-7/20: You need to work a lot harder to stay fit and fine! Make it a point to practice good habits daily and see how much better you feel!

7-14/20: Not bad, but there is scope for improvement! Try and add a few more good habits to your daily routine.

14-20/20: Great job! Keep up the good work! Your body and mind thank you!

Swachh Bharat Abhiyan

We have already discussed the importance of following good hygiene and health practices for ourselves. But, it is not enough for us to be healthy and hygienic. We must also extend this standard to our homes, our immediate surroundings and to our country as a whole.

The 'Swachh Bharat Abhiyan' (Clean India Mission) launched by Prime Minister Shri Narendra Modi on 2nd October 2014, believes in doing exactly this. The aim of this mission is to clean the streets and roads of India and raise the overall level of cleanliness. Currently this mission covers 4,041 cities and towns across the country. Millions of our people have taken the pledge for a clean India. You should take the pledge too, and do everything possible to keep our country clean!

What are Habits?

A habit is a behaviour that is repeated frequently. All of us have good habits and bad habits. Keep in mind the phrase by John Dryden: "We first make our habits, and then our habits make us." This is why it is so important that you make good habits a way of life, and consciously avoid practicing bad habits.

Some good habits that you should make part of your daily routine are:

- Always having a positive attitude
- Making exercise a part of your daily routine
- Reading motivational and inspirational stories
- Smiling! Make it a habit to smile as often as possible
- Making time for family and friends
- Going to bed early and waking up early

Some bad habits that you should quit immediately are:

- Skipping breakfast
- Snacking frequently even when you are not hungry
- Eating too much fattening and sugary food
- Smoking, drinking alcohol and doing drugs
- Spending more money than you can afford
- Worrying about unimportant issues
- Staying up late and waking up late

Tips

- Following healthy and hygienic practices every day will make you feel good mentally and physically.
- Hygiene is two-thirds of health – so good hygiene will help you stay strong and healthy!

7.1.2 Safety: Tips to Design a Safe Workplace

Every employer is obligated to ensure that his workplace follows the highest possible safety protocol. When setting up a business, owners must make it a point to:

- Use ergonomically designed furniture and equipment to avoid stooping and twisting
- Provide mechanical aids to avoid lifting or carrying heavy objects
- Have protective equipment on hand for hazardous jobs
- Designate emergency exits and ensure they are easily accessible
- Set down health codes and ensure they are implemented
- Follow the practice of regular safety inspections in and around the workplace
- Ensure regular building inspections are conducted
- Get expert advice on workplace safety and follow it

Non-Negotiable Employee Safety Habits

Every employee is obligated to follow all safety protocols put in place by the employer. All employees must make it a habit to:

- Immediately report unsafe conditions to a supervisor
- Recognize and report safety hazards that could lead to slips, trips and falls
- Report all injuries and accidents to a supervisor

- Wear the correct protective equipment when required
- Learn how to correctly use equipment provided for safety purposes
- Be aware of and avoid actions that could endanger other people
- Take rest breaks during the day and some time off from work during the week

Tips

- Be aware of what emergency number to call at the time of a workplace emergency
- Practice evacuation drills regularly to avoid chaotic evacuations
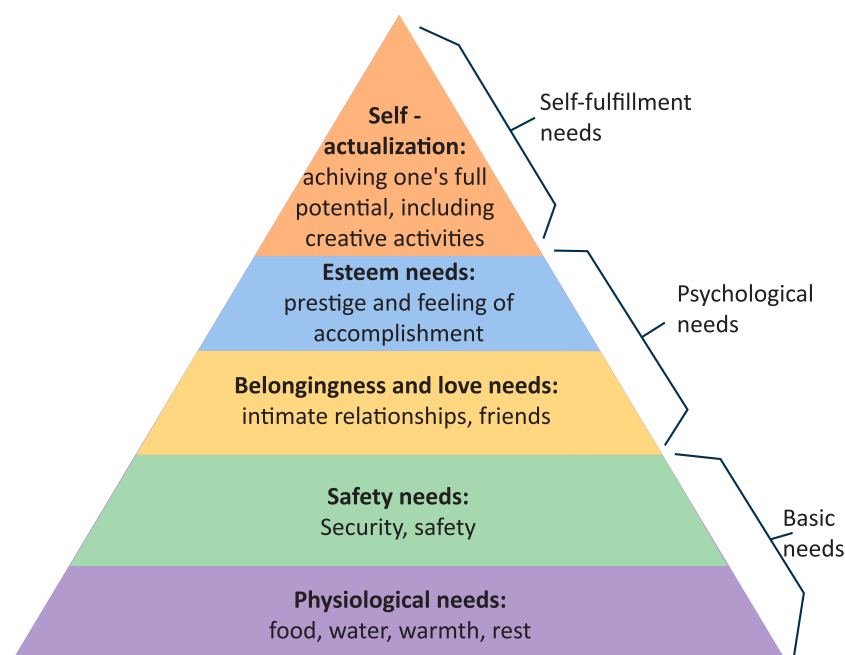
7.1.3 Self Analysis – Attitude, Achievement Motivation: What is Self-Analysis?

To truly achieve your full potential, you need to take a deep look inside yourself and find out what kind of person you really are. This attempt to understand your personality is known as self-analysis. Assessing yourself in this manner will help you grow, and will also help you to identify areas within yourself that need to be further developed, changed or eliminated. You can better understand yourself by taking a deep look at what motivates you, what your attitude is like, and what your strengths and weaknesses are.

What is Motivation?

Very simply put, motivation is your reason for acting or behaving in a certain manner. It is important to understand that not everyone is motivated by the same desires – people are motivated by many, many different things. We can understand this better by looking at Maslow's Hierarchy of Needs.

Maslow's Hierarchy of Needs

Famous American psychologist Abraham Maslow wanted to understand what motivates people. He believed that people have five types of needs, ranging from very basic needs (called physiological needs) to more important needs that are required for self-growth (called self-actualization needs). Between the physiological and self-actualization needs are three other needs – safety needs, belongingness and love needs, and esteem needs. These needs are usually shown as a pyramid with five levels and are known as Maslow's Hierarchy of Needs.

Maslow's Hierarchy of Needs pyramid:
- Self - actualization: achiving one's full potential, including creative activities — Self-fulfillment needs
- Esteem needs: prestige and feeling of accomplishment — Psychological needs
- Belongingness and love needs: intimate relationships, friends — Psychological needs
- Safety needs: Security, safety — Basic needs
- Physiological needs: food, water, warmth, rest — Basic needs

As you can see from the pyramid, the lowest level depicts the most basic needs. Maslow believed that our behaviour is motivated by our basic needs, until those needs are met. Once they are fulfilled, we move to the next level and are motived by the next level of needs. Let's understand this better with an example.

Rupa comes from a very poor family. She never has enough food, water, warmth or rest. According to Maslow, until Rupa is sure that she will get these basic needs, she will not even think about the next level of needs – her safety needs. But, once Rupa is confident that her basic needs will be met, she will move to the next level, and her behaviour will then be motivated by her need for security and safety. Once these new needs are met, Rupa will once again move to the next level, and be motivated by her need for relationships and friends. Once this need is satisfied, Rupa will then focus on the fourth level of needs – her esteem needs, after which she will move up to the fifth and last level of needs – the desire to achieve her full potential.

Understanding Achievement Motivation

We now know that people are motivated by basic, psychological and self-fulfillment needs. However, certain people are also motivated by the achievement of highly challenging accomplishments. This is known as Achievement Motivation, or 'need for achievement'.

The level of motivation achievement in a person differs from individual to individual. It is important that entrepreneurs have a high level of achievement motivation – a deep desire to accomplish something important and unique. It is equally important that they hire people who are also highly motivated by challenges and success.

What Motivates You?

What are the things that really motivate you? List down five things that really motivate you. Remember to answer honestly!

I am motivated by:

_____

_____

_____

Characteristics of Entrepreneurs with Achievement Motivation

Entrepreneurs with achievement motivation can be described as follows:

- Unafraid to take risks for personal accomplishment
- Love being challenged
- Future-oriented
- Flexible and adaptive
- Value negative feedback more than positive feedback

- Very persistent when it comes to achieving goals
- Extremely courageous
- Highly creative and innovative
- Restless – constantly looking to achieve more
- Feel personally responsible for solving problems

Think about it:

- How many of these traits do you have?
- Can you think of entrepreneurs who display these traits?

What is Attitude?

Now that we understand why motivation is so important for self-analysis, let's look at the role our attitude plays in better understanding ourselves. Attitude can be described as your tendency (positive or negative), to think and feel about someone or something. Attitude is the foundation for success in every aspect of life. Our attitude can be our best friend or our worst enemy. In other words:

"The only disability in life is a bad attitude."

When you start a business, you are sure to encounter a wide variety of emotions, from difficult times and failures to good times and successes. Your attitude is what will see you through the tough times and guide you towards success. Attitude is also infectious. It affects everyone around you, from your customers to your employees to your investors. A positive attitude helps build confidence in the workplace while a negative attitude is likely to result in the demotivation of your people.

How to Cultivate a Positive Attitude?

The good news is attitude is a choice. So it is possible to improve, control and change our attitude, if we decide we want to! The following tips help foster a positive mindset:

- Remember that you control your attitude, not the other way around
- Devote at least 15 minutes a day towards reading, watching or listening to something positive
- Avoid negative people who only complain and stop complaining yourself
- Expand your vocabulary with positive words and delete negative phrases from your mind
- Be appreciative and focus on what's good in yourself, in your life, and in others
- Stop thinking of yourself as a victim and start being proactive
- Imagine yourself succeeding and achieving your goals

What Are Your Strengths and Weaknesses?

Another way to analyze yourself is by honestly identifying your strengths and weaknesses. This will help you use your strengths to your best advantage and reduce your weaknesses.

Note down all your strengths and weaknesses in the two columns below. Remember to be honest with yourself!

Strengths	Weaknesses

Tips

- Achievement motivation can be learned.
- Don't be afraid to make mistakes.
- Train yourself to finish what you start.
- Dream big.

7.1.4 Honesty & Work Ethics: What is Honesty?

Honesty is the quality of being fair and truthful. It means speaking and acting in a manner that inspires trust. A person who is described as honest is seen as truthful and sincere, and as someone who isn't deceitful or devious and doesn't steal or cheat. There are two dimensions of honesty – one is honesty in communication and the other is honesty in conduct.

Honesty is an extremely important trait because it results in peace of mind and builds relationships that are based on trust. Being dishonest, on the other hand, results in anxiety and leads to relationships full of distrust and conflict.

Qualities of Honest People

Honest individuals have certain distinct characteristics. Some common qualities among honest people are:

1. They don't worry about what others think of them. They believe in being themselves – they don't bother about whether they are liked or disliked for their personalities.
2. They stand up for their beliefs. They won't think twice about giving their honest opinion, even if they are aware that their point of view lies with the minority.
3. They are think skinned. This means they are not affected by others judging them harshly for their honest opinions.
4. They forge trusting, meaningful and healthy friendships. Honest people usually surround themselves with honest friends. They have faith that their friends will be truthful and upfront with them at all times.
5. They are trusted by their peers. They are seen as people who can be counted on for truthful and objective feedback and advice.

Importance of Honesty in Entrepreneurs

One of the most important characteristics of entrepreneurs is honesty. When entrepreneurs are honest with their customers, employees and investors, it shows that they respect those that they work with. It is also important that entrepreneurs remain honest with themselves. Let's look at how being honest would lead to great benefits for entrepreneurs.

- Honesty and customers: When entrepreneurs are honest with their customers it leads to stronger relationships, which in turn results in business growth and a stronger customer network.
- Honesty and employees: When entrepreneurs build honest relationships with their employees, it leads to more transparency in the workplace, which results in higher work performance and better results.
- Honesty and investors: For entrepreneurs, being honest with investors means not only sharing strengths but also candidly disclosing current and potential weaknesses, problem areas and solution strategies. Keep in mind that investors have a lot of experience with startups and are aware that all new companies have problems. Claiming that everything is perfectly fine and running smoothly is a red flag for most investors.
- Honesty with oneself: The consequences of being dishonest with oneself can lead to dire results, especially in the case of entrepreneurs. For entrepreneurs to succeed, it is critical that they remain realistic about their situation at all times, and accurately judge every aspect of their enterprise for what it truly is.

What are Work Ethics?

Being ethical in the workplace means displaying values like honesty, integrity and respect in all your decisions and communications. It means not displaying negative qualities like lying, cheating and stealing.

Workplace ethics play a big role in the profitability of a company. It is as crucial to an enterprise as high morale and teamwork. This is why most companies lay down specific workplace ethic guidelines that must compulsorily be followed by their employees. These guidelines are typically outlined in a company's employee handbook.

Elements of a Strong Work Ethic

An entrepreneur must display strong work ethics, as well as hire only those individuals who believe in and display the same level of ethical behavior in the workplace. Some elements of a strong work ethic are:

- **Professionalism:** This involves everything from how you present yourself in a corporate setting to the manner in which you treat others in the workplace.
- **Respectfulness:** This means remaining poised and diplomatic regardless of how stressful or volatile a situation is.
- **Dependability:** This means always keeping your word, whether it's arriving on time for a meeting or delivering work on time.
- **Dedication:** This means refusing to quit until the designated work is done, and completing the work at the highest possible level of excellence.
- **Determination:** This means embracing obstacles as challenges rather than letting them stop you, and pushing ahead with purpose and resilience to get the desired results.
- **Accountability:** This means taking responsibility for your actions and the consequences of your actions, and not making excuses for your mistakes.
- **Humility:** This means acknowledging everyone's efforts and had work, and sharing the credit for accomplishments.

How to Foster a Good Work Ethic?

As an entrepreneur, it is important that you clearly define the kind of behaviour that you expect from each and every team member in the workplace. You should make it clear that you expect employees to display positive work ethics like:

- **Honesty:** All work assigned to a person should be done with complete honesty, without any deceit or lies.
- **Good attitude:** All team members should be optimistic, energetic, and positive.
- Reliability: Employees should show up where they are supposed to be, when they are supposed to be there.
- **Good work habits:** Employees should always be well groomed, never use inappropriate language, conduct themselves professionally at all times, etc.
- **Initiative:** Doing the bare minimum is not enough. Every team member needs to be proactive and show initiative.
- **Trustworthiness:** Trust is non-negotiable. If an employee cannot be trusted, it's time to let that employee go.
- **Respect:** Employees need to respect the company, the law, their work, their colleagues and themselves.
- **Integrity:** Each and every team member should be completely ethical and must display above board behaviour at all times.
- **Efficiency:** Efficient employees help a company grow while inefficient employees result in a waste of time and resources.

Tips

- Don't get angry when someone tells you the truth and you don't like what you hear.
- Always be willing to accept responsibility for your mistakes.

7.1.5 Creativity & Innovation : What is Creativity?

Creativity means thinking outside the box. It means viewing things in new ways or from different perspectives, and then converting these ideas into reality. Creativity involves two parts: thinking and producing. Simply having an idea makes you imaginative, not creative. However, having an idea and acting on it makes you creative.

Characteristics of Highly Creative People

Some characteristics of creative people are:

- They are imaginative and playful
- They see issues from different angles
- They notice small details
- They have very little tolerance for boredom

- They detest rules and routine
- They love to daydream
- They are very curious

What is Innovation?

There are many different definitions of innovation. In simple terms, innovation means turning an idea into a solution that adds value. It can also mean adding value by implementing a new product, service or process, or significantly improving on an existing product, service or process.

Characteristics of Highly Innovative People

Some characteristics of highly innovative people are:

- They embrace doing things differently
- They don't believe in taking shortcuts
- They are not afraid to be unconventional
- They are highly proactive and persistent
- They are organized, cautious and risk-averse

Tips

- Take regular breaks from your creative work to recharge yourself and gain fresh perspective.
- Build prototypes frequently, test them out, get feedback, and make the required changes.

7.1.6 Time Management: What is Time Management?

Time management is the process organizing your time, and deciding how to allocate your time between different activities. Good time management is the difference between working smart (getting more done in less time) and working hard (working for more time to get more done).

Effective time management leads to an efficient work output, even when you are faced with tight deadlines and high pressure situations. On the other hand, not managing your time effectively results in inefficient output and increases stress and anxiety.

Benefits of Time Management

Time management can lead to huge benefits like:

- Greater productivity
- Better professional reputation
- Higher chances for career advancement

- Higher efficiency
- Reduced stress
- Greater opportunities to achieve goals

Not managing time effectively can result in undesirable consequences like:

- Missing deadlines
- Substandard work quality
- Stalled career

- Inefficient work output
- Poor professional reputation
- Increase in stress and anxiety

Traits of Effective Time Managers

Some traits of effective time managers are:

- They begin projects early
- They set daily objectives
- They modify plans if required, to achieve better results
- They are flexible and open-minded
- They inform people in advance if their help will be required
- They know how to say no

- They break tasks into steps with specific deadlines
- They continually review long term goals
- They think of alternate solutions if and when required
- They ask for help when required
- They create backup plans

Effective Time Management Techniques

You can manage your time better by putting into practice certain time management techniques. Some helpful tips are:

- Plan out your day as well as plan for interruptions. Give yourself at least 30 minutes to figure out your time plan. In your plan, schedule some time for interruptions.
- Put up a "Do Not Disturb" sign when you absolutely have to complete a certain amount of work.
- Close your mind to all distractions. Train yourself to ignore ringing phones, don't reply to chat messages and disconnect from social media sites.
- Delegate your work. This will not only help your work get done faster, but will also show you the unique skills and abilities of those around you.
- Stop procrastinating. Remind yourself that procrastination typically arises due to the fear of failure or the belief that you cannot do things as perfectly as you wish to do them.
- Prioritize. List each task to be completed in order of its urgency or importance level. Then focus on completing each task, one by one.
- Maintain a log of your work activities. Analyze the log to help you understand how efficient you are, and how much time is wasted every day.
- Create time management goals to reduce time wastage.

Tips

- Always complete the most important tasks first.
- Get at least 7 – 8 hours of sleep every day.
- Start your day early.
- Don't waste too much time on small, unimportant details.
- Set a time limit for every task that you will undertake.
- Give yourself some time to unwind between tasks.

7.1.7 Anger Management: What is Anger Management?

Anger management is the process of:

1. Learning to recognize the signs that you, or someone else, is becoming angry
2. Taking the best course of action to calm down the situation in a positive way

Anger management does not mean suppressing anger.

Importance of Anger Management

Anger is a perfectly normal human emotion. In fact, when managed the right way, anger can be considered a healthy emotion. However, if it is not kept in check, anger can make us act inappropriately and can lead to us saying or doing things that we will likely later regret.

Extreme anger can:

- **Hurt you physically:** It leads to heart disease, diabetes, a weakened immune system, insomnia, and high blood pressure.
- **Hurt you mentally:** It can cloud your thinking and lead to stress, depression and mental health issues.
- **Hurt your career:** It can result in alienating your colleagues, bosses, clients and lead to the loss of respect.
- **Hurt your relationships:** It makes it hard for your family and friends to trust you, be honest with you and feel comfortable around you.

This is why anger management, or managing anger appropriately, is so important.

Anger Management Strategies

Here are some strategies that can help you control your anger:

Strategy 1: Relaxation

Something as simple as breathing deeply and looking at relaxing images works wonders in calming down angry feelings. Try this simple breathing exercise:

1. Take a deep breath from your diaphragm (don't breathe from your chest)
2. Visualize your breath coming up from your stomach
3. Keep repeating a calming word like 'relax' or 'take it easy' (remember to keep breathing deeply while repeating the word)
4. Picture a relaxing moment (this can be from your memory or your imagination)

Follow this relaxation technique daily, especially when you realize that you're starting to feel angry.

Strategy 2: Cognitive Restructuring

Cognitive restructuring means changing the manner in which you think. Anger can make you curse, swear, exaggerate and act very dramatically. When this happens, force yourself to replace your angry thoughts with more logical ones. For instance, instead of thinking 'Everything is ruined' change your mindset and tell yourself 'It's not the end of the world and getting angry won't solve this'.

Strategy 3: Problem Solving

Getting angry about a problem that you cannot control is a perfectly natural response. Sometimes, try as you may, there may not be a solution to the difficulty you are faced with. In such cases, stop focusing on solving the problem, and instead focus on handling and facing the problem. Remind yourself that you will do your best to deal with the situation, but that you will not blame yourself if you don't get the solution you desire.

Strategy 4: Better Communication

When you're angry, it is very easy to jump to inaccurate conclusions. In this case, you need to force yourself to stop reacting, and think carefully about what you want to say, before saying it. Avoid saying

the first thing that enters your head. Force yourself to listen carefully to what the other person is saying. Then think about the conversation before responding.

Strategy 5: Changing Your Environment

If you find that your environment is the cause of your anger, try and give yourself a break from your surroundings. Make an active decision to schedule some personal time for yourself, especially on days that are very hectic and stressful. Having even a brief amount of quiet or alone time is sure to help calm you down.

Tips for Anger Management

The following tips will help you keep your anger in check:

- Take some time to collect your thoughts before you speak out in anger.
- Express the reason for your anger in an assertive, but non-confrontational manner once you have calmed down.
- Do some form of physical exercise like running or walking briskly when you feel yourself getting angry.
- Make short breaks part of your daily routine, especially during days that are stressful.
- Focus on how to solve a problem that's making you angry, rather than focusing on the fact that the problem is making you angry.

Tips

- Try to forgive those who anger you, rather than hold a grudge against them.
- Avoid using sarcasm and hurling insults. Instead, try and explain the reason for your frustration in a polite and mature manner.

7.1.8 Stress Management: What is Stress?

We say we are 'stressed' when we feel overloaded and unsure of our ability to deal with the pressures placed on us. Anything that challenges or threatens our well-being can be defined as a stress. It is important to note that stress can be good and bad. While good stress keeps us going, negative stress undermines our mental and physical health. This is why it is so important to manage negative stress effectively.

Causes of Stress

Stress can be caused by internal and external factors.

Internal causes of stress

- Constant worry
- Rigid thinking
- Unrealistic expectations

- Pessimism
- Negative self-talk
- All in or all out attitude

External causes of stress

- Major life changes
- Difficulties with relationships
- Having too much to do

- Difficulties at work or in school
- Financial difficulties
- Worrying about one's children and/or family

Symptoms of Stress

Stress can manifest itself in numerous ways. Take a look at the cognitive, emotional, physical and behavioral symptoms of stress.

Cognitive Symptoms	Emotional Symptoms
• Memory problems • Concentration issues • Lack of judgement • Pessimism • Anxiety • Constant worrying	• Depression • Agitation • Irritability • Loneliness • Anxiety • Anger

Physical Symptoms	Behavioral Symptoms
• Aches and pain • Diarrhea or constipation • Nausea • Dizziness • Chest pain and/or rapid heartbeat • Frequent cold or flu like feelings	• Increase or decrease in appetite • Over sleeping or not sleeping enough • Withdrawing socially • Ignoring responsibilities • Consumption of alcohol or cigarettes • Nervous habits like nail biting, pacing etc.

Tips to Manage Stress

The following tips can help you manage your stress better:

- Note down the different ways in which you can handle the various sources of your stress.
- Remember that you cannot control everything, but you can control how you respond.
- Discuss your feelings, opinions and beliefs rather than reacting angrily, defensively or passively.
- Practice relaxation techniques like meditation, yoga or tai chi when you start feeling stressed.
- Devote a part of your day towards exercise.
- Eat healthy foods like fruits and vegetables. Avoid unhealthy foods especially those containing large amounts of sugar.
- Plan your day so that you can manage your time better, with less stress.
- Say no to people and things when required.
- Schedule time to pursue your hobbies and interests.
- Ensure you get at least 7-8 hours of sleep.
- Reduce your caffeine intake.
- Increase the time spent with family and friends.

Tips

- Force yourself to smile even if you feel stressed. Smiling makes us feel relaxed and happy.
- Stop yourself from feeling and thinking like a victim. Change your attitude and focus on being proactive.

UNIT 7.2: Digital Literacy: A Recap

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. Identify the basic parts of a computer
2. Identify the basic parts of a keyboard
3. Recall basic computer terminology
4. Recall the functions of basic computer keys
5. Discuss the main applications of MS Office
6. Discuss the benefits of Microsoft Outlook
7. Discuss the different types of e-commerce
8. List the benefits of e-commerce for retailers and customers
9. Discuss how the Digital India campaign will help boost e-commerce in India
10. Describe how you will sell a product or service on an e-commerce platform

7.2.1 Computer and Internet basics:
Basic Parts of a Computer
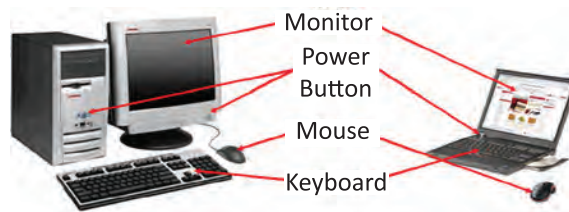
Fig.7.2.1. Parts of a Computer

- **Central Processing Unit (CPU)**: The brain of the computer. It interprets and carries out program instructions.
- **Hard Drive**: A device that stores large amounts of data.
- **Monitor**: The device that contains the computer screen where the information is visually displayed.
- **Mouse**: A hand-held device used to point to items on the monitor.
- **Speakers**: Devices that enable you to hear sound from the computer.
- **Printer**: A device that converts output from a computer into printed paper documents.

Basic Parts of a Keyboard
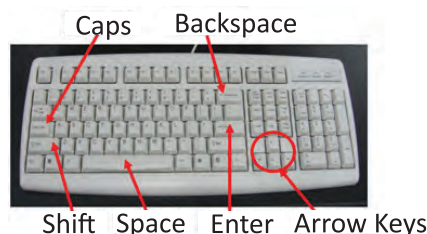
Fig.7.2.2. Parts of a Keyboard

- **Arrow Keys**: Press these keys to move your cursor.
- **Space bar**: Adds a space.
- **Enter/Return**: Moves your cursor to a new line.

- **Shift**: Press this key if you want to type a capital letter or the upper symbol of a key.
- **Caps Lock**: Press this key if you want all the letters you type to be capital letters. Press it again to revert back to typing lowercase letters.
- **Backspace**: Deletes everything to the left of your cursor.

Basic Internet Terms

- **The Internet**: A vast, international collection of computer networks that transfers information.
- **The World Wide Web**: A system that lets you access information on the Internet.
- **Website**: A location on the World Wide Web (and Internet) that contains information about a specific topic.
- **Homepage**: Provides information about a website and directs you to other pages on that website.
- **Link/Hyperlink**: A highlighted or underlined icon, graphic, or text that takes you to another file or object.
- **Web Address/URL**: The address for a website.
- **Address Box**: A box in the browser window where you can type in a web address.

Tips

- When visiting a .com address, there no need to type http:// or even www. Just type the name of the website and then press Ctrl + Enter. (Example: Type 'apple' and press Ctrl + Enter to go to www.apple.com)
- Press the Ctrl key and press the + or - to increase and decrease the size of text.
- Press F5 or Ctrl + R to refresh or reload a web page.

7.2.2 MS Office and Email: About MS Office

MS Office or Microsoft Office is a suite of computer programs developed by Microsoft. Although meant for all users, it offers different versions that cater specifically to students, home users and business users. All the programs are compatible with both, Windows and Macintosh.

Most Popular Office Products

Some of the most popular and universally used MS Office applications are:

- **Microsoft Word**: Allows users to type text and add images to a document.
- **Microsoft Excel**: Allows users to enter data into a spreadsheet and create calculations and graphs.
- **Microsoft PowerPoint**: Allows users to add text, pictures and media and create slideshows and presentations.
- **Microsoft Outlook**: Allows users to send and receive email.
- **Microsoft OneNote**: Allows users to make drawings and notes with the feel of a pen on paper.
- **Microsoft Access**: Allows users to store data over many tables.

Why Choose Microsoft Outlook?

A popular email management choice especially in the workplace, Microsoft Outlook also includes an address book, notebook, web browser and calendar. Some major benefits of this program are:

- **Integrated search function**: You can use keywords to search for data across all Outlook programs.
- **Enhanced security**: Your email is safe from hackers, junk mail and phishing website email.
- **Email syncing**: Sync your mail with your calendar, contact list, notes in OneNote and…your phone!
- **Offline access to email**: No Internet? No problem! Write emails offline and send them when you're connected again.

Tips

- Press Ctrl+R as a shortcut method to reply to email.
- Set your desktop notifications only for very important emails.
- Flag messages quickly by selecting messages and hitting the Insert key.
- Save frequently sent emails as a template to reuse again and again.
- Conveniently save important emails as files.

7.2.3 E-Commerce: What is E-Commerce?

E-commerce is the buying or selling of goods and services, or the transmitting of money or data, electronically on the internet. E-Commerce is the short form for "electronic commerce."

Examples of E-Commerce

Some examples of e-commerce are:

- Online shopping
- Online auctions
- Online ticketing
- Electronic payments
- Internet banking

Types of E-Commerce

E-commerce can be classified based on the types of participants in the transaction. The main types of e-commerce are:

- **Business to Business (B2B):** Both the transacting parties are businesses.
- **Business to Consumer (B2C):** Businesses sell electronically to end-consumers.
- **Consumer to Consumer (C2C):** Consumers come together to buy, sell or trade items to other consumers.
- **Consumer-to-Business (C2B):** Consumers make products or services available for purchase to companies looking for exactly those services or products.
- **Business-to-Administration (B2A):** Online transactions conducted between companies and public administration.
- **Consumer-to-Administration (C2A):** Online transactions conducted between individuals and public administration.

Benefits of E-Commerce

The e-commerce business provides some benefits for retailers and customers.

Benefits for retailers:

- Establishes an online presence
- Reduces operational costs by removing overhead costs
- Increases brand awareness through the use of good keywords
- Increases sales by removing geographical and time constraints

Benefits for customers:

- Offers a wider range of choice than any physical store
- Enables goods and services to be purchased from remote locations
- Enables consumers to perform price comparisons

Digital India Campaign

Prime Minister Narendra Modi launched the Digital India campaign in 2015, with the objective of offering every citizen of India access to digital services, knowledge and information. The campaign aims to improve the country's online infrastructure and increase internet connectivity, thus boosting the e-commerce industry.

Currently, the majority of online transactions come from tier 2 and tier 3 cities. Once the Digital India campaign is in place, the government will deliver services through mobile connectivity, which will help deliver internet to remote corners of the country. This will help the e-commerce market to enter India's tier 4 towns and rural areas.

E-Commerce Activity

Choose a product or service that you want to sell online. Write a brief note explaining how you will use existing e-commerce platforms, or create a new e-commerce platform, to sell your product or service.

Tips

- Before launching your e-commerce platform, test everything.
- Pay close and personal attention to your social media.

UNIT 7.3: Money Matters

Unit Objectives

At the end of this unit, you will be able to:

1. Discuss the importance of saving money
2. Discuss the benefits of saving money
3. Discuss the main types of bank accounts
4. Describe the process of opening a bank account
5. Differentiate between fixed and variable costs
6. Describe the main types of investment options
7. Describe the different types of insurance products
8. Describe the different types of taxes
9. Discuss the uses of online banking
10. Discuss the main types of electronic funds transfers

7.3.1 Personal Finance – Why to Save?: Importance of Saving

We all know that the future is unpredictable. You never know what will happen tomorrow, next week or next year. That's why saving money steadily through the years is so important. Saving money will help improve your financial situation over time. But more importantly, knowing that you have money stashed away for an emergency will give you peace of mind. Saving money also opens the door to many more options and possibilities.

Benefits of Saving

Inculcating the habit of saving leads to a vast number of benefits. Saving helps you:

- **Become financially independent**: When you have enough money saved up to feel secure you can start making your choices, from taking a vacation whenever you want, to switching careers or starting your own business.
- **Invest in yourself through education**: Through saving, you can earn enough to pay up for courses that will add to your professional experience and ultimately result in higher paying jobs.
- **Get out of debt**: Once you have saved enough as a reserve fund, you can use your savings to pay off debts like loans or bills that have accumulated over time.
- **Be prepared for surprise expenses**: Having money saved enables you to pay for unforeseen expenses like sudden car or house repairs, without feeling financially stressed.
- **Pay for emergencies**: Saving helps you deal with emergencies like sudden health issues or emergency trips without feeling financially burdened.
- **Afford large purchases and achieve major goals**: Saving diligently makes it possible to place down payments towards major purchases and goals, like buying a home or a car.
- **Retire**: The money you have saved over the years will keep you comfortable when you no longer have the income you would get from your job.

Tips

- Break your spending habit. Try not spending on one expensive item per week, and put the money that you would have spent into your savings.
- Decide that you will not buy anything on certain days or weeks and stick to your word.

7.3.2 Types of Bank Accounts, Opening a Bank Account: Types of Bank Accounts

In India, banks offer four main types of bank accounts. These are:

- Current Accounts
- Savings Accounts
- Recurring Deposit Accounts
- Fixed Deposit Accounts

Current Accounts

Current accounts offer the most liquid deposits and thus, are best suited for businessmen and companies. As these accounts are not meant for investments and savings, there is no imposed limit on the number or amount of transactions that can be made on any given day. Current account holders are not paid any interest on the amounts held in their accounts. They are charged for certain services offered on such accounts.

Savings Accounts

Savings accounts are meant to promote savings, and are therefore the number one choice for salaried individuals, pensioners and students. While there is no restriction on the number and amount of deposits made, there are usually restrictions on the number and amount of withdrawals. Savings account holders are paid interest on their savings.

Recurring Deposit Accounts

Recurring Deposit accounts, also called RD accounts, are the accounts of choice for those who want to save an amount every month, but are unable to invest a large sum at one time. Such account holders deposit a small, fixed amount every month for a pre-determined period (minimum 6 months). Defaulting on a monthly payment results in the account holder being charged a penalty amount. The total amount is repaid with interest at the end of the specified period.

Fixed Deposit Accounts

Fixed Deposit accounts, also called FD accounts, are ideal for those who wish to deposit their savings for a long term in return for a high rate of interest. The rate of interest offered depends on the amount deposited and the time period, and also differs from bank to bank. In the case of an FD, a certain amount of money is deposited by the account holder for a fixed period of time. The money can be withdrawn when the period expires. If necessary, the depositor can break the fixed deposit prematurely. However, this usually attracts a penalty amount which also differs from bank to bank.

Opening a Bank Account

Opening a bank account is quite a simple process. Take a look at the steps to open an account of your own:

Step 1: Fill in the Account Opening Form

This form requires you to provide the following information:

- Personal details (name, address, phone number, date of birth, gender, occupation, address)
- Method of receiving your account statement (hard copy/email)
- Details of your initial deposit (cash/cheque)
- Manner of operating your account (online/mobile banking/traditional via cheque, slip books)

Ensure that you sign wherever required on the form.

Step 2: Affix your Photograph

Stick a recent photograph of yourself in the allotted space on the form.

Step 3: Provide your Know Your Customer (KYC) Details

KYC is a process that helps banks verify the identity and address of their customers. To open an account, every individual needs to submit certain approved documents with respect to photo identity (ID) and address proof. Some Officially Valid Documents (OVDs) are:

- Passport
- Driving License
- Voters' Identity Card
- PAN Card
- UIDAI (Aadhaar) Card

Step 4: Submit All your Documents

Submit the completed Account Opening Form and KYC documents. Then wait until the forms are processed and your account has been opened!

Tips

- Select the right type of account.
- Fill in complete nomination details.
- Ask about fees.
- Understand the rules.
- Check for online banking – it's convenient!
- Keep an eye on your bank balance.

7.3.3 Costs: Fixed vs Variable: What are Fixed and Variable Costs?

Fixed costs and variable costs together make up a company's total cost. These are the two types of costs that companies have to bear when producing goods and services.

A fixed cost does not change with the volume of goods or services a company produces. It always remains the same.

A variable cost, on the other hand, increases and decreases depending on the volume of goods and services produced. In other words, it varies with the amount produced.

Differences Between Fixed and Variable Costs

Let's take a look at some of the main differences between fixed and variable costs:

Criteria	Fixed Costs	Variable Costs
Meaning	A cost that stays the same, regardless of the output produced.	A cost that changes when the output changes.
Nature	Time related.	Volume related.
Incurred	Incurred irrespective of units being produced.	Incurred only when units are produced.
Unit cost	Inversely proportional to the number of units produced.	Remains the same, per unit.
Examples	Depreciation, rent, salary, insurance, tax etc.	Material consumed, wages, commission on sales, packing expenses, etc.

Tips

- When trying to determine whether a cost is fixed or variable, simply ask the following question: Will the particular cost change if the company stopped its production activities? If the answer is no, then it is a fixed cost. If the answer is yes, then it is probably a variable cost.

7.3.4 Investment, Insurance and Taxes: Investment

Investment means that money is spent today with the aim of reaping financial gains at a future time. The main types of investment options are as follows:

- **Bonds:** Bonds are instruments used by public and private companies to raise large sums of money – too large to be borrowed from a bank. These bonds are then issued in the public market and are bought by lenders.
- **Stocks:** Stocks or equity are shares that are issued by companies and are bought by the general public.
- **Small Savings Schemes:** Small Savings Schemes are tools meant to save money in small amounts. Some popular schemes are the Employees Provident Fund, Sukanya Samriddhi Scheme and National Pension Scheme.
- **Mutual Funds:** Mutual Funds are professionally managed financial instruments that invest money in different securities on behalf of investors.
- **Fixed Deposits:** A fixed amount of money is kept aside with a financial institution for a fixed amount of time in return for interest on the money.
- **Real Estate:** Loans are taken from banks to purchase real estate, which is then leased or sold with the aim of making a profit on the appreciated property price.
- **Hedge Funds:** Hedge funds invest in both financial derivatives and/or publicly traded securities.
- **Private Equity:** Private Equity is trading in the shares of an operating company that is not publicly listed and whose shares are not available on the stock market.
- **Venture Capital:** Venture Capital involves investing substantial capital in a budding company in return for stocks in that company.

Insurance

There are two types of insurance – Life Insurance and Non-Life or General Insurance.

Life Insurance

Life Insurance deals with all insurance covering human life.

Life Insurance Products

The main life insurance products are:

- **Term Insurance:** This is the simplest and cheapest form of insurance. It offers financial protection for a specified tenure, say 15 to 20 years. In the case of your death, your family is paid the sum assured. In the case of your surviving the term, the insurer pays nothing.
- **Endowment Policy:** This offers the dual benefit of insurance and investment. Part of the premium is allocated towards the sum assured, while the remaining premium gets invested in equity and debt. It pays a lump sum amount after the specified duration or on the death of the policyholder, whichever is earlier.
- **Unit-Linked Insurance Plan (ULIP):** Here part of the premium is spent on the life cover, while the remaining amount is invested in equity and debt. It helps develop a regular saving habit.
- **Money Back Life Insurance:** While the policyholder is alive, periodic payments of the partial survival benefits are made during the policy tenure. On the death of the insured, the insurance company pays the full sum assured along with survival benefits.

- **Whole Life Insurance:** It offers the dual benefit of insurance and investment. It offers insurance cover for the whole life of the person or up to 100 years whichever is earlier.

General Insurance

General Insurance deals with all insurance covering assets like animals, agricultural crops, goods, factories, cars and so on.

General Insurance Products

The main general insurance products are:

- **Motor Insurance:** This can be divided into Four Wheeler Insurance and Two Wheeler Insurance.
- **Health Insurance:** The main types of health insurance are individual health insurance, family floater health insurance, comprehensive health insurance and critical illness insurance.
- **Travel Insurance:** This can be categorised into Individual Travel Policy, Family Travel Policy, Student Travel Insurance and Senior Citizen Health Insurance.
- **Home Insurance:** This protects the house and its contents from risk.
- **Marine Insurance:** This insurance covers goods, freight, cargo etc. against loss or damage during transit by rail, road, sea and/or air.

Taxes

There are two types of taxes – Direct Taxes and Indirect Taxes.

Direct Tax

Direct taxes are levied directly on an entity or a person and are non-transferrable.

Some examples of Direct Taxes are:

- **Income Tax:** This tax is levied on your earning in a financial year. It is applicable to both, individuals and companies.
- **Capital Gains Tax:** This tax is payable whenever you receive a sizable amount of money. It is usually of two types – short term capital gains from investments held for less than 36 months and long term capital gains from investments held for longer than 36 months.
- **Securities Transaction Tax: T**his tax is added to the price of a share. It is levied every time you buy or sell shares.
- **Perquisite Tax:** This tax is levied is on perks that have been acquired by a company or used by an employee.
- **Corporate Tax:** Corporate tax is paid by companies from the revenue they earn.

Indirect Tax

Indirect taxes are levied on goods or services.

Some examples of Indirect Taxes are:

- **Sales Tax:** Sales Tax is levied on the sale of a product.
- **Service Tax:** Service Tax is added to services provided in India.
- **Value Added Tax:** Value Added Tax is levied at the discretion of the state government. The tax is levied on goods sold in the state. The tax amount is decided by the state.
- **Customs Duty & Octroi:** Customs Duty is a charge that is applied on purchases that are imported from another country. Octroi is levied on goods that cross state borders within India.
- **Excise Duty:** Excise Duty is levied on all goods manufactured or produced in India.

Tips

- Think about how quickly you need your money back and pick an investment option accordingly.
- Ensure that you are buying the right type of insurance policy for yourself.
- Remember, not paying taxes can result in penalties ranging from fines to imprisonment.

7.3.5 Online Banking, NEFT, RTGS etc.:
What is Online Banking?

Internet or online banking allows account holders to access their account from a laptop at any location. In this way, instructions can be issued. To access an account, account holders simply need to use their unique customer ID number and password.

Internet banking can be used to:

- Find out an account balance
- Transfer amounts from one account to another
- Arrange for the issuance of cheques
- Instruct payments to be made
- Request for a cheque book
- Request for a statement of accounts
- Make a fixed deposit

Electronic Funds Transfers

Electronic funds transfer is a convenient way of transferring money from the comfort of one's own home, using integrated banking tools like internet and mobile banking.

Transferring funds via an electronic gateway is extremely convenient. With the help of online banking, you can choose to:

- Transfer funds into your own accounts of the same bank.
- Transfer funds into different accounts of the same bank.
- Transfer funds into accounts in different banks, using NEFT.
- Transfer funds into other bank accounts using RTGS.
- Transfer funds into various accounts using IMPS.

NEFT

NEFT stands for National Electronic Funds Transfer. This money transfer system allows you to electronically transfer funds from your respective bank accounts to any other account, either in the same bank or belonging to any other bank. NEFT can be used by individuals, firms and corporate organizations to transfer funds between accounts.

In order to transfer funds via NEFT, two things are required:

- A transferring bank
- A destination bank

Before you can transfer funds through NEFT, you will need to register the beneficiary who will be receiving the funds. In order to complete this registration, you will require the following information:

- Recipient's name
- Recipient's account number
- Recipient's bank's name
- Recipient's bank's IFSC code

RTGS

RTGS stands for Real Time Gross Settlement. This is a real time funds transfer system which enables you to transfer funds from one bank to another, in real time or on a gross basis. The transferred amount is immediately deducted from the account of one bank, and instantly credited to the other bank's account. The RTGS payment gateway is maintained by the Reserve Bank of India. The transactions between banks are made electronically.

RTGS can be used by individuals, companies and firms to transfer large sums of money. Before remitting funds through RTGS, you will need to add the beneficiary and his bank account details via your online banking account. In order to complete this registration, you will require the following information:

- Name of the beneficiary
- Beneficiary's account number
- Beneficiary's bank address
- Beneficiary's bank's IFSC code

IMPS

IMPS stands for Immediate Payment Service. This is a real-time, inter-bank, electronic funds transfer system used to transfer money instantly within banks across India. IMPS enables users to make instant electronic transfer payments using mobile phones through both, Mobile Banking and SMS. It can also be used through ATMs and online banking. IMPS is available 24 hours a day and 7 days a week. The system features a secure transfer gateway and immediately confirms orders that have been fulfilled.

To transfer money through IMPS, the you need to:

- Register for IMPS with your bank
- Receive a Mobile Money Identifier (MMID) from the bank
- Receive a MPIN from the bank

Once you have both these, you can login or make a request through SMS to transfer a particular amount to a beneficiary.

For the beneficiary to receive the transferred money, he must:

1. Link his mobile number with his respective account
2. Receive the MMID from the bank

In order to initiate a money transfer through IMPS, you will need to enter the following information:

1. The beneficiary's mobile number
2. The beneficiary's MMID
3. The transfer amount
4. Your MPIN

As soon as money has been deducted from your account and credited into the beneficiary's account, you will be sent a confirmation SMS with a transaction reference number, for future reference.

Differences Between NEFT, RTGS & IMPS

Criteria	NEFT	RTGS	IMPS
Settlement	Done in batches	Real-time	Real-time
Full form	National Electronic Fund Transfer	Real Time Gross Settlement	Immediate Payment Service
Timings on Monday – Friday	8:00 am – 6:30 pm	9:00 am – 4:30 pm	24x7
Timings on Saturday	8:00 am – 1:00 pm	9:00 am – 1:30 pm	24x7

Criteria	NEFT	RTGS	IMPS
Minimum amount of money transfer limit	₹1	₹2 lacs	₹1
Maximum amount of money transfer limit	₹10 lacs	₹10 lacs per day	₹2 lacs
Maximum charges as per RBI	Upto 10,000 – ₹2.5 above 10,000 – 1 lac – ₹5 above 1 – 2 lacs – ₹15 above 2 – 5 lacs – ₹25 above 5 – 10 lacs – ₹25	above 2 – 5 lacs – ₹25 above 5 – 10 lacs – ₹50	Upto 10,000 – ₹5 above 10,000 – 1 lac – ₹5 above 1 – 2 lacs – ₹15

Tips

- Never click on any links in any e-mail message to access your online banking website.
- You will never be asked for your credit or debit card details while using online banking.
- Change your online banking password regularly.

UNIT 7.4: Preparing for Employment and Self Employment

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. Discuss the steps to prepare for an interview
2. Discuss the steps to create an effective Resume
3. Discuss the most frequently asked interview questions
4. Discuss how to answer the most frequently asked interview questions
5. Discuss basic workplace terminology

7.4.1 Interview Preparation: How to Prepare for an Interview?

The success of your getting the job that you want depends largely on how well your interview for that job goes. Therefore, before you go in for your interview, it is important that you prepare for it with a fair amount of research and planning. Take a look at the steps to follow in order to be well prepared for an interview:

1. **Research the organization that you are having the interview with.**
   - Studying the company beforehand will help you be more prepared at the time of the interview. Your knowledge of the organization will help you answer questions at the time of the interview, and will leave you looking and feeling more confident. This is sure to make you stand out from other, not as well informed, candidates.
   - Look for background information on the company. Ty and find an overview of the company and its industry profile.
   - Visit the company website to get a good idea of what the company does. A company website offers a wealth of important information. Read and understand the company's mission statement. Pay attention to the company's products/services and client list. Read through any press releases to get an idea of the company's projected growth and stability.
   - Note down any questions that you have after your research has been completed.

2. **Think about whether your skills and qualifications match the job requirements.**
   - Carefully read through and analyze the job description.
   - Make a note of the knowledge, skills and abilities required to fulfill the job requirements.
   - Take a look at the organization hierarchy. Figure out where the position you are applying for fits into this hierarchy.

3. **Go through the most typical interview questions asked, and prepare your responses.**
   - Remember, in most interviews a mix of resume-based, behavioral and case study questions are asked.
   - Think about the kind of answers you would like to provide to typical questions asked in these three areas.
   - Practice these answers until you can express them confidently and clearly.

4. **Plan your attire for the interview.**
   - It is always safest to opt for formal business attire, unless expressly informed to dress in business casual (in which case you should use your best judgement).
   - Ensure that your clothes are clean and well-ironed. Pick neutral colours – nothing too bright or flashy.

- The shoes you wear should match your clothes, and should be clean and suitable for an interview.
- Remember, your aim is to leave everyone you meet with the impression that you are a professional and highly efficient person.

5. **Ensure that you have packed everything that you may require during the interview.**
   - Carry a few copies of your resume. Use a good quality paper for your resume print outs.
   - Always take along a notepad and a pen.
   - Take along any information you may need to refer to, in order to fill out an application form.
   - Carry a few samples of your work, if relevant.

6. **Remember the importance of non-verbal communication.**
   - Practice projecting confidence. Remind yourself to smile and make eye contact. Practice giving a firm handshake.
   - Keep in mind the importance of posture. Practice sitting up straight. Train yourself to stop nervous gestures like fidgeting and foot-tapping.
   - Practice keeping your reactions in check. Remember, your facial expressions provide a good insight into your true feelings. Practice projecting a positive image.

7. **Make a list of questions to end the interview with.**
   - Most interviews will end with the interviewer(s) asking if you have any questions. This is your chance to show that you have done your research and are interested in learning more about the company.
   - If the interviewer does not ask you this question, you can inform him/her that you have some queries that you would like to discuss. This is the time for you to refer to the notes you made while studying the company.
   - Some good questions to ask at this point are:
     - What do you consider the most important criteria for success in this job?
     - How will my performance be evaluated?
     - What are the opportunities for advancement?
     - What are the next steps in the hiring process?
   - Remember, never ask for information that is easily available on the company website.

Tips

- Ask insightful and probing questions.
- When communicating, use effective forms of body language like smiling, making eye contact, and actively listening and nodding. Don't slouch, play with nearby items, fidget, chew gum, or mumble.

7.4.2 Preparing an Effective Resume: How to Create an Effective Resume?

A resume is a formal document that lists a candidate's work experience, education and skills. A good resume gives a potential employer enough information to believe the applicant is worth interviewing. That's why it is so important to create a resume that is effective. Take a look at the steps to create an effective resume:

Step 1: Write the Address Section

The Address section occupies the top of your resume. It includes information like your name, address, phone number and e-mail address. Insert a bold line under the section to separate it from rest of your resume.

Example:

Khyati Mehta

Breach Candy, Mumbai – India

Contact No: +91 2223678270

Email: khyati.mehta@gmail.com

Step 2: Add the Profile Summary Section

This part of your resume should list your overall experiences, achievements, awards, certifications and strengths. You can make your summary as short as 2-3 bullet points or as long as 8-10 bullet points.

Example:

Profile Summary

- A Floor Supervisor graduated from University of Delhi having 6 years of experience in managing a retail outlet.
- Core expertise lies in managing retail staff, including cashiers and people working on the floor.

Step 3: Include Your Educational Qualifications

When listing your academic records, first list your highest degree. Then add the second highest qualification under the highest one and so on. To provide a clear and accurate picture of your educational background, it is critical that include information on your position, rank, percentage or CPI for every degree or certification that you have listed.

If you have done any certifications and trainings, you can add a Trainings & Certifications section under your Educational Qualifications section.

Example:

Educational Qualifications

- *<Enter qualification> <enter date of qualification> from <enter name of institute> with <enter percentage or any other relevant scoring system>.*

Step 4: List Your Technical Skills

When listing your technical skills, start with the skills that you are most confident about. Then add the skills that you do not have as good a command over. It is perfectly acceptable to include just one skill, if you feel that particular skill adds tremendous value to your résumé. If you do not have any technical skills, you can omit this step.

Example:

Technical Skills

- *<Enter your technical skill here, if applicable>*

Step 5: Insert Your Academic Project Experience

List down all the important projects that you have worked on. Include the following information in this section:

• Project title	• Organization	• Platform used
• Contribution	• Description	

Example:

Academic Projects
Project Title: <Insert project title>
Organization: <Insert the name of the organization for whom you did the project>
Platform used: <Insert the platform used, if any>
Contribution: <Insert your contribution towards this project>
Description: <Insert a description of the project in one line>

Step 6: List Your Strengths

This is where you list all your major strengths. This section should be in the form of a bulleted list.

Example:

Strengths
• Excellent oral, written and presentation skills
• Action-oriented and result-focused
• Great time management skills

Step 7: List Your Extracurricular Activities

It is very important to show that you have diverse interests and that your life consists of more than academics. Including your extracurricular activities can give you an added edge over other candidates who have similar academic scores and project experiences. This section should be in the form of a bulleted list.

Example:

Extracurricular Activities
• *< Insert your extracurricular activity here. E.g.: Member of _____, played (name of sport) at _____ level, won (name of prize/award) for _____ >*

Step 8: Write Your Personal Details

The last section of your résumé must include the following personal information:

- Date of birth
- Nationality
- Gender & marital status
- Languages known

Example:

Personal Details
• Date of birth: 25th May, 1981
• Gender & marital status: Female, Single
• Nationality: Indian
• Languages known: English, Hindi, Tamil, French

Tips

- Keep your resume file name short, simple and informational.
- Make sure the resume is neat and free from typing errors.
- Always create your resume on plain white paper.

7.4.3 Interview FAQs

Take a look at some of the most frequently asked interview questions, and some helpful tips on how to answer them.

Q1. Can you tell me a little about yourself?

Tips to answer:

- Don't provide your full employment or personal history.
- Offer 2-3 specific experiences that you feel are most valuable and relevant.
- Conclude with how those experiences have made you perfect for this specific role.

Q2. How did you hear about the position?

Tips to answer:

- Tell the interviewer how you heard about the job – whether it was through a friend (name the friend), event or article (name them) or a job portal (say which one).
- Explain what excites you about the position and what in particular caught your eye about this role.

Q3. What do you know about the company?

Tips to answer:

- Don't recite the company's About Us page.
- Show that you understand and care about the company's goals.
- Explain why you believe in the company's mission and values.

Q4. Why do you want this job?

Tips to answer:

- Show that you are passionate about the job.
- Identify why the role is a great fit for you.
- Explain why you love the company.

Q5. Why should we hire you?

Tips to answer:

- Prove through your words that you can not only do the work, but can definitely deliver excellent results.
- Explain why you would be a great fit with the team and work culture.
- Explain why you should be chosen over any other candidate.

Q6. What are your greatest professional strengths?

Tips to answer:

- Be honest – share some of your real strengths, rather than give answers that you think sound good.
- Offer examples of specific strengths that are relevant to the position you are applying for.
- Provide examples of how you've demonstrated these strengths.

Q7. What do you consider to be your weaknesses?

Tips to answer:

- The purpose of this question is to gauge your self-awareness and honesty.
- Give an example of a trait that you struggle with, but that you're working on to improve.

Q8. What are your salary requirements?

Tips to answer:

- Do your research beforehand and find out the typical salary range for the job you are applying for.
- Figure out where you lie on the pay scale based on your experience, education, and skills.
- Be flexible. Tell the interviewer that you know your skills are valuable, but that you want the job and are willing to negotiate.

Q9. What do you like to do outside of work?

Tips to answer:

- The purpose of this question is to see if you will fit in with the company culture.
- Be honest – open up and share activities and hobbies that interest and excite you.

Q10. If you were an animal, which one would you want to be?

Tips to answer:

- The purpose of this question is to see if you are able to think on your feet.
- There's no wrong answer – but to make a great impression try to bring out your strengths or personality traits through your answer.

Q11: What do you think we could do better or differently?

Tips to answer:

- The purpose of this question is to see if you have done your research on the company, and to test whether you can think critically and come up with new ideas.
- Suggest new ideas. Show how your interests and expertise would help you execute these ideas.

Q12: Do you have any questions for us?

Tips to answer:

- Do not ask questions to which the answers can be easily found on the company website or through a quick online search.
- Ask intelligent questions that show your ability to think critically.

Tips

- Be honest and confident while answering.
- Use examples of your past experiences wherever possible to make your answers more impactful.

7.4.4 Work Readiness – Terms & Terminologies: Basic Workplace Terminology

Every employee should be well versed in the following terms:

- **Annual leave:** Paid vacation leave given by employers to employees.
- **Background Check:** A method used by employers to verify the accuracy of the information provided by potential candidates.
- **Benefits:** A part of an employee's compensation package.
- **Breaks:** Short periods of rest taken by employees during working hours.
- **Compensation Package:** The combination of salary and benefits that an employer provides to his/her employees.

- **Compensatory Time (Comp Time):** Time off in lieu of pay.
- **Contract Employee:** An employee who works for one organization that sells said employee's services to another company, either on a project or time basis.
- **Contract of Employment:** When an employee is offered work in exchange for wages or salary, and accepts the offer made by the employer, a contract of employment exists.
- **Corporate Culture:** The beliefs and values shared by all the members of a company, and imparted from one generation of employees to another.
- **Counter Offer/Counter Proposal:** A negotiation technique used by potential candidates to increase the amount of salary offered by a company.
- **Cover Letter:** A letter that accompanies a candidate's resume. It emphasizes the important points in the candidate's resume and provides real examples that prove the candidate's ability to perform the expected job role.
- **Curriculum Vitae (CV)/Resume:** A summary of a candidate's achievements, educational background, work experience, skills and strengths.
- **Declining Letter:** A letter sent by an employee to an employer, turning down the job offer made by the employer to the employee.
- **Deductions:** Amounts subtracted from an employee's pay and listed on the employee's pay slip.
- **Discrimination:** The act of treating one person not as favourably as another person.
- **Employee:** A person who works for another person in exchange for payment.
- **Employee Training:** A workshop or in-house training that an employee is asked to attend by his or her superior, for the benefit of the employer.
- **Employment Gaps:** Periods of unemployed time between jobs.
- **Fixed-Term Contract:** A contract of employment which gets terminated on an agreed-upon date.
- **Follow-Up:** The act of contacting a potential employer after a candidate has submitted his or her resume.
- **Freelancer/Consultant/Independent Contractor:** A person who works for him or herself and pitches for temporary jobs and projects with different employers.
- **Holiday:** Paid time-off from work.
- **Hourly Rate:** The amount of salary or wages paid for 60 minutes of work.
- **Internship:** A job opportunity offered by an employer to a potential employee, called an intern, to work at the employer's company for a fixed, limited time period.
- **Interview:** A conversation between a potential employee and a representative of an employer, in order to determine if the potential employee should be hired.
- **Job Application:** A form which asks for a candidate's information like the candidate's name, address, contact details and work experience. The purpose of a candidate submitting a job application, is to show that candidate's interest in working for a particular company.
- **Job Offer:** An offer of employment made by an employer to a potential employee.
- **Job Search Agent:** A program that enables candidates to search for employment opportunities by selecting criteria listed in the program, for job vacancies.
- **Lay Off:** A lay off occurs when an employee is temporarily let go from his or her job, due to the employer not having any work for that employee.
- **Leave:** Formal permission given to an employee, by his or her employer, to take a leave of absence from work.
- **Letter of Acceptance:** A letter given by an employer to an employee, confirming the offer of employment made by the employer, as well as the conditions of the offer.
- **Letter of Agreement:** A letter that outlines the terms of employment.
- **Letter of Recommendation:** A letter written for the purpose of validating the work skills of a person.

- **Maternity Leave:** Leave taken from work by women who are pregnant, or who have just given birth.
- **Mentor:** A person who is employed at a higher level than you, who offers you advice and guides you in your career.
- **Minimum wage:** The minimum wage amount paid on an hourly basis.
- **Notice:** An announcement made by an employee or an employer, stating that the employment contract will end on a particular date.
- **Offer of Employment:** An offer made by an employer to a prospective employee that contains important information pertaining to the job being offered, like the starting date, salary, working conditions etc.
- **Open-Ended Contract:** A contract of employment that continues till the employer or employee terminates it.
- **Overqualified:** A person who is not suited for a particular job because he or she has too many years of work experience, or a level of education that is much higher than required for the job, or is currently or was previously too highly paid.
- **Part-Time Worker:** An employee who works for fewer hours than the standard number of hours normally worked.
- **Paternity Leave:** Leave granted to a man who has recently become a father.
- **Recruiters/Headhunters/Executive Search Firms:** Professionals who are paid by employers to search for people to fill particular positions.
- **Resigning/Resignations:** When an employee formally informs his or her employer that he or she is quitting his or her job.
- **Self-Employed:** A person who has his or her own business and does not work in the capacity of an employee.
- **Time Sheet:** A form that is submitted to an employer, by an employee, that contains the number of hours worked every day by the employee.

UNIT 7.5: Understanding Entrepreneurship

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. Discuss the concept of entrepreneurship
2. Discuss the importance of entrepreneurship
3. Describe the characteristics of an entrepreneur
4. Describe the different types of enterprises
5. List the qualities of an effective leader
6. Discuss the benefits of effective leadership
7. List the traits of an effective team
8. Discuss the importance of listening effectively
9. Discuss how to listen effectively
10. Discuss the importance of speaking effectively
11. Discuss how to speak effectively
12. Discuss how to solve problems
13. List important problem solving traits
14. Discuss ways to assess problem solving skills
15. Discuss the importance of negotiation
16. Discuss how to negotiate
17. Discuss how to identify new business opportunities
18. Discuss how to identify business opportunities within your business
19. Explain the meaning of entrepreneur
20. Describe the different types of entrepreneurs
21. List the characteristics of entrepreneurs
22. Recall entrepreneur success stories
23. Discuss the entrepreneurial process
24. Describe the entrepreneurship ecosystem
25. Discuss the purpose of the Make in India campaign
26. Discuss key schemes to promote entrepreneurs
27. Discuss the relationship between entrepreneurship and risk appetite
28. Discuss the relationship between entrepreneurship and resilience
29. Describe the characteristics of a resilient entrepreneur
30. Discuss how to deal with failure

7.5.1 Concept Introduction, (Characteristic of an Entrepreneur, types of firms / types of enterprises): Entrepreneurs and Entrepreneurship

Anyone who is determined to start a business, no matter what the risk, is an entrepreneur. Entrepreneurs run their own start-up, take responsibility for the financial risks and use creativity, innovation and vast reserves of self-motivation to achieve success. They dream big and are determined to do whatever it takes to turn their idea into a viable offering. The aim of an entrepreneur is to create an enterprise. The process of creating this enterprise is known as entrepreneurship.

Importance of Entrepreneurship

Entrepreneurship is very important for the following reasons:

1. It results in the creation of new organizations
2. It brings creativity into the marketplace
3. It leads to improved standards of living
4. It helps develop the economy of a country

Characteristics of Entrepreneurs

All successful entrepreneurs have certain characteristics in common.

They are all:

- Extremely passionate about their work
- Confident in themselves
- Disciplined and dedicated
- Motivated and driven
- Highly creative
- Visionaries
- Open-minded
- Decisive

Entrepreneurs also have a tendency to:

- Have a high risk tolerance
- Thoroughly plan everything
- Manage their money wisely
- Make their customers their priority
- Understand their offering and their market in detail
- Ask for advice from experts when required
- Know when to cut their losses

Examples of Famous Entrepreneurs

Some famous entrepreneurs are:

- Dhirubhai Ambani (Reliance)
- Dr. Karsanbhai Patel (Nirma)
- Azim Premji (Wipro)
- Anil Agarwal (Vedanta Resources)

Types of Enterprises

As an entrepreneur in India, you can own and run any of the following types of enterprises:

Sole Proprietorship

In a sole proprietorship, a single individual owns, manages and controls the enterprise. This type of business is the easiest to form with respect to legal formalities. The business and the owner have no separate legal existence. All profit belongs to the proprietor, as do all the losses - the liability of the entrepreneur is unlimited.

Partnership

A partnership firm is formed by two or more people. The owners of the enterprise are called partners. A partnership deed must be signed by all the partners. The firm and its partners have no separate legal existence. The profits are shared by the partners. With respect to losses, the liability of the partners is unlimited. A firm has a limited life span and must be dissolved when any one of the partners dies, retires, claims bankruptcy or goes insane.

Limited Liability Partnership (LLP)

In a Limited Liability Partnership or LLP, the partners of the firm enjoy perpetual existence as well as the advantage of limited liability. Each partner's liability is limited to their agreed contribution to the LLP. The partnership and its partners have a separate legal existence.

Tips

- Learn from others' failures.
- Be certain that this is what you want.
- Search for a problem to solve, rather than look for a problem to attach to your idea.

7.5.2 Leadership & Teamwork: Leadership and Leaders

Leadership means setting an example for others to follow. Setting a good example means not asking someone to do something that you wouldn't willingly want to do yourself. Leadership is about figuring out what to do in order to win as a team, and as a company.

Leaders believe in doing the right things. They also believe in helping others to do the right things. An effective leader is someone who:

- Creates an inspiring vision of the future.
- Motivates and inspires his team to pursue that vision.

Leadership Qualities That All Entrepreneurs Need

Building a successful enterprise is only possible if the entrepreneur in charge possesses excellent leadership qualities. Some critical leadership skills that every entrepreneur must have are:

1. **Pragmatism**: This means having the ability to highlight all obstacles and challenges, in order to resolve issues and reduce risks.
2. **Humility**: This means admitting to mistakes often and early, and being quick to take responsibility for your actions. Mistakes should be viewed as challenges to overcome, not opportunities to point blame.
3. **Flexibility**: It is critical for a good leader to be very flexible and quickly adapt to change. It is equally critical to know when to adapt and when not to.

4. **Authenticity**: This means showing both, your strengths and your weaknesses. It means being human and showing others that you are human.

5. **Reinvention:** This means refreshing or changing your leadership style when necessary. To do this, it's important to learn where your leadership gaps lie and find out what resources are required to close them.

6. **Awareness**: This means taking the time to recognize how others view you. It means understanding how your presence affects those around you.

Benefits of Effective Leadership

Effective leadership results in numerous benefits. Great leadership leads to the leader successfully:

- Gaining the loyalty and commitment of the team members
- Motivating the team to work towards achieving the company's goals and objectives
- Building morale and instilling confidence in the team members
- Fostering mutual understanding and team-spirit among team members
- Convincing team members about the need to change when a situation requires adaptability

Teamwork and Teams

Teamwork occurs when the people in a workplace combine their individual skills to pursue a common goal. Effective teams are made up of individuals who work together to achieve this common goal. A great team is one who holds themselves accountable for the end result.

Importance of Teamwork in Entrepreneurial Success

For an entrepreneurial leader, building an effective team is critical to the success of a venture. An entrepreneur must ensure that the team he builds possesses certain crucial qualities, traits and characteristics. An effective team is one which has:

1. **Unity of purpose:** All the team members should clearly understand and be equally committed to the purpose, vision and goals of the team.

2. **Great communication skills:** Team members should have the ability to express their concerns, ask questions and use diagrams, and charts to convey complex information.

3. **The ability to collaborate:** Every member should feel entitled to provide regular feedback on new ideas.

4. **Initiative:** The team should consist of proactive individuals. The members should have the enthusiasm to come up with new ideas, improve existing ideas, and conduct their own research.

5. **Visionary members:** The team should have the ability to anticipate problems and act on these potential problem before they turn into real problems.

6. **Great adaptability skills:** The team must believe that change is a positive force. Change should be seen as the chance to improve and try new things.

7. **Excellent organizational skills:** The team should have the ability to develop standard work processes, balance responsibilities, properly plan projects, and set in place methods to measure progress and ROI.

Tips

- Don't get too attached to your original idea. Allow it to evolve and change.
- Be aware of your weaknesses and build a team that will complement your shortfalls.
- Hiring the right people is not enough. You need to promote or incentivize your most talented people to keep them motivated.
- Earn your team's respect.

7.5.3 Communication Skills: Listening & Speaking: The Importance of Listening Effectively

Listening is the ability to correctly receive and understand messages during the process of communication. Listening is critical for effective communication. Without effective listening skills, messages can easily be misunderstood. This results in a communication breakdown and can lead to the sender and the receiver of the message becoming frustrated or irritated.

It's very important to note that listening is not the same as hearing. Hearing just refers to sounds that you hear. Listening is a whole lot more than that. To listen, one requires focus. It means not only paying attention to the story, but also focusing on how the story is relayed, the way language and voice is used, and even how the speaker uses their body language. The ability to listen depends on how effectively one can perceive and understand both, verbal and non-verbal cues.

How to Listen Effectively

To listen effectively you should:

- Stop talking
- Stop interrupting
- Focus completely on what is being said
- Nod and use encouraging words and gestures
- Be open-minded
- Think about the speaker's perspective
- Be very, very patient
- Pay attention to the tone that is being used
- Pay attention to the speaker's gestures, facial expressions and eye movements
- Not try and rush the person
- Not let the speaker's mannerisms or habits irritate or distract you

Imporatnce of Speaking Effectively

How successfully a message gets conveyed depends entirely on how effectively you are able to get it through. An effective speaker is one who enunciates properly, pronounces words correctly, chooses the right words and speaks at a pace that is easily understandable. Besides this, the words spoken out loud need to match the gestures, tone and body language used.

What you say, and the tone in which you say it, results in numerous perceptions being formed. A person who speaks hesitantly may be perceived as having low self-esteem or lacking in knowledge of the discussed topic. Those with a quiet voice may very well be labelled as shy. And those who speak in commanding tones with high levels of clarity, are usually considered to be extremely confident. This makes speaking a very critical communication skill.

How to Speak Effectively?

To speak effectively you should:

- Incorporate body language in your speech like eye contact, smiling, nodding, gesturing etc.
- Build a draft of your speech before actually making your speech.
- Ensure that all your emotions and feelings are under control.
- Pronounce your words distinctly with the correct pitch and intensity. Your speech should be crystal clear at all times.
- Use a pleasant and natural tone when speaking. Your audience should not feel like you are putting on an accent or being unnatural in any way.

- Use precise and specific words to drive your message home. Ambiguity should be avoided at all costs.
- Ensure that your speech has a logical flow.
- Be brief. Don't add any unnecessary information.
- Make a conscious effort to avoid irritating mannerisms like fidgeting, twitching etc.
- Choose your words carefully and use simple words that the majority of the audience will have no difficulty understanding.
- Use visual aids like slides or a whiteboard.
- Speak slowly so that your audience can easily understand what you're saying. However, be careful not to speak too slowly because this can come across as stiff, unprepared or even condescending.
- Remember to pause at the right moments.

Tips

- If you're finding it difficult to focus on what someone is saying, try repeating their words in your head.
- Always maintain eye contact with the person that you are communicating with, when speaking as well as listening. This conveys and also encourages interest in the conversation.

7.5.4 Problem Solving & Negotiation skills:
What is a Problem?

As per The Concise Oxford Dictionary (1995), a problem is, "A doubtful or difficult matter requiring a solution"

All problems contain two elements:

1. Goals   2. Obstacles

The aim of problem solving is to recognize the obstacles and remove them in order to achieve the goals.

How to Solve Problems?

Solving a problem requires a level of rational thinking. Here are some logical steps to follow when faced with an issue:

Step 1: Identify the problem   **Step 2:** Study the problem in detail

Step 3: List all possible solutions   **Step 4:** Select the best solution

Step 5: Implement the chosen solution   **Step 6:** Check that the problem has really been solved

Important Traits for Problem Solving

Highly developed problem solving skills are critical for both, business owners and their employees. The following personality traits play a big role in how effectively problems are solved:

- Being open minded
- Being proactive
- Having a positive attitude

- Asking the right questions
- Not panicking
- Focusing on the right problem

How to Assess for Problem Solving Skills?

As an entrepreneur, it would be a good idea to assess the level of problem solving skills of potential candidates before hiring them. Some ways to assess this skill are through:

1. **Application forms:** Ask for proof of the candidate's problem solving skills in the application form.
2. **Psychometric tests:** Give potential candidates logical reasoning and critical thinking tests and see how they fare.
3. **Interviews:** Create hypothetical problematic situations or raise ethical questions and see how the candidates respond.
4. **Technical questions:** Give candidates examples of real life problems and evaluate their thought process.

What is Negotiation?

Negotiation is a method used to settle differences. The aim of negotiation is to resolve differences through a compromise or agreement while avoiding disputes. Without negotiation, conflicts are likely to lead to resentment between people. Good negotiation skills help satisfy both parties and go a long way towards developing strong relationships.

Why Negotiate?

Starting a business requires many, many negotiations. Some negotiations are small while others are critical enough to make or break a startup. Negotiation also plays a big role inside the workplace. As an entrepreneur, you need to know not only know how to negotiate yourself, but also how to train employees in the art of negotiation.

How to Negotiate?

Take a look at some steps to help you negotiate:

Step 1: Pre-Negotiation Preparation	Agree on where to meet to discuss the problem, decide who all will be present and set a time limit for the discussion.
Step 2: Discuss the Problem	This involves asking questions, listening to the other side, putting your views forward and clarifying doubts.
Step 3: Clarify the Objective	Ensure that both parties want to solve the same problem and reach the same goal.
Step 4: Aim for a Win-Win Outcome	Try your best to be open minded when negotiating. Compromise and offer alternate solutions to reach an outcome where both parties win.
Step 5: Clearly Define the Agreement	When an agreement has been reached, the details of the agreement should be crystal clear to both sides, with no scope for misunderstandings.
Step 6: Implement the Agreed Upon Solution	Agree on a course of action to set the solution in motion

Tips

- Know exactly what you want before you work towards getting it
- Give more importance to listening and thinking, than speaking
- Focus on building a relationship rather than winning
- Remember that your people skills will affect the outcome
- Know when to walk away – sometimes reaching an agreement may not be possible

7.5.5 Business Opportunities Identification: Entrepreneurs and Opportunities

"The entrepreneur always searches for change, responds to it and exploits it as an opportunity."
Peter Drucker

The ability to identify business opportunities is an essential characteristic of an entrepreneur.

What is an Opportunity?

The word opportunity suggests a good chance or a favourable situation to do something offered by circumstances.

A business opportunity means a good or favourable change available to run a specific business in a given environment, at a given point of time.

Common Questions Faced by Entrepreneurs

A critical question that all entrepreneurs face is how to go about finding the business opportunity that is right for them.

Some common questions that entrepreneurs constantly think about are:

- Should the new enterprise introduce a new product or service based on an unmet need?
- Should the new enterprise select an existing product or service from one market and offer it in another where it may not be available?
- Should the enterprise be based on a tried and tested formula that has worked elsewhere?

It is therefore extremely important that entrepreneurs must learn how to identify new and existing business opportunities and evaluate their chances of success.

When is an Idea an Opportunity?

An idea is an opportunity when:

- It creates or adds value to a customer
- It solves a significant problem, removes a pain point or meets a demand
- Has a robust market and profit margin
- Is a good fit with the founder and management team at the right time and place

Factors to Consider When Looking for Opportunities

Consider the following when looking for business opportunities:

- Economic trends
- Changes in funding
- Changing relationships between vendors, partners and suppliers
- Market trends
- Changes in political support
- Shift in target audience

Ways to Identify New Business Opportunities

1. Identify Market Inefficiencies

   When looking at a market, consider what inefficiencies are present in the market. Think about ways to correct these inefficiencies.

2. Remove Key Hassles

   Rather than create a new product or service, you can innovatively improve a product, service or process.

3. Create Something New

   Think about how you can create a new experience for customers, based on existing business models.

4. Pick a Growing Sector/Industry

    Research and find out which sectors or industries are growing and think about what opportunities you can tap in the same.

5. Think About Product Differentiation

    If you already have a product in mind, think about ways to set it apart from the existing ones.

Ways to Identify Business Opportunities Within   Your Business

1. SWOT Analysis

    An excellent way to identify opportunities inside your business is by creating a SWOT analysis. The acronym SWOT stands for strengths, weaknesses, opportunities, and threats.
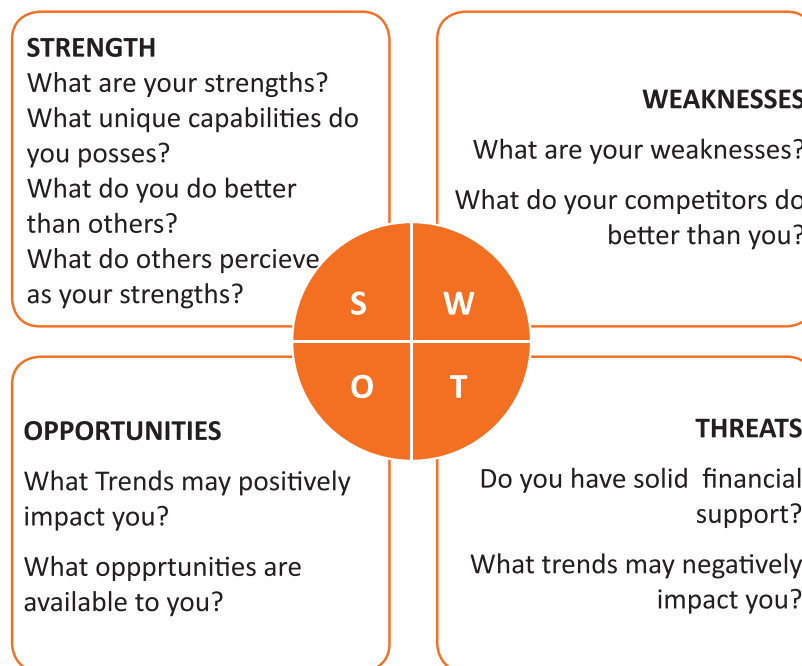
    SWOT analysis framework:

STRENGTH
What are your strengths?
What unique capabilities do you posses?
What do you do better than others?
What do others percieve as your strengths?

WEAKNESSES
What are your weaknesses?
What do your competitors do better than you?

S   W

O   T

OPPORTUNITIES
What Trends may positively impact you?
What oppprtunities are available to you?

THREATS
Do you have solid financial support?
What trends may negatively impact you?

Fig.7.5.1. SWOT Analysis

Consider the following when looking for business opportunities:

By looking at yourself and your competitors using the SWOT framework, you can uncover opportunities that you can exploit, as well as manage and eliminate threats that could derail your success.

2. Establishing Your USP

    Establish your USP and position yourself as different from your competitors. Identify why customers should buy from you and promote that reason.

Opportunity Analysis

Once you have identified an opportunity, you need to analyze it.

To analyze an opportunity, you must:

*   Focus on the idea
*   Focus on the market of the idea
*   Talk to industry leaders in the same space as the idea
*   Talk to players in the same space as the idea

Tips

- Remember, opportunities are situational.
- Look for a proven track record.
- Avoid the latest craze.
- Love your idea.

7.5.6 Entrepreneurship Support Eco - System:
What is an Entrepreneur?

An entrepreneur is a person who:

- Does not work for an employee
- Runs a small enterprise
- Assumes all the risks and rewards of the enterprise, idea, good or service

Types of Entrepreneurs

There are four main types of entrepreneurs:

1. **The Traditional Entrepreneur**: This type of entrepreneur usually has some kind of skill –they can be a carpenter, mechanic, cook etc. They have businesses that have been around for numerous years like restaurants, shops and carpenters. Typically, they gain plenty of experience in a particular industry before they begin their own business in a similar field.
2. **The Growth Potential Entrepreneur**: The desire of this type of entrepreneur is to start an enterprise that will grow, win many customers and make lots of money. Their ultimate aim is to eventually sell their enterprise for a nice profit. Such entrepreneurs usually have a science or technical background.
3. **The Project-Oriented Entrepreneur**: This type of entrepreneur generally has a background in the Arts or psychology. Their enterprises tend to be focus on something that they are very passionate about.
4. **The Lifestyle Entrepreneur**: This type of entrepreneur has usually worked as a teacher or a secretary. They are more interested in selling something that people will enjoy, rather than making lots of money.

Characteristics of an Entrepreneur

Successful entrepreneurs have the following characteristics:

- They are highly motivated
- They are creative and persuasive
- They are mentally prepared to handle each and every task
- They have excellent business skills – they know how to evaluate their cash flow, sales and revenue
- They are willing to take great risks
- They are very proactive – this means they are willing to do the work themselves, rather than wait for someone else to do it
- They have a vision – they are able to see the big picture
- They are flexible and open-minded
- They are good at making decisions

Entrepreneur Success Stories

Dhiru Bhai Ambani

Dhirubhai Ambani began his entrepreneurial career by selling "bhajias" to pilgrims in Mount Girnar on weekends. At 16, he moved to Yemen where he worked as a gas-station attendant, and as a clerk in an oil company. He returned to India with Rs. 50,000 and started a textile trading company. Reliance went on to become the first Indian company to raise money in global markets and the first Indian company to feature in Forbes 500 list.

Dr. Karsanbhai Patel

Karsanbhai Patel made detergent powder in the backyard of his house. He sold his product door-to-door and offered a money back guarantee with every pack that was sold. He charged Rs. 3 per kg when the cheapest detergent at that time was Rs.13 per kg. Dr. Patel eventually started Nirma which became a whole new segment in the Indian domestic detergent market.

The Entrepreneurial Process

Let's take a look at the stages of the entrepreneurial process.

Stage 1: Idea Generation. The entrepreneurial process begins with an idea that has been thought of by the entrepreneur. The idea is a problem that has the potential to be solved.

Stage 2: Germination or Recognition. In this stage a possible solution to the identified problem is thought of.

Stage 3: Preparation or Rationalization. The problem is studied further and research is done to find out how others have tried to solve the same problem.
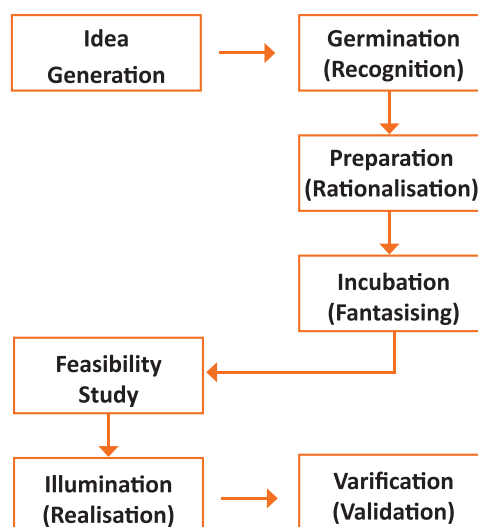
Stage 4: Incubation or Fantasizing. This stage involves creative thinking for the purpose of coming up with more ideas. Less thought is given to the problem areas.

Stage 5: Feasibility Study: The next step is the creation of a feasibility study to determine if the idea will make a profit and if it should be seen through.

Stage 6: Illumination or Realization. This is when all uncertain areas suddenly become clear. The entrepreneur feels confident that his idea has merit.

Stage 7: Verification or Validation. In this final stage, the idea is verified to see if it works and if it is useful.

Take a look at the diagram below to get a better idea of this process.

Idea Generation	→	Germination (Recognition)

Preparation (Rationalisation)

Incubation (Fantasising)

Feasibility Study

Illumination (Realisation)	→	Varification (Validation)

Introduction to the Entrepreneurship Ecosystem

The entrepreneurship support ecosystem signifies the collective and complete nature of entrepreneurship. New companies emerge and flourish not only because of the courageous, visionary entrepreneurs who launch them, but they thrive as they are set in an environment or 'ecosystem' made of private and public participants. These players nurture and sustain the new ventures, facilitating the entrepreneurs' efforts.

An entrepreneurship ecosystem comprises of the following six domains:

1. **Favourable Culture:** This includes elements such as tolerance of risk and errors, valuable networking and positive social standing of the entrepreneur.
2. **Facilitating Policies & Leadership:** This includes regulatory framework incentives and existence of public research institutes.
3. **Financing Options:** Angel financing, venture capitalists and micro loans would be good examples of this.
4. **Human Capital:** This refers to trained and untrained labour, entrepreneurs and entrepreneurship training programmes, etc.
5. **Conducive Markets for Products & Services:** This refers to an existence or scope of existence of a market for the product/service.
6. **Institutional & Infrastructural Support:** This includes legal and financing advisers, telecommunications, digital and transportation infrastructure, and entrepreneurship networking programmes.

These domains indicate whether there is a strong entrepreneurship support ecosystem and what actions should the government put in place to further encourage this ecosystem. The six domains and their various elements have been graphically depicted.
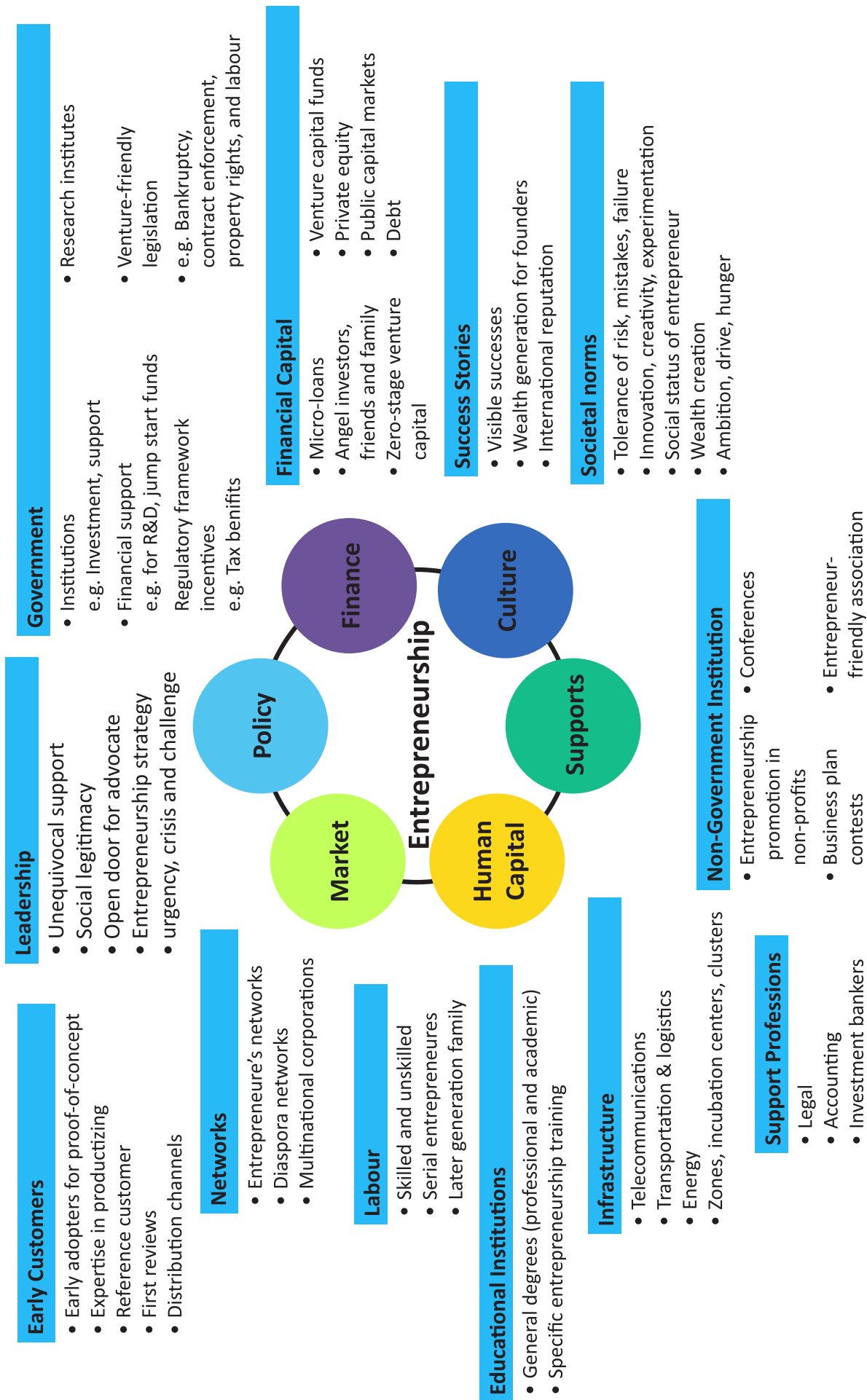
Early Customers
- Early adopters for proof-of-concept
- Expertise in productizing
- Reference customer
- First reviews
- Distribution channels

Leadership
- Unequivocal support
- Social legitimacy
- Open door for advocate
- Entrepreneurship strategy
- urgency, crisis and challenge

Government
- Institutions
  e.g. Investment, support
- Financial support
  e.g. for R&D, jump start funds
  Regulatory framework
  incentives
  e.g. Tax benifits
- Research institutes
- Venture-friendly
  legislation
- e.g. Bankruptcy,
  contract enforcement,
  property rights, and labour

Networks
- Entrepreneure's networks
- Diaspora networks
- Multinational corporations

Financial Capital
- Micro-loans
- Angel investors,
  friends and family
- Zero-stage venture
  capital
- Venture capital funds
- Private equity
- Public capital markets
- Debt

Labour
- Skilled and unskilled
- Serial entrepreneures
- Later generation family

Success Stories
- Visible successes
- Wealth generation for founders
- International reputation

Societal norms
- Tolerance of risk, mistakes, failure
- Innovation, creativity, experimentation
- Social status of entrepreneur
- Wealth creation
- Ambition, drive, hunger

Educational Institutions
- General degrees (professional and academic)
- Specific entrepreneurship training

Infrastructure
- Telecommunications
- Transportation & logistics
- Energy
- Zones, incubation centers, clusters

Non-Government Institution
- Entrepreneurship
  promotion in
  non-profits
- Business plan
  contests
- Conferences
- Entrepreneur-
  friendly association

Support Professions
- Legal
- Accounting
- Investment bankers

Finance

Culture

Policy

Entrepreneurship

Supports

Market

Human
Capital

Fig.7.5.2. Entrepreneurship at a Glance

Every entrepreneurship support ecosystem is unique and all the elements of the ecosystem are interdependent. Although every region's entrepreneurship ecosystem can be broadly described by the above features, each ecosystem is the result of the hundred elements interacting in highly complex and particular ways.

Entrepreneurship ecosystems eventually become (largely) self-sustaining. When the six domains are resilient enough, they are mutually beneficial. At this point, government involvement can and should be significantly minimized. Public leaders do not need to invest a lot to sustain the ecosystem. It is imperative that the entrepreneurship ecosystem incentives are formulated to be self-liquidating, hence focusing on sustainability of the environment.

Make in India Campaign

Every entrepreneur has certain needs. Some of their important needs are:

- To easily get loans
- To easily find investors
- To get tax exemptions
- To easily access resources and good infrastructure
- To enjoy a procedure that is free of hassles and is quick
- To be able to easily partner with other firms

The Make in India campaign, launched by Prime Minister Modi aims to satisfy all these needs of young, aspiring entrepreneurs. Its objective is to:

- Make investment easy
- Support new ideas
- Enhance skill development
- Safeguard the ideas of entrepreneurs
- Create state-of-the-art facilities for manufacturing goods

Key Schemes to Promote Entrepreneurs

The government offers many schemes to support entrepreneurs. These schemes are run by various Ministries/Departments of Government of India to support First Generation Entrepreneurs. Take a look at a few key schemes to promote entrepreneurship:

Name of the Scheme

1. Pradhan Mantri MUDRA Yojana - Micro Units Development and Refinance Agency (MUDRA),
2. STAND UP INDIA
3. Prime Minister Employment Generation Programme (PMEGP)
4. International Cooperation
5. Performance and Credit Rating
6. Marketing Assistance Scheme
7. Reimbursement of Registration Fee for Bar Coding
8. Enable Participation of MSMEs in State/District level Trade Fairs and Provide Funding Support
9. Capital Subsidy Support on Credit for Technology up gradation
10. Credit Guarantee Fund for Micro and Small Enterprise (CGFMSE)
11. Reimbursement of Certification Fees for Acquiring ISO Standards
12. Agricultural Marketing
13. Small Agricultural Marketing
14. Mega Food Park
15. Adivasi Mahila Sashaktikaran Yojana

1. **Pradhan Mantri MUDRA Yojana,** - Micro Units Development and Refinance Agency (MUDRA),

   Description

   Under the aegis support of Pradhan Mantri MUDRA Yojana, MUDRA has already created its initial products/schemes. The interventions have been named 'Shishu', 'Kishor' and 'Tarun' to signify the stage of growth/development and funding needs of the beneficiary micro unit/entrepreneur and also provide a reference point for the next phase of graduation/growth to look forward to:

   a. Shishu: Covering loans upto Rs.50,000/-

   b. Kishor: Covering loans above Rs. 50,000/- and upto Rs.5 lakh

   c. Tarun: Covering loans above Rs. 5 lakh to Rs.10 lakh

Who can apply?

Any Indian citizen who has a business plan for a non-farm sector income generating activity such as manufacturing, processing, trading or service sector and whose credit need is less than Rs.10 lakh can approach either a Bank, MFI, or NBFC for availing of MUDRA loans under Pradhan Mantri Mudra Yojana (PMMY).

2. **Stand Up India**

   Description

   The objective of the Standup India scheme is to facilitate bank loans between Rs.10 lakh and Rs.1 crore to at least one Schedule Caste (SC) or Scheduled Tribe (ST) borrower and at least one woman borrower per bank branch for setting up a Greenfield enterprise. This enterprise may be in manufacturing, services or the trading sector. In case of non-Individual enterprises at least 51% of the shareholding and controlling stake should be held be either an SC/ST or Woman Entrepreneur.

Who can apply?

ST, SC &Women

3. **Prime Minister Employment Generation Programme (PMEGP)**

   Description

   The Scheme is implemented by Khadi and Village Industries Commission (KVIC), as the nodal agency at the National level. At the State level, the Scheme is implemented through State KVIC Directorates, State Khadi and Village Industries Boards (KVIBs) and District Industries Centres (DICs) and banks. The Government subsidy under the Scheme is routed by KVIC through identified banks for eventual distribution to the beneficiaries/entrepreneurs in their bank accounts.

Nature of assistance

The maximum cost of the project/unit admissible under manufacturing sector is Rs.25 lakh and under business/service sector is Rs.10 lakh. Levels of funding under PMEGP

Categories of beneficiaries under PMEGP	Beneficiary's contribution (of project cost)	Rate of Subsidy (of project cost)
Area (location of project/unit)		Urban Rural
General Category	10%	15% 25%
Special (including SC / ST / OBC / Minorities / Women, Ex-servicemen, Physically handicapped, NER, Hill and Border areas, etc.	05%	25% 35%

The balance amount of the total project cost will be provided by Banks as term loan as well as working capital.

Who can apply?

Any individual, above 18 years of age. At least VIII standard pass for projects costing above Rs.10 lakh in the manufacturing sector and above Rs.5 lakh in the business/service sector. Only new projects are considered for sanction under PMEGP. Self Help Groups (including those belonging to BPL provided that they have not availed benefits under any other Scheme), Institutions registered under Societies Registration Act,1860; Production Co-operative Societies, and Charitable Trusts are also eligible. Existing Units (under PMRY, REGP or any other scheme of Government of India or State Government) and the units that have already availed Government Subsidy under any other scheme of Government of India or State Government are NOT eligible.

4. **International Cooperation**

   Description

   The Scheme would cover the following activities:

   a. Deputation of MSME business delegations to other countries for exploring new areas of technology infusion/upgradation, facilitating joint ventures, improving market of MSMEs products, foreign collaborations, etc.

   b. Participation by Indian MSMEs in international exhibitions, trade fairs and buyer-seller meets in foreign countries as well as in India, in which there is international participation.

   c. Holding international conferences and seminars on topics and themes of interest to the MSME.

Nature of assistance

IC Scheme provides financial assistance towards the airfare and space rent of entrepreneurs. Assistance is provided on the basis of size and the type of the enterprise.

Who can apply?

a. State/Central Government Organisations;

b. Industry/Enterprise Associations; and

c. Registered Societies/Trusts and Organisations associated with the promotion and development of MSMEs

5. **Performance and Credit Rating for Micro and Small Enterprises**

   Description

   The objective of the Scheme is to create awareness amongst micro & small enterprises about the strengths and weaknesses of their operations and also their credit worthiness.

Nature of assistance

Turn Over	Fee to be reimbursed by Ministry of MSME
Up to Rs.50 lacs	75% of the fee charged by the rating agency subject to a ceiling Rs.15,000/-
Above Rs.50 lacs to Rs.200 lacs	75% of the fee charged by the rating agency subject to a ceiling of Rs.30,0001-
Above Rs.200 lacs	75% of the fee charged by the rating agency subject to a ceiling of Rs.40,000/-

Who can apply?

Any enterprise registered in India as a micro or small enterprise is eligible to apply.

6. **Marketing Assistance Scheme**

   Description

   The assistance is provided for the following activities:

   a. Organizing exhibitions abroad and participation in international exhibitions/trade fairs

b. Co-sponsoring of exhibitions organized by other organisations/industry associations/agencies

c. Organizing buyer-seller meets, intensive campaigns and marketing promotion events

Nature of assistance

Financial assistance of up to 95% of the airfare and space rent of entrepreneurs. Assistance is provided on the basis of size and the type of the enterprise. Financial assistance for co-sponsoring would be limited to 40% of the net expenditure, subject to maximum amount of Rs.5 lakh.

Who can apply?

MSMEs, Industry Associations and other organizations related to MSME sector.

7. **Reimbursement of Registration Fee for Bar Coding**

   Description

   The financial assistance is provided towards 75% reimbursement of only one-time registration fee and 75% of annual recurring fee for first three years paid by MSEs to GS1 India for using bar coding.

   Nature of assistance

   Funding support for reimbursement of 75% of one time and recurring bar code registration fees.

   Who can apply?

   All MSMEs with EM registration.

8. **Enabling Participation of MSMEs in State/District Level Trade Fairs and Provide Funding Support**

   Description

   Provide marketing platform to manufacturing MSMEs by enabling their participation in state/district level exhibitions being organized by state/district authorities/associations.

Nature of assistance

1. Free registration for participating in trade fairs

Note: *The selection of participants would be done by the MSME-DIs post the submission of application.*

2. Reimbursement of 50% of to and fro actual fare by shortest distance/direct train (limited to AC II tier class) from the nearest railway station/bus fare to the place of exhibition and 50% space rental charges for MSMEs (General category entrepreneurs).

3. For Women/SC/ST entrepreneurs & entrepreneurs from North Eastern Region Govt. of India will reimburse 80% of items listed above in Point (2).

Note: The total reimbursement will be max. Rs.30,000/- per unit for the SC/ST/Women/Physically Handicapped entrepreneurs, while for the other units the max. limit will be Rs.20,000/- per person per MSME unit.

Note: *The participant is required to submit follow-up proofs post attending the event to claim reimbursement. The proofs can be submitted after logging in online under the section "My Applications" or directly contacting a DI office.*

Who can apply?

All MSMEs with EM registration.

9. **Capital Subsidy Support on Credit for Technology Upgradation**

   Description

   MSMEs can get a capital subsidy (~15%) on credit availed for technology upgradation.

   Nature of assistance

   Financial assistance for availing credit and loan.

Who can apply?

1. Banks and financial institutions can apply to DC-MSME for availing support.
2. MSMEs need to directly contact the respective banks for getting credit and capital subsidy.

How to apply?

If you are a financial institution, click on the "Apply Now" button or else you can also directly contact the Office of DC-MSME. You can view the contact details of Office of DC-MSME. If you are an MSME, directly contact the respective banks/financial institutions as listed in the scheme guidelines.

10. **Provision of Collateral Free Credit for MSMEs**

Description

Banks and financial institutions are provided funding assistance under this scheme so that they can in turn lend collateral free credit to MSMEs.

Nature of assistance

Funding support to banks and financial institutions for lending collateral-free credit to MSMEs.

Who can apply?

Banks and financial institutions can apply to office of DC-MSME/MSME-DIs for availing support. MSMEs need to directly contact the respective banks for getting credit.

11. **Reimbursement of certification fees for acquiring ISO standards**

ISO 9000/ISO 14001 Certification Reimbursement.

Description

The GoI assistance will be provided for one-time reimbursement of expenditure to such MSME manufacturing units which acquire ISO 18000/ISO 22000/ISO 27000 certification.

Nature of assistance

Reimbursement of expenditure incurred on acquiring ISO standards.

Who can apply?

MSMEs with EM registration.

12. **Agricultural Marketing**

Description

A capital investment subsidy for construction/renovation of rural godowns.

Creation of scientific storage capacity and prevention of distress sale.

Nature of assistance

Subsidy @ 25% to farmers, 15% of project cost to companies.

Who can apply

NGOs, SHGs, companies, co-operatives.

13. **Small Agricultural Marketing**

Description

Business development description provides venture capital assistance in the form of equity, and arranges training and visits of agri-preneurs

Farmers' Agriculture Business Consortium

Business development description provides venture capital assistance in the form of equity, and arranges training and visits of agri-preneurs.

Nature of assistance

Financial assistance with a ceiling of Rs.5 lakh.

Who can apply

Individuals, farmers, producer groups, partnership/propriety firms, SGHs, agri-preneurs, etc.

14. **Mega Food Park**

Description

Mechanism to link agricultural production and market to maximize value addition, enhance farmers income, create rural employment.

Nature of assistance

One-time capital grant of 50% of project cost with a limit of Rs.50 crore.

Who can apply

Farmers, farmer groups, SHGs.

15. **Adivasi Mahila Sashaktikaran Yojana**

Description

Concessional scheme for the economic development of ST women.

Nature of assistance

Term loan at concessional rates upto 90% of cost of scheme.

Who can apply

Scheduled Tribes Women.

Tips

- Research the existing market, network with other entrepreneurs, venture capitalists, angel investors, and thoroughly review the policies in place to enable your entrepreneurship.
- Failure is a stepping stone and not the end of the road. Review yours and your peers' errors and correct them in your future venture.
- Be proactive in your ecosystem. Identify the key features of your ecosystem and enrich them to ensure self-sustainability of your entrepreneurship support ecosystem.

7.5.7 Risk Appetite & Resilience: Entrepreneurship and Risk

Entrepreneurs are inherently risk takers. They are path-makers not path-takers. Unlike a normal, cautious person, an entrepreneur would not think twice about quitting his job (his sole income) and taking a risk on himself and his idea.

An entrepreneur is aware that while pursuing his dreams, assumptions can be proven wrong and unforeseen events may arise. He knows that after dealing with numerous problems, success is still not guaranteed. Entrepreneurship is synonymous with the ability to take risks. This ability, called risk-appetite, is an entrepreneurial trait that is partly genetic and partly acquired.

What is Risk Appetite?

Risk appetite is defined as the extent to which a company is equipped to take risk, in order to achieve its objectives. Essentially, it refers to the balance, struck by the company, between possible profits and the hazards caused by changes in the environment (economic ecosystem, policies, etc.). Taking on more risk

may lead to higher rewards but have a high probability of losses as well. However, being too conservative may go against the company as it can miss out on good opportunities to grow and reach their objectives.

The levels of risk appetite can be broadly categorized as "low", "medium" and "high." The company's entrepreneur(s) have to evaluate all potential alternatives and select the option most likely to succeed. Companies have varying levels of risk appetites for different objectives. The levels depend on:

• The type of industry
• Market pressures
• Company objectives

For example, a startup with a revolutionary concept will have a very high risk appetite. The startup can afford short term failures before it achieves longer term success. This type of appetite will not remain constant and will be adjusted to account for the present circumstances of the company.

Risk Appetite Statement

Companies have to define and articulate their risk appetite in sync with decisions made about their objectives and opportunities. The point of having a risk appetite statement is to have a framework that clearly states the acceptance and management of risk in business. It sets risk taking limits within the company. The risk appetite statement should convey the following:

• The nature of risks the business faces.
• Which risks the company is comfortable taking on and which risks are unacceptable.
• How much risk to accept in all the risk categories.
• The desired tradeoff between risk and reward.
• Measures of risk and methods of examining and regulating risk exposures.

Entrepreneurship and Resilience

Entrepreneurs are characterized by a set of qualities known as resilience. These qualities play an especially large role in the early stages of developing an enterprise. Risk resilience is an extremely valuable characteristic as it is believed to protect entrepreneurs against the threat of challenges and changes in the business environment.

What is Entrepreneurial Resilience?

Resilience is used to describe individuals who have the ability to overcome setbacks related to their life and career aspirations. A resilient person is someone who is capable of easily and quickly recovering from setbacks. For the entrepreneur, resilience is a critical trait. Entrepreneurial resilience can be enhanced in the following ways:

• By developing a professional network of coaches and mentors
• By accepting that change is a part of life
• By viewing obstacles as something that can be overcome

Characteristics of a Resilient Entrepreneur

The characteristics required to make an entrepreneur resilient enough to go the whole way in their business enterprise are:

• A strong internal sense of control
• Ability to diversify and expand
• Strong social connections
• Survivor attitude
• Skill to learn from setbacks
• Cash-flow conscious habits
• Ability to look at the bigger picture
• Attention to detail

Tips

- Cultivate a great network of clients, suppliers, peers, friends and family. This will not only help you promote your business, but will also help you learn, identify new opportunities and stay tuned to changes in the market.
- Don't dwell on setbacks. Focus on what the you need to do next to get moving again.
- While you should try and curtail expenses, ensure that it is not at the cost of your growth.

7.5.8 Success & Failures: Understanding Successes and Failures in Entrepreneurship

Shyam is a famous entrepreneur, known for his success story. But what most people don't know, is that Shyam failed numerous times before his enterprise became a success. Read his interview to get an idea of what entrepreneurship is really about, straight from an entrepreneur who has both, failed and succeeded.

Interviewer: Shyam, I have heard that entrepreneurs are great risk-takers who are never afraid of failing. Is this true?

Shyam: Ha ha, no of course it's not true! Most people believe that entrepreneurs need to be fearlessly enthusiastic. But the truth is, fear is a very normal and valid human reaction, especially when you are planning to start your own business! In fact, my biggest fear was the fear of failing. The reality is, entrepreneurs fail as much as they succeed. The trick is to not allow the fear of failing to stop you from going ahead with your plans. Remember, failures are lessons for future success!

Interviewer: What, according to you, is the reason that entrepreneurs fail?

Shyam: Well, there is no one single reason why entrepreneurs fail. An entrepreneur can fail due to numerous reasons. You could fail because you have allowed your fear of failure to defeat you. You could fail because you are unwilling to delegate (distribute) work. As the saying goes, "You can do anything, but not everything!" You could fail because you gave up too easily – maybe you were not persistent enough. You could fail because you were focusing your energy on small, insignificant tasks and ignoring the tasks that were most important. Other reasons for failing are partnering with the wrong people, not being able to sell your product to the right customers at the right time at the right price… and many more reasons!

Interviewer: As an entrepreneur, how do you feel failure should be looked at?

Shyam: I believe we should all look at failure as an asset, rather than as something negative. The way I see it, if you have an idea, you should try to make it work, even if there is a chance that you will fail. That's because not trying is failure right there, anyway! And failure is not the worst thing that can happen. I think having regrets because of not trying, and wondering 'what if' is far worse than trying and actually failing.

Interviewer: How did you feel when you failed for the first time?

Shyam: I was completely heartbroken! It was a very painful experience. But the good news is, you do recover from the failure. And with every subsequent failure, the recovery process gets a lot easier. That's because you start to see each failure more as a lesson that will eventually help you succeed, rather than as an obstacle that you cannot overcome. You will start to realize that failure has many benefits.

Interviewer: Can you tell us about some of the benefits of failing?

Shyam: One of the benefits that I have experienced personally from failing is that the failure made me see things in a new light. It gave me answers that I didn't have before. Failure can make you a lot stronger. It also helps keep your ego in control.

Interviewer: What advice would you give entrepreneurs who are about to start their own enterprises?

Shyam: I would tell them to do their research and ensure that their product is something that is actually wanted by customers. I'd tell them to pick their partners and employees very wisely and cautiously. I'd tell

them that it's very important to be aggressive – push and market your product as aggressively as possible. I would warn them that starting an enterprise is very expensive and that they should be prepared for a situation where they run out of money.

I would tell them to create long term goals and put a plan in action to achieve that goal. I would tell them to build a product that is truly unique. Be very careful and ensure that you are not copying another startup. Lastly, I'd tell them that it's very important that they find the right investors.

Interviewer: That's some really helpful advice, Shyam! I'm sure this will help all entrepreneurs to be more prepared before they begin their journey! Thank you for all your insight!

Tips

- Remember that nothing is impossible.
- Identify your mission and your purpose before you start.
- Plan your next steps – don't make decisions hastily.

UNIT 7.6: Preparing to be an Entrepreneur

Unit Objectives 🎯

At the end of this unit, you will be able to:

1. Discuss how market research is carried out
2. Describe the 4 Ps of marketing
3. Discuss the importance of idea generation
4. Recall basic business terminology
5. Discuss the need for CRM
6. Discuss the benefits of CRM
7. Discuss the need for networking
8. Discuss the benefits of networking
9. Discuss the importance of setting goals
10. Differentiate between short-term, medium-term and long-term goals
11. Discuss how to write a business plan
12. Explain the financial planning process
13. Discuss ways to manage your risk
14. Describe the procedure and formalities for applying for bank finance
15. Discuss how to manage your own enterprise
16. List important questions that every entrepreneur should ask before starting an enterprise

7.6.1 Market Study / The 4 Ps of Marketing / Importance of an IDEA: Understanding Market Research

Market research is the process of gathering, analyzing and interpreting market information on a product or service that is being sold in that market. It also includes information on:

- Past, present and prospective customers
- Customer characteristics and spending habits
- The location and needs of the target market
- The overall industry
- Relevant competitors

Market research involves two types of data:

- Primary information. This is research collected by yourself or by someone hired by you.
- Secondary information. This is research that already exists and is out there for you to find and use.

Primary research

Primary research can be of two types:

- Exploratory: This is open-ended and usually involves detailed, unstructured interviews.
- Specific: This is precise and involves structured, formal interviews. Conducting specific research is the more expensive than conducting exploratory research.

Secondary research

Secondary research uses outside information. Some common secondary sources are:

• Public sources: These are usually free and have a lot of good information. Examples are government departments, business departments of public libraries etc.

• Commercial sources: These offer valuable information but usually require a fee to be paid. Examples are research and trade associations, banks and other financial institutions etc.

• Educational institutions: These offer a wealth of information. Examples are colleges, universities, technical institutes etc.

The 4 Ps of Marketing

The 4 Ps of marketing are Product, Price, Promotion and Place. Let's look at each of these 4 Ps in detail.

Product

A product can be:

• A tangible good   • An intangible service

Whatever your product is, it is critical that you have a clear understanding of what you are offering, and what its unique characteristics are, before you begin with the marketing process.

Some questions to ask yourself are:

• What does the customer want from the product/service?
• What needs does it satisfy?
• Are there any more features that can be added?
• Does it have any expensive and unnecessary features?
• How will customers use it?
• What should it be called?
• How is it different from similar products?
• How much will it cost to produce?
• Can it be sold at a profit?

Price

Once all the elements of Product have been established, the Price factor needs to be considered.

The Price of a Product will depend on several factors such as profit margins, supply, demand and the marketing strategy.

Some questions to ask yourself are:

• What is the value of the product/service to customers?
• Do local products/services have established price points?
• Is the customer price sensitive?
• Should discounts be offered?
• How is your price compared to that of your competitors?

Promotion

Once you are certain about your Product and your Price, the next step is to look at ways to promote it. Some key elements of promotion are advertising, public relations, social media marketing, email marketing, search engine marketing, video marketing and more.

Some questions to ask yourself are:

• Where should you promote your product or service?

- What is the best medium to use to reach your target audience?
- When would be the best time to promote your product?
- How are your competitors promoting their products?

Place

According to most marketers, the basis of marketing is about offering the right product, at the right price, at the right place, at the right time. For this reason, selecting the best possible location is critical for converting prospective clients into actual clients.

Some questions to ask yourself are:

- Will your product or service be looked for in a physical store, online or both?
- What should you do to access the most appropriate distribution channels?
- Will you require a sales force?
- Where are your competitors offering their products or services?
- Should you follow in your competitors' footsteps?
- Should you do something different from your competitors?

Importance of an IDEA

Ideas are the foundation of progress. An idea can be small or ground-breaking, easy to accomplish or extremely complicated to implement. Whatever the case, the fact that it is an idea gives it merit. Without ideas, nothing is possible. Most people are afraid to speak out their ideas, out for fear of being ridiculed. However, if are an entrepreneur and want to remain competitive and innovative, you need to bring your ideas out into the light.

Some ways to do this are by:

- Establishing a culture of brainstorming where you invite all interested parties to contribute
- Discussing ideas out loud so that people can add their ideas, views, opinions to them
- Being open minded and not limiting your ideas, even if the idea who have seems ridiculous
- Not discarding ideas that you don't work on immediately, but instead making a note of them and shelving them so they can be revisited at a later date

Tips

- Keep in mind that good ideas do not always have to be unique.
- Remember that timing plays a huge role in determining the success of your idea.
- Situations and circumstances will always change, so be flexible and adapt your idea accordingly.

7.6.2 Business Entity Concepts: Basic Business Terminology

If your aim is to start and run a business, it is crucial that you have a good understanding of basic business terms. Every entrepreneur should be well versed in the following terms:

- Accounting: A systematic method of recording and reporting financial transactions.
- Accounts payable: Money owed by a company to its creditors.
- Accounts Receivable: The amount a company is owed by its clients.
- Assets: The value of everything a company owns and uses to conduct its business.
- Balance Sheet: A snapshot of a company's assets, liabilities and owner's equity at a given moment.
- Bottom Line: The total amount a business has earned or lost at the end of a month.
- Business: An organization that operates with the aim of making a profit.
- Business to Business (B2B): A business that sells goods or services to another business.
- Business to Consumer (B2C): A business that sells goods or services directly to the end user.
- Capital: The money a business has in its accounts, assets and investments. The two main types of capital are debt and equity.
- Cash Flow: The overall movement of funds through a business each month, including income and expenses.
- Cash Flow Statement: A statement showing the money that entered and exited a business during a specific period of time.
- Contract: A formal agreement to do work for pay.
- Depreciation: The degrading value of an asset over time.
- Expense: The costs that a business incurs through its operations.
- Finance: The management and allocation of money and other assets.
- Financial Report: A comprehensive account of a business' transactions and expenses.
- Fixed Cost: A one-time expense.
- Income Statement (Profit and Loss Statement): Shows the profitability of a business during a period of time.
- Liabilities: The value of what a business owes to someone else.
- Marketing: The process of promoting, selling and distributing a product or service.
- Net Income/Profit: Revenues minus expenses.
- Net Worth: The total value of a business.
- Payback Period: The amount of time it takes to recover the initial investment of a business.
- Profit Margin: The ratio of profit, divided by revenue, displayed as a percentage.
- Return on Investment (ROI): The amount of money a business gets as return from an investment.
- Revenue: The total amount of income before expenses are subtracted.
- Sales Prospect: A potential customer.
- Supplier: A provider of supplies to a business.
- Target Market: A specific group of customers at which a company's products and services are aimed.
- Valuation: An estimate of the overall worth of the business.
- Variable Cost: Expenses that change in proportion to the activity of a business.
- Working Capital: Calculated as current assets minus current liabilities.
- Business Transactions: There are three types of business transactions. These are:
    - Simple Transactions – Usually a single transaction between a vendor and a customer. For example: Buying a cup of coffee.

- ✧ Complex Transactions – These transactions go through a number of events before they can be completed. For example: Buying a house.
- ✧ Ongoing transactions – These transactions usually require a contract. For example: Contract with a vendor.

Basic Accounting Formulas

Take a look some important accounting formulas that every entrepreneur needs to know.

1. The Accounting Equation: This is value of everything a company owns and uses to conduct its business.
   Formula:

   Assets = Liability + Owner's Equity

2. Net Income: This is the profit of the company.
   Formula:

   Net Income = Revenues – Expenses

3. Break-Even Point: This is the point at which the company will not make a profit or a loss. The total cost and total revenues are equal.
   Formula:

   Break-Even = Fixed Costs/Sales Price – Variable Cost per Unit

4. Cash Ratio: This tells us about the liquidity of a company.
   Formula:

   Cash Ratio = Cash/Current Liabilities

5. Profit Margin: This is shown as a percentage. It shows what percentage of sales are left over after all the expenses are paid by the business.
   Formula:

   Profit Margin = Net Income/Sales

6. Debt-to-Equity Ratio: This ratio shows how much equity and debt a company is using to finance its assets, and whether the shareholder equity can fulfill obligations to creditors if the business starts making a loss.
   Formula:

   Debt-to-Equity Ratio = Total Liabilities/Total Equity

7. Cost of Goods Sold: This is the total of all costs used to create a product or service, which has been sold.
   Formula:

   Cost of Goods Sold = Cost of Materials/Inventory – Cost of Outputs

8. Return on Investment (ROI): This is usually shown as a percentage. It calculates the profits of an investment as a percentage of the original cost.
   Formula:

   ROI = Net Profit/Total Investment * 100

9. Simple Interest: This is money you can earn by initially investing some money (the principal).
   Formula:

   A = P(1 + rt); R = r * 100

   Where:

   A = Total Accrued Amount (principal + interest)

P = Principal Amount

I = Interest Amount

r = Rate of Interest per year in decimal; r = R/100

t = Time Period involved in months or years

10. Annual Compound Interest: The calculates the addition of interest to the principal sum of a loan or deposit.

Formula:

A = P (1 + r/n) ^ nt:

Where:

A = the future value of the investment/loan, including interest

P = the principal investment amount (the initial deposit or loan amount)

r = the annual interest rate (decimal)

n = the number of times that interest is compounded per year

t = the number of years the money is invested or borrowed for

7.6.3 CRM & Networking: What is CRM?

CRM stands for Customer Relationship Management. Originally the expression Customer Relationship Management meant managing one's relationship with customers. However, today it refers to IT systems and software designed to help companies manage their relationships.

The Need for CRM

The better a company can manage its relationships with its customers, the higher the chances of the company's success. For any entrepreneur, the ability to successfully retain existing customers and expand the enterprise is paramount. This is why IT systems that focus on addressing the problems of dealing with customers on a daily basis are becoming more and more in demand.

Customer needs change over time, and technology can make it easier to understand what customers really want. This insight helps companies to be more responsive to the needs of their customers. It enables them to modify their business operations when required, so that their customers are always served in the best manner possible. Simply put, CRM helps companies recognize the value of their clients and enables them to capitalize on improved customer relations.

Benefits of CRM

CRM has a number of important benefits:

- It helps improve relations with existing customers which can lead to:
  - Increased sales
  - Identification of customer needs
  - Cross-selling of products
- It results in better marketing of one's products or services
- It enhances customer satisfaction and retention
- It improves profitability by identifying and focusing on the most profitable customers

What is Networking?

In business, networking means leveraging your business and personal connections in order to bring in a regular supply of new business. This marketing method is effective as well as low cost. It is a great way to develop sales opportunities and contacts. Networking can be based on referrals and introductions, or can take place via phone, email, and social and business networking websites.

The Need for Networking

Networking is an essential personal skill for business people, but it is even more important for entrepreneurs. The process of networking has its roots in relationship building. Networking results in greater communication and a stronger presence in the entrepreneurial ecosystem. This helps build strong relationships with other entrepreneurs.

Business networking events held across the globe play a huge role in connecting like-minded entrepreneurs who share the same fundamental beliefs in communication, exchanging ideas and converting ideas into realities. Such networking events also play a crucial role in connecting entrepreneurs with potential investors. Entrepreneurs may have vastly different experiences and backgrounds but they all have a common goal in mind – they all seek connection, inspiration, advice, opportunities and mentors. Networking offers them a platform to do just that.

Benefits of Networking

Networking offers numerous benefits for entrepreneurs. Some of the major benefits are:

- Getting high quality leads
- Increased business opportunities
- Good source of relevant connections
- Advice from like-minded entrepreneurs
- Gaining visibility and raising your profile
- Meeting positive and enthusiastic people
- Increased self-confidence
- Satisfaction from helping others
- Building strong and lasting friendships

Tips

- Use social media interactions to identify needs and gather feedback.
- When networking, ask open-ended questions rather than yes/no type questions.

7.6.4 Business Plan: Why Set Goals?

Setting goals is important because it gives you long-term vision and short-term motivation. Goals can be short term, medium term and long term.

Short-Term Goals

- These are specific goals for the immediate future.

Example: Repairing a machine that has failed.

Medium-Term Goals

- These goals are built on your short term goals.
- They do not need to be as specific as your short term goals.

Example: Arranging for a service contract to ensure that your machines don't fail again.

Long-Term Goals

These goals require time and planning.

They usually take a year or more to achieve.

Example: Planning your expenses so you can buy new machinery

Why Create a Business Plan?

A business plan is a tool for understanding how your business is put together. It can be used to monitor progress, foster accountable and control the fate of the business. It usually offers a 3-5 year projection and outlines the plan that the company intends to follow to grow its revenues. A business plan is also a very important tool for getting the interest of key employees or future investors.

A business plan typically comprises of eight elements.

Elements of a Business Plan

Executive Summary

The executive summary follows the title page. The summary should clearly state your desires as the business owner in a short and businesslike way. It is an overview of your business and your plans. Ideally this should not be more than 1-2 pages.

Your Executive Summary should include:

- The Mission Statement: Explain what your business is all about.
  Example: Nike's Mission Statement

  Nike's mission statement is "To bring inspiration and innovation to every athlete in the world."
- Company Information: Provide information like when your business was formed, the names and roles of the founders, the number of employees, your business location(s) etc.
- Growth Highlights: Mention examples of company growth. Use graphs and charts where possible.
- Your Products/Services: Describe the products or services provided.
- Financial Information: Provide details on current bank and investors.
- Summarize future plans: Describe where you see your business in the future.

Business Description

The second section of your business plan needs to provide a detailed review of the different elements of your business. This will help potential investors to correctly understand your business goal and the uniqueness of your offering.

Your Business Description should include:

- A description of the nature of your business
- The market needs that you are aiming to satisfy
- The ways in which your products and services meet these needs
- The specific consumers and organizations that you intend to serve
- Your specific competitive advantages

Market Analysis

The market analysis section usually follows the business description. The aim of this section is to showcase your industry and market knowledge. This is also the section where you should lay down your research findings and conclusions.

Your Market Analysis should include:

- Your industry description and outlook
- Information on your target market
- The needs and demographics of your target audience
- The size of your target market
- The amount of market share you want to capture
- Your pricing structure
- Your competitive analysis
- Any regulatory requirements

Organization & Management

This section should come immediately after the Market Analysis.

Your Organization & Management section should include:

- Your company's organizational structure
- Details of your company's ownership
- Details of your management team
- Qualifications of your board of directors
- Detailed descriptions of each division/department and its function
- The salary and benefits package that you offer your people
- The incentives that you offer

Service or Product Line

The next section is the service or product line section. This is where you describe your service or product, and stress on their benefits to potential and current customers. Explain in detail why your product of choice will fulfill the needs of your target audience.

Your Service or Product Line section should include:

- A description of your product/service
- A description of your product or service's life cycle
- A list of any copyright or patent filings
- A description of any R&D activities that you are involved in or planning

Marketing & Sales

Once the Service or Product Line section of your plan has been completed, you should start on the description of the marketing and sales management strategy for your business.

Your Marketing section should include the following strategies:

- **Market penetration strategy**: This strategy focuses on selling your existing products or services in existing markets, in order to increase your market share.
- **Growth strategy**: This strategy focuses on increasing the amount of market share, even if it reduces earnings in the short-term.
- **Channels of distribution strategy**: These can be wholesalers, retailers, distributers and even the internet.
- **Communication strategy:** These can be written strategies (e-mail, text, chat), oral strategies (phone calls, video chats, face-to-face conversations), non-verbal strategies (body language, facial expressions, tone of voice) and visual strategies (signs, webpages, illustrations).

Your Sales section should include the following information:

- **A salesforce strategy**: This strategy focuses on increasing the revenue of the enterprise.
- **A breakdown of your sales activities**: This means detailing out how you intend to sell your products or services – will you sell it offline or online, how many units do you intend to sell, what price do you plan to sell each unit at, etc.

Funding Request

This section is specifically for those who require funding for their venture.

The Funding Request section should include the following information:

- How much funding you currently require.
- How much funding you will require over the next five years. This will depend on your long-term goals.
- The type of funding you want and how you plan to use it. Do you want funding that can be used only for a specific purpose, or funding that can be used for any kind of requirement?
- Strategic plans for the future. This will involve detailing out your long-term plans – what these plans are and how much money you will require to put these plans in motions.
- Historical and prospective financial information. This can be done by creating and maintaining all your financial records, right from the moment your enterprise started, to the present day. Documents required for this are your balance sheet which contains details of your company's assets and liabilities, your income statement which lists your company's revenues, expenses and net income for the year, your tax returns (usually for the last three years) and your cash flow budget which lists the cash that came in, the cash that went out and states whether you had a cash deficit (negative balance) or surplus (positive balance) at the end of each month.

Financial Planning

Before you begin building your enterprise, you need to plan your finances. Take a look at the steps for financial planning:

Step 1: Create a financial plan. This should include your goals, strategies and timelines for accomplishing these goals.

Step 2: Organize all your important financial documents. Maintain a file to hold your investment details, bank statements, tax papers, credit card bills, insurance papers and any other financial records.

Step 3: Calculate your net worth. This means figure out what you own (assets like your house, bank accounts, investments etc.), and then subtract what you owe (liabilities like loans, pending credit card amounts etc.) the amount you are left with is your net worth.

Step 4: Make a spending plan. This means write down in detail where your money will come from, and where it will go.

Step 5: Build an emergency fund. A good emergency fund contains enough money to cover at least 6 months' worth of expenses.

Step 6: Set up your insurance. Insurance provides long term financial security and protects you against risk.

Risk Management

As an entrepreneur, it is critical that you evaluate the risks involved with the type of enterprise that you want to start, before you begin setting up your company. Once you have identified potential risks, you can take steps to reduce them. Some ways to manage risks are:

- Research similar business and find out about their risks and how they were minimized.
- Evaluate current market trends and find out if similar products or services that launched a while ago are still being well received by the public.
- Think about whether you really have the required expertise to launch your product or service.
- Examine your finances and see if you have enough income to start your enterprise.
- Be aware of the current state of the economy, consider how the economy may change over time, and think about how your enterprise will be affected by any of those changes.
- Create a detailed business plan.

Tips

- Ensure all the important elements are covered in your plan.
- Scrutinize the numbers thoroughly.
- Be concise and realistic.
- Be conservative in your approach and your projections.
- Use visuals like charts, graphs and images wherever possible.

7.6.5 Procedure and Formalities for Bank Finance: The Need for Bank Finance

For entrepreneurs, one of the most difficult challenges faced involves securing funds for startups. With numerous funding options available, entrepreneurs need to take a close look at which funding methodology works best for them. In India, banks are one of the largest funders of startups, offering funding to thousands of startups every year.

What Information Should Entrepreneurs Offer Banks for Funding?

When approaching a bank, entrepreneurs must have a clear idea of the different criteria that banks use to screen, rate and process loan applications. Entrepreneurs must also be aware of the importance of providing banks with accurate and correct information. It is now easier than ever for financial institutions to track any default behaviour of loan applicants. Entrepreneurs looking for funding from banks must provide banks with information relating to their general credentials, financial situation and guarantees or collaterals that can be offered.

General Credentials

This is where you, as an entrepreneur, provide the bank with background information on yourself. Such information includes:

- Letter(s) of Introduction: This letter should be written by a respected business person who knows you well enough to introduce you. The aim of this letter is set across your achievements and vouch for your character and integrity.
- Your Profile: This is basically your resume. You need to give the bank a good idea of your educational achievements, professional training, qualifications, employment record and achievements.
- Business Brochure: A business brochure typically provides information on company products, clients, how long the business has been running for etc.
- Bank and Other References: If you have an account with another bank, providing those bank references is a good idea.
- Proof of Company Ownership or Registration: In some cases, you may need to provide the bank with proof of company ownership and registration. A list of assets and liabilities may also be required.

Financial Situation

Banks will expect current financial information on your enterprise. The standard financial reports you should be prepared with are:

- Balance Sheet
- Cash-Flow Statement
- Business Plan

- Profit-and-Loss Account
- Projected Sales and Revenues
- Feasibility Study

Guarantees or Collaterals

Usually banks will refuse to grant you a loan without security. You can offer assets which the bank can seize and sell off if you do not repay the loan. Fixed assets like machinery, equipment, vehicles etc. are also considered to be security for loans.

The Lending Criteria of Banks

Your request for funding will have a higher chance of success if you can satisfy the following lending criteria:

- Good cash flow
- Adequate shareholders' funds
- Adequate security
- Experience in business
- Good reputation

The Procedure

To apply for funding the following procedure will need to be followed.

1. Submit your application form and all other required documents to the bank.
2. The bank will carefully assess your credit worthiness and assign ratings by analyzing your business information with respect to parameters like management, financial, operational and industry information as well as past loan performance.
3. The bank will make a decision as to whether or not you should be given funding.

Tips

- Get advice on funding options from experienced bankers.
- Be cautious and avoid borrowing more than you need, for longer than you need, at an interest rate that is higher than you are comfortable with.

7.6.6 Enterprise Management - An Overview: How to Manage Your Enterprise?

To manage your enterprise effectively you need to look at many different aspects, right from managing the day-to-day activities to figuring out how to handle a large scale event. Let's take a look at some simple steps to manage your company effectively.

Step 1: Use your leadership skills and ask for advice when required.

Let's take the example of Ramu, an entrepreneur who has recently started his own enterprise. Ramu has good leadership skills – he is honest, communicates well, knows how to delegate work etc. These leadership skills definitely help Ramu in the management of his enterprise. However, sometimes Ramu comes across situations that he is unsure how to handle. What should Ramu do in this case? One solution is for him to find a more experienced manager who is willing to mentor him. Another solution is for Ramu to use his networking skills so that he can connect with managers from other organizations, who can give him advice on how to handle such situations.

Step 2: Divide your work amongst others – realize that you cannot handle everything yourself.

Even the most skilled manager in the world will not be able to manage every single task that an enterprise will demand of him. A smart manager needs to realize that the key to managing his enterprise lies in his dividing all his work between those around him. This is known as delegation. However, delegating is not enough. A manager must delegate effectively if he wants to see results. This is important because delegating, when done incorrectly, can result in you creating even more work for yourself. To delegate effectively, you can start by making two lists. One list should contain the things that you know you need

to handle yourself. The second list should contain the things that you are confident can be given to others to manage and handle. Besides incorrect delegation, another issue that may arise is over-delegation. This means giving away too many of your tasks to others. The problem with this is, the more tasks you delegate, the more time you will spend tracking and monitoring the work progress of those you have handed the tasks to. This will leave you with very little time to finish your own work.

Step 3: Hire the right people for the job.

Hiring the right people goes a long way towards effectively managing your enterprise. To hire the best people suited for the job, you need to be very careful with your interview process. You should ask potential candidates the right questions and evaluate their answers carefully. Carrying out background checks is always a good practice. Running a credit check is also a good idea, especially if the people you are planning to hire will be handling your money. Create a detailed job description for each role that you want filled and ensure that all candidates have a clear and correct understanding of the job description. You should also have an employee manual in place, where you put down every expectation that you have from your employees. All these actions will help ensure that the right people are approached for running your enterprise.

Step 4: Motivate your employees and train them well.

Your enterprise can only be managed effectively if your employees are motivated to work hard for your enterprise. Part of being motivated involves your employees believing in the vision and mission of your enterprise and genuinely wanting to make efforts towards pursuing the same. You can motivate your employees with recognition, bonuses and rewards for achievements. You can also motivate them by telling them about how their efforts have led to the company's success. This will help them feel pride and give them a sense of responsibility that will increase their motivation.

Besides motivating your people, your employees should be constantly trained in new practices and technologies. Remember, training is not a one-time effort. It is a consistent effort that needs to be carried out regularly.

Step 5: Train your people to handle your customers well.

Your employees need to be well-versed in the art of customer management. This means they should be able to understand what their customers want, and also know how to satisfy their needs. For them to truly understand this, they need to see how you deal effectively with customers. This is called leading by example. Show them how you sincerely listen to your clients and the efforts that you put into understand their requirements. Let them listen to the type of questions that you ask your clients so they understand which questions are appropriate.

Step 6: Market your enterprise effectively.

Use all your skills and the skills of your employees to market your enterprise in an effective manner. You can also hire a marketing agency if you feel you need help in this area.

Now that you know what is required to run your enterprise effectively, put these steps into play, and see how much easier managing your enterprise becomes!

Tips

- Get advice on funding options from experienced bankers.
- Be cautious and avoid borrowing more than you need, for longer than you need, at an interest rate that is higher than you are comfortable with.

7.6.7. 20 Questions to Ask Yourself Before Considering Entrepreneurship

1. Why am I starting a business?
2. What problem am I solving?
3. Have others attempted to solve this problem before? Did they succeed or fail?
4. Do I have a mentor1 or industry expert that I can call on?
5. Who is my ideal customer2?
6. Who are my competitors3?
7. What makes my business idea different from other business ideas?
8. What are the key features of my product or service?
9. Have I done a SWOT4 analysis?
10. What is the size of the market that will buy my product or service?
11. What would it take to build a minimum viable product5 to test the market?
12. How much money do I need to get started?
13. Will I need to get a loan?
14. How soon will my products or services be available?
15. When will I break even6 or make a profit?
16. How will those who invest in my idea make a profit?
17. How should I set up the legal structure7 of my business?
18. What taxes8 will I need to pay?
19. What kind of insurance9 will I need?
20. Have I reached out to potential customers for feedback?

Tips

- It is very important to validate your business ideas before you invest significant time, money and resources into it.
- The more questions you ask yourself, the more prepared you will be to handle to highs and lows of starting an enterprise.

Footnotes:

1. A mentor is a trusted and experienced person who is willing to coach and guide you.
2. A customer is someone who buys goods and/or services.
3. A competitor is a person or company that sells products and/or services similar to your products and/or services.
4. SWOT stands for Strengths, Weaknesses, Opportunities and Threats. To conduct a SWOT analysis of your company, you need to list down all the strengths and weaknesses of your company, the opportunities that are present for your company and the threats faced by your company.
5. A minimum viable product is a product that has the fewest possible features, that can be sold to customers, for the purpose of getting feedback from customers on the product.
6. A company is said to break even when the profits of the company are equal to the costs.
7. The legal structure could be a sole proprietorship, partnership or limited liability partnership.
8. There are two types of taxes – direct taxes payable by a person or a company, or indirect taxes charged on goods and/or services.
9. There are two types of insurance – life insurance and general insurance. Life insurance covers human life while general insurance covers assets like animals, goods, cars etc.

Notes

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