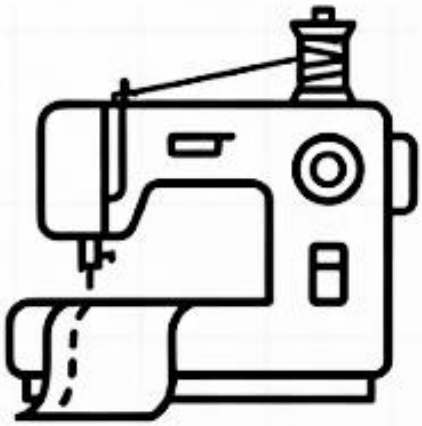
MVS FOUNDATION

FREE NOTES

HOME SCIENCE (321)

CHAPTERWISE NOTES



HOME SCIENCE

Sl. No.	Module	Chapters (Public Examination)	Marks
1	**Module 2: Food and Nutrition**	L-5. Meal Planning L-6. Nutritional Status L-9. Food preservation	16
2	**Module 4 : Human Development**	L-19 Growth and Development (6-11) L-20 Adolescence L-21 Concerns and Issues in Human Development	16
3	**Optional Module 6A**	L-29 Cleaning and Cleaning Materials L-30 Maintenance of Premises L-31 Aesthetics at Home	12

Component	Details	Marks
Public Exam (Selected Modules 2,4,6A)	Total Chapters: **9**	44
Practical Exam	Practical	20
TMA	Tutor Marked Assignment	16
Final Possible Marks		**80 Marks**

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1

MEAL PLANNING

Introduction

Food is not only a means to satisfy hunger but also the basis of good health, energy and growth. The needs of every member of the family are different, therefore it is necessary to plan meals thoughtfully for proper nutrition. This process is called **meal planning**, which is the key to a balanced diet and a healthy life.

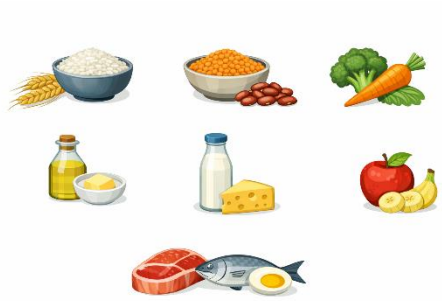
Food Groups

- Food items are divided into groups on the basis of the nutrients present in them.
- This classification helps in planning daily meals according to nutrients.

Definition of Food Group

A group of food items having similar characteristics is called a **food group.**

Basis of Classification



1. Classification based on physiological functions

- Providing energy
- Providing energy
- Protection and regulation

2. Classification based on nutrients (Five Food Groups by ICMR)

- **Cereals and products** — energy, protein, vitamin B
- **Pulses and legumes** — protein, iron, folic acid
- **Milk and meat products** — protein, calcium, vitamins
- **Fruits and vegetables** — vitamins, minerals, fibre
- **Fats and sugars** — energy

Food Exchange

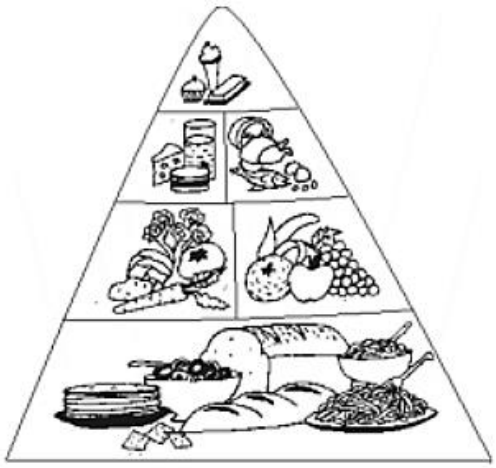
Replacing one food item with another having similar nutrients is called **food exchange.**

Balanced Diet

A diet which contains all essential nutrients in proper amounts is called a **balanced diet.**

Characteristics of a Balanced Diet

- Inclusion of all food groups
- Fulfillment of individual nutritional needs
- Variety in meals
- Use of seasonal foods
- Economy
- According to taste and preference



What Is Meal Planning

Planning balanced meals using available resources is **meal planning.**

Factors Affecting Meal Planning

- **Nutritional requirements**
- **Age**
- **Sex**
- **Physical activity**
- **Economic Considerations**
- **Time, energy and skill Considerations**
- **Seasonal availability**

Modification Of Family Meals For Different Age Groups

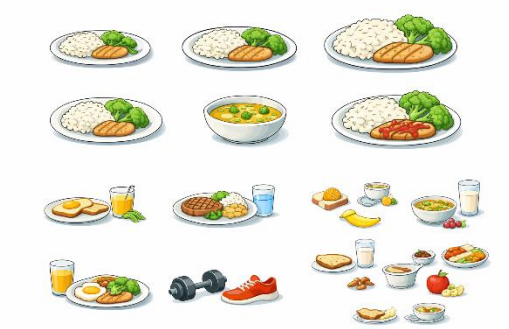
- The needs of all family members are different.

- The same meal is modified by changing quantity, quality and frequency.

Types Of Diet Modification

1. Quantitative modification of diet

- Increasing or decreasing the quantity of food.



2. Qualitative modification of diet

- Changes in nutrients, consistency, taste etc.

3. Modification in frequency of

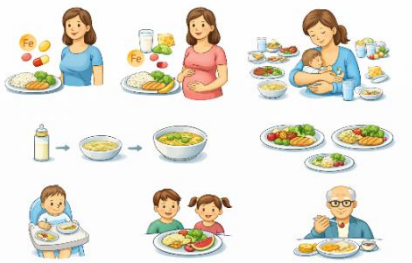
- Increasing or decreasing the frequency of meals.

Through Food Exchange Method

Using another food item in place of one food item with similar nutrients is called food substitution.

Modification For Special Conditions

- **Adult woman:** less energy and protein than men, more iron and vitamins.
- **Pregnant woman:** more calories, protein, calcium, iron.
- **Lactating mother:** more protein, calcium, vitamins; frequent meals.
- **Infant:** liquid → semi-solid → solid food according to age.
- **Children and adolescents:** more energy and protein required.
- **Old People:** less energy, soft and easily digestible food.



Need For Special Diet

During illness nutritional requirements change.

Therapeutic Diet

A modified diet given during disease condition is called **therapeutic diet.**

Objectives Of Diet Modification In Illness

- Maintain nutritional status

- Correct deficiencies
- Change in consistency
- Weight control if required

TOP 5 QUESTIONS

Q-1. What is a balanced diet?

Answer- A balanced diet is the food that contains all essential nutrients - carbohydrates, proteins, fats, vitamins, minerals and fibre - in proper amounts according to the body's requirements. It provides energy, supports growth and helps in maintaining health.

Q-2. What is the meaning of meal planning?

Answer- Meal planning means making a prior plan for balanced meals by considering available resources, time, budget and the nutritional needs of family members. It helps in proper food selection, fulfillment of nutrition and saving time and money.

Q-3. What is a food group?

Answer- A food group is a group of food items having similar characteristics and nutrients. Dividing food into groups makes it easier to prepare a balanced diet because it shows that essential nutrients are obtained from different groups.

Q-4. What is diet modification?

Answer- Diet modification is the process of changing the quantity, quality and frequency of meals according to the age, health condition, stage and needs of a person. It helps meet individual nutritional needs and makes food more suitable and useful.

Q-5. What is therapeutic diet?

Answer- Therapeutic diet is a special diet given during disease condition by considering the patient's condition. It is a modified form of normal diet whose purpose is to maintain nutrition, promote quick recovery and fulfill special body requirements.

2

NUTRITIONAL STATUS

Introduction

Good health is formed not only by eating food but by the proper utilisation of nutrients by the body. When the body receives essential nutrients in balanced amounts then the nutritional status remains good. This chapter explains nutritional status, malnutrition and the problems related to it.

Nutritional Status

Definition of nutritional status:

The condition of health of a person that is influenced by the intake and utilisation of nutrients is called **nutritional status.**

1. Balanced diet → normal nutritional status

2. Imbalanced diet → **malnutrition**

Malnutrition

The condition of imbalance in the body due to deficiency or excess of nutrients is **malnutrition.**

Types of malnutrition:

1. Undernutrition

2. Overnutrition

Causes Of Malnutrition

- Lack of availability of food
- Population growth
- Ignorance

- Economic condition
- Stress conditions (special conditions)
- Lack of personal hygiene and infection

Effects of malnutrition

- Increased chances of infection
- Physical and mental weakness
- Decrease in work capacity
- May lead to death

Assessment Of Nutritional Status

The process of finding out the nutritional status of an individual or group is **nutritional assessment.**

Methods of assessment of nutritional status

1. By physical measurement

- Weight
- Height

2. By dietary intake

- 24-hour food record

3. By identification of diseases caused by nutrient deficiency

Physical growth

- Weight and height are indicators of nutritional status.
- Less than standard → undernutrition
- More than standard → overnutrition

Nutritional Deficiency Diseases

1. Protein Energy Malnutrition (PEM)

Cause: deficiency of energy and protein

Types:

1. Marasmus

2. Kwashiorkor

Difference Between Marasmus And Kwashiorkor

Basis	Marasmus	Kwashiorkor
1. Cause	deficiency of both protein and energy	deficiency of protein only
2. Age	before 12 years	1–3 years
3. Body build	very thin	swelling in body
4. Abdomen	sunken	protruding
5. Skin/Hai	dry skin, hair normal	spots on skin, hair brown and falling

Common symptoms:

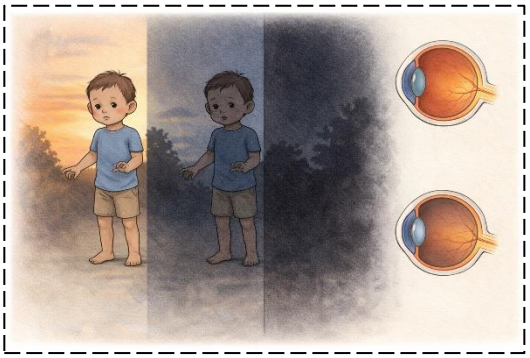
1. Growth retardation

2. Muscle Deficiency

2. Vitamin A deficiency

Deficiency of vitamin A in diet leads to vitamin A deficiency.

Symptoms:



1. Night blindness

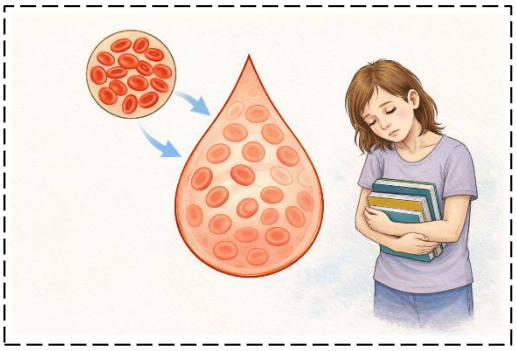
2. Dryness in eyes

3. Increased infections

3. Anaemia

Low level of haemoglobin in blood is anaemia.

Cause:

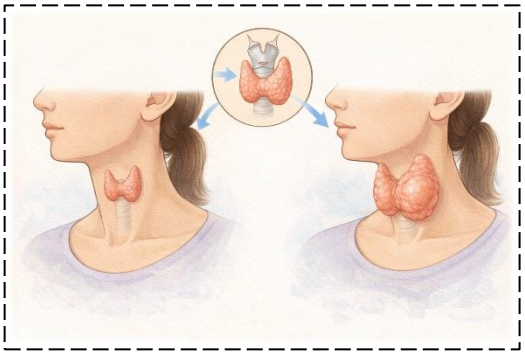


- Iron deficiency
- Deficiency of folic acid and vitamin B12

Symptoms:

- Weakness
- Fatigue
- Paleness

4. Iodine Deficiency



1. Iodine deficiency causes **goitre.**

2. Symptoms (adults):

- Swelling in neck
- Fatigue
- Symptoms (children):

3. Symptoms (children):

- Slow growth rate

- Mental retardation

National Nutrition Programmes

Programmes run by the government to prevent diseases caused by nutrient deficiencies, provide supplementary nutrition to vulnerable groups and improve nutritional status in the country are called **National nutrition programmes.**

Major programmes

1. Integrated Child Development Services (ICDS)

A programme that provides supplementary nutrition, health services, immunization and nutrition education to young children, pregnant and lactating women.

2. Mid Day Meal Programme (MDM)

A programme that improves nutrition and increases school attendance by providing supplementary meals to primary school children in school.

3. Vitamin A Prophylaxis Programme

A programme that provides doses of vitamin A to prevent eye problems and blindness caused by vitamin A deficiency in children.

4. National Nutritional Anaemia Control Programme

A programme that prevents anaemia in children and women by providing iron and folic acid.

5. National Iodine Deficiency Disorder Control Programme

A programme that promotes the use of iodized salt to prevent diseases caused by iodine deficiency (such as goitre).

Icds — Main Services

- Immunization
- Health check-up

- Supplementary nutrition
- Supplementary nutrition
- Nutrition and health education
- Pre-school education

Beneficiaries

- Children below 6 years
- Adolescent girls
- Pregnant and lactating women
- Women aged 15–45 years

TOP 5 QUESTIONS

Q-1. What is nutritional status?

Answer- Nutritional status is the condition of health of a person which depends on the intake and utilisation of nutrients by the body. When a balanced diet is taken the nutritional status remains normal, whereas deficiency or excess of nutrients leads to malnutrition

Q-2. What is malnutrition?

Answer- Malnutrition is the condition of imbalance in the body caused by deficiency or excess of nutrients. It can occur in both forms - undernutrition and overnutrition - and negatively affects health, growth and work efficiency.

Q-3. Write the methods of assessment of nutritional status.

Answer- The main methods of assessment of nutritional status are - physical measurements (weight, height), study of dietary intake (24-hour food record) and identification of symptoms of diseases caused by nutrient deficiencies.

Q-4. What is Protein Energy Malnutrition?

Answer- The nutritional problem caused by deficiency of energy and protein is called Protein Energy Malnutrition. It is mainly found in children and its two major forms are marasmus and kwashiorkor, in which growth retardation and loss of muscles are the main symptoms.

Q-5. What is the objective of national nutrition programmes?

Answer- The objective of national nutrition programmes is to prevent diseases caused by nutrient deficiencies, provide supplementary nutrition to vulnerable groups, improve health and enhance the nutritional status of children, women and adolescent girls.

3

FOOD PRESERVATION

Introduction

Food items spoil quickly, therefore it is necessary to preserve them for a long time. The process of keeping food safely in proper condition is called food preservation. This chapter explains the meaning, principles and household methods of **food preservation.**

Meaning And Need For Preservation

Definition of food preservation:

The process of keeping food items in their good condition for a long time is **food preservation.**

Shelf life

The period during which food remains usable is called **shelf life.**

Need for preservation

- To increase the **shelf life** of food items
- To prepare new products **(jam, pickle etc.)**
- To make storage and transportation easier
- To preserve seasonal foods for future use

Principles Of Food Preservation

- **Killing micro-organisms**
- **Preventing or slowing the effect of micro-organisms**
- **Stopping the action of enzymes**

1. Killing micro-organisms

- Destroying micro-organisms by increasing temperature
- Cooking, boiling, canning

2. Preventing the effect of micro-organisms

- Providing protective covering
- Increasing or decreasing temperature
- Use of chemicals
- Cooling / freezing

3. Stopping the action of enzymes

Stopping enzyme activity by mild heat treatment (blanching)

Household Methods Of Food Preservation

(i) drying or dehydration

- **Dehydration:** Removal of moisture by controlled temperature and air flow is dehydration.
- Low moisture → micro-organisms do not grow
- Easy storage

Potato chips (dehydration method)

Ingredients :-

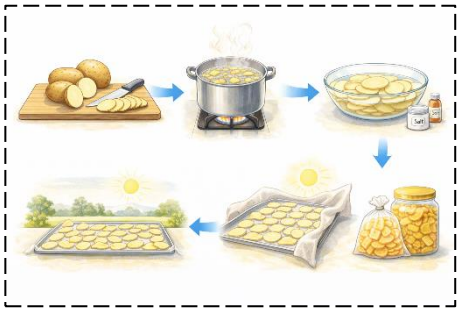
Potatoes, water, salt

Potassium metabisulphite

Polythene bags

Tray or big plate or large polythene sheets

Muslin cloth



Method:

- Wash potatoes and cut into round slices of 2–3 mm thickness.
- Put the slices in boiling water for 3–4 minutes.
- Take out and keep in cold water containing salt and potassium metabisulphite solution for 10 minutes.
- Spread on tray/sheet, cover with muslin cloth and dry in sun.
- When completely dry, store in air-tight container or polythene.

(ii) Pickling with salt, spices and oil

- Salt and spices absorb moisture
- Oil prevents contact with air
- Growth of micro-organisms stops

(iii) Making jam, jelly and murabba

- **Jam:** cooking fruit pulp with sugar to make a thick mixture.
- **Jelly:** substance that sets using fruit juice, pectin, acid and sugar.
- **Murabba:** preserving fruit by cooking it in sugar solution.

Mixed fruit jam

Ingredients:

Mixed fruit pulp - 500 g

Sugar - 500 g

Citric acid - 4 g (1 teaspoon)

Water - 100 ml

Fruit essence - few drops

Red colour - 1/2 teaspoon

Method

- Wash, peel and cut different fruits into small pieces.
- Mash pieces or grind in mixer to prepare pulp.
- Boil fruit pulp for about 15 minutes.
- Add sugar and cook the mixture with continuous stirring.
- When mixture starts thickening add citric acid.
- Cook until mixture falls in sheet/flake form (end point).
- Remove from flame and add essence and colour.
- Fill hot jam into clean bottle, allow to cool and close properly.

(iv) Making squash

- Prepared drink by mixing fruit juice with sugar syrup
- Preserved by adding preservative
- Fill bottles after **sterilization**

Sterilization:

Sterilization is the process of boiling bottles to make them free from micro-organisms.

(v) Freezing

- Micro-organisms become inactive at low temperature
- Long term storage possible
- Removal of air in packing is necessary

Freezing of peas

By blanching peas, packing and keeping in freezer, growth of micro-organisms stops and peas remain safe for a long time.

Method:

- Select fresh and tender peas and shell them.
- Add salt to water and boil, then put peas for 2 minutes (blanching).
- Remove and cool immediately.
- Fill in small polythene bags, remove air and seal.
- Place the packet in freezer.

TOP 5 QUESTIONS

Q-1. What is food preservation?

Answer- The process of keeping food items in their good condition for a long time is called food preservation. Its objective is to prevent spoilage, increase shelf life and preserve food for future use.

Q-2. What is shelf life?

Answer- Shelf life is the period during which food items remain safe and usable. Shelf life is increased through food preservation techniques so that food does not spoil for a long time and can be used safely.

Q-3. Write the main principles of food preservation.

Answer- The main principles of food preservation are - destroying micro-organisms, preventing or slowing their effect and stopping enzyme activity. These principles prevent food from spoilage.

Q-4. What is dehydration?

Answer- Dehydration is the process in which moisture is removed from food items by controlled temperature and air flow. When moisture decreases, growth of micro-organisms stops and food remains safe for a long time.

Q-5. What is sterilization?

Answer- Sterilization is the process in which bottles or containers are boiled to make them free from micro-organisms. This keeps food safe and reduces the chances of spoilage.

4

GROWTH AND DEVELOPMENT

(6-11 Yrs)

Introduction

The age of 6 to 11 years is an important stage in a child's life where physical, mental, social and language related abilities develop rapidly. In this stage the child learns new skills and a strong foundation of personality is formed.

Physical Development

- Height and weight increase continuously in 6–11 years.
- The pace of development appears earlier in girls than boys.

Change in Body Proportions

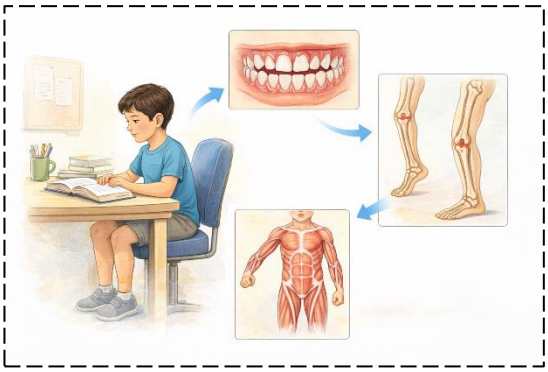
- The proportion of the head becomes smaller compared to the body.
- Fine and gross muscles develop.

Development of Teeth, Bones and Muscles

1. Teeth: By middle childhood about 28 permanent teeth appear.

2. Bones:

- All bones are formed and become strong.
- Strength increases with calcium.



3. Muscles and Fat:

- Muscles are more developed in boys

- More fat accumulates in girls

Motor Development

The child learns to run, jump and balance.

Muscular co-ordination: Control of muscular activities is muscular co-ordination.

Types of Muscular Co-ordination

- **Gross muscular co-ordination:** running, jumping, climbing
- **Fine muscular co-ordination:** writing, drawing
- **Sensitive period:** the time when skills are learned easily.

Language Development

- By 6–11 years good command over language is achieved.
- Vocabulary about 14,000–30,000 words.
- The child understands words with multiple meanings.
- Understands idioms, metaphors, humour and tongue twisters.
- **Example:** Chandu ke chacha ne Chandu ki chachi ko chandi ke chamach se chutney chatayi.

Socio Emotional Development

Social development:

Learning to behave with others.

Emotional development:

Controlling emotions and expressing them in the right way.

Factors influencing

- **Parents:** develop self-confidence and self-esteem.
- **Peers:** learn cooperation, comparison and social skills.
- **School:** provides opportunity to develop skills according to interest.

Cognitive Development

Development of the ability to think, reason and solve problems.

Main characteristics

- Difference between imagination and reality
- Understanding others' viewpoint (empathy)
- **Reversibility —** ability to think forward and backward
- **Conservation —** understanding that quantity does not change due to external change
- **Classification —** grouping objects
- **Seriation — arranging in sequence**
- Understanding of time and speed

TOP 5 QUESTIONS

Q-1. What is middle childhood?

Answer- Middle childhood is the stage of 6 to 11 years of age in which physical, mental, language, social and cognitive development of the child occurs rapidly. This stage is considered important for learning skills and personality development.

Q-2. What is muscular co-ordination?

Answer- The ability to control different activities of muscles is called muscular co-ordination. It is of two types - gross (running, jumping) and fine (writing, drawing), which develops rapidly in this stage.

Q-3. Write the characteristics of language development.

Answer- In this stage vocabulary increases, the child forms correct sentences, understands words with multiple meanings and starts using idioms, humour and tongue twisters. The ability to use language effectively develops.

Q-4. What is socio-emotional development?

Answer- In socio-emotional development the child learns to behave with others, cooperate and control emotions. Parents, peers and school influence this development and develop self-confidence and social skills in the child.

Q-5. Write the main characteristics of cognitive development.

Answer- In this stage the child thinks logically, understands the difference between imagination and reality and develops classification, seriation, conservation, reversibility and understanding of time and speed, which increases problem solving ability.

5

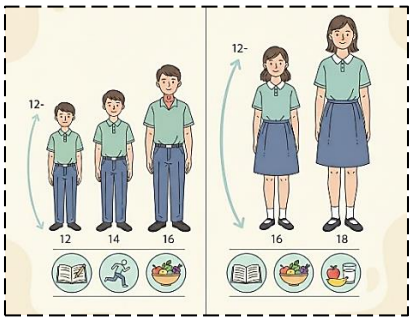
ADOLESCENCE

Introduction

Adolescence is the transitional period between childhood and adulthood in which rapid physical, mental, social and emotional changes occur. This stage is an important period for personality formation, identity and understanding responsibilities.

Defining Adolescence

- The period between childhood and adulthood is called adolescence.
- Age range: approximately **10–19 years**
- In this stage rapid physical and sexual development occurs.



Physical changes during adolescence

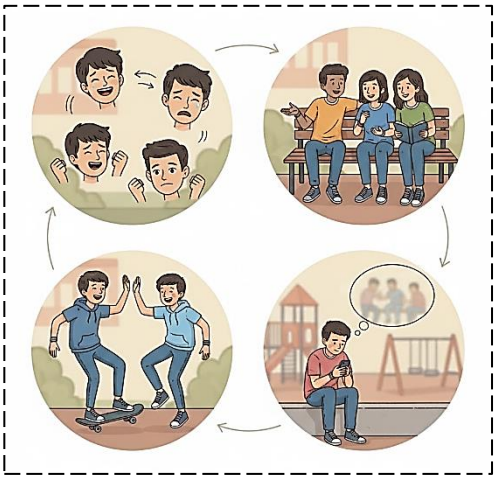
Point	Girls	Boys
Height increase	Increases about ~8 cm between 11–13½ years	Increases about ~20 cm between 13–15 years
Body build	Body becomes rounded	increases Muscles develop
Shoulders–hips	Shoulders narrow, hips broad	Shoulders broad, hips narrow
Voice	Voice matures	Voice becomes heavy, Adam's apple prominent
Sexual changes	Breast development	Development of genitals

Special changes	Menstruation begins	Nocturnal emission begins

Early And Late Maturation

- Timing of maturation differs.
- Early maturing adolescents → more confidence
- Late maturing adolescents → possibility of inferiority feeling
- Parents need to inform about physical changes

Socio-Emotional Development



- Mood swings in emotions
- Prefer staying with peers
- Adopt group culture, values and behaviour
- Absence of friends leads to loneliness and stress

Language Development

- Vocabulary increases
- Use of complex sentences
- Slang language: informal language used by peers **is slang language.**
- Use of abbreviated forms of words

Cognitive Development

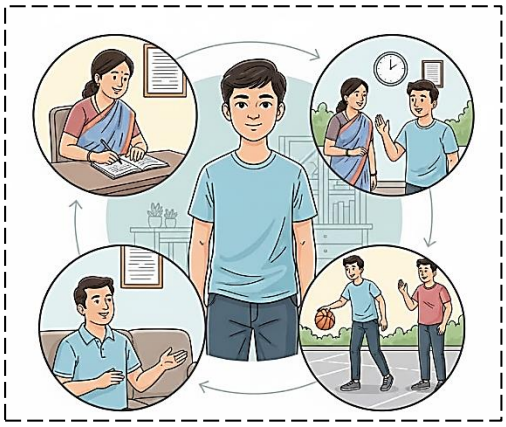
- Abstract thinking develops
- Reasoning and imagination increase
- Consider alternatives to problems

- Understand sarcasm and hidden meanings

Adolescents Need Sex Education

- Information necessary due to sexual maturity
- Correct information → healthy behaviour
- Important role of parents and school
- Also called reproductive health education

Role Of Parents



- Balance between independence and control
- Provide opportunities for decision making
- Excessive strictness → less independence
- Supportive parents → increased confidence

Role Of Peers

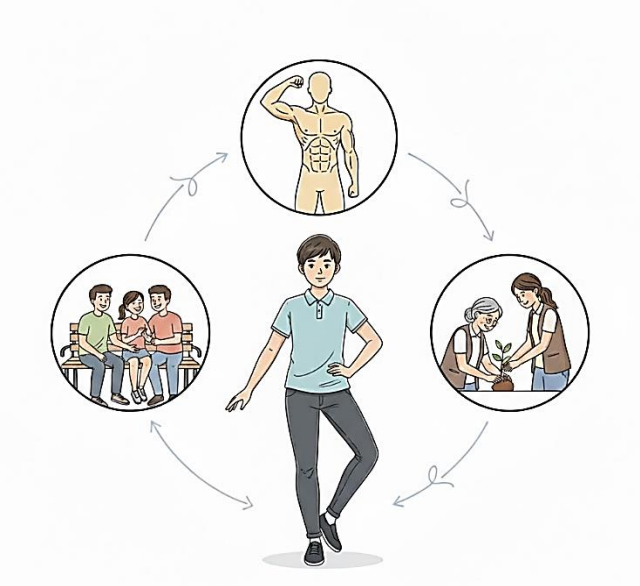
- Greater influence of peer group
- Social skills develop
- **Peer culture:** behaviour and style of peer group is called peer culture.
- Both positive and negative influence possible

Role Of School And Teachers

- Development of social and academic skills
- Positive school environment necessary
- Teacher encouragement → increased confidence
- Teacher acts as bridge between parents and adolescent

Developmental Tasks During Adolescence

- Accept physical changes
- Form relationships with same age peers
- Preparation to perform social roles
- Emotional independence
- Develop values and principles
- Vocational preparation
- Preparation for marriage and family life



Typical Characteristics

- Concern about appearance and body
- Adoption of peer culture
- Attraction towards opposite sex
- Idealism
- Feeling of rebellion
- Experience of generation gap
- Mood swings
- Formation of self identity

ADOLESCENTS, TOO, HAVE PROBLEMS

- Eating related problems
- Suicidal tendencies
- Peer pressure

- Personal problems
- Social problems
- Physical problems
- Teenage pregnancy

TOP 5 QUESTIONS

Q-1. What is adolescence?

Answer- Adolescence is the period between childhood and adulthood, approximately 10–19 years. In this stage physical, mental, social and emotional changes occur rapidly and personality and identity are formed.

Q-2. Write the physical changes during adolescence.

Answer- During adolescence height increases, muscles develop, hair appears on the body, voice changes and sexual changes such as menstruation in girls and nocturnal emission in boys are observed.

Q-3. Why is sex education necessary during adolescence?

Answer- Due to sexual maturity during adolescence correct information is necessary. Sex education helps adolescents understand physical changes, make healthy decisions and avoid risks caused by incorrect information.

Q-4. What is the role of parents?

Answer- Parents provide both independence and guidance to adolescents. Supportive behaviour, communication and providing opportunities for decision making make adolescents confident, responsible and independent.

Q-5. Write the major problems of adolescents.

Answer- Adolescents face problems such as eating related problems, peer pressure, suicidal tendencies, personal and social problems, physical problems and teenage pregnancy, which are influenced by emotional instability and social pressure.

6

CONCERNS AND ISSUES IN HUMAN DEVELOPMENT

Introduction

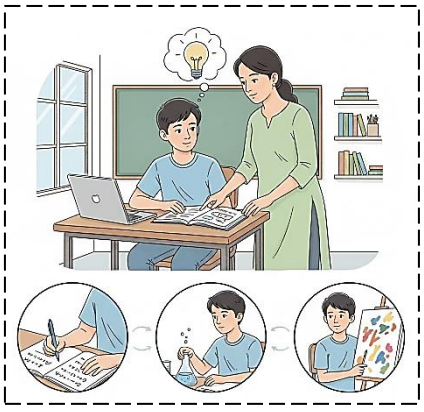
There are many children in society who do not get proper opportunities, facilities and a safe environment. As a result obstacles arise in their development. This chapter explains important issues related to discrimination against girls, juvenile delinquency, child labour, disability and health.

Discriminations Against The Girl Child

- Discrimination against girls is seen from birth itself.
- Inequality in nutrition, health, education and care.

Role of Education

- **Education:** the process of acquiring knowledge and skills is education.
- Education increases awareness.
- Provides economic independence.
- Develops self-confidence.
- Helps in child rearing.



What is juvenile delinquency ?

Violation of law by children is called **juvenile delinquency.**

Types of juvenile delinquency

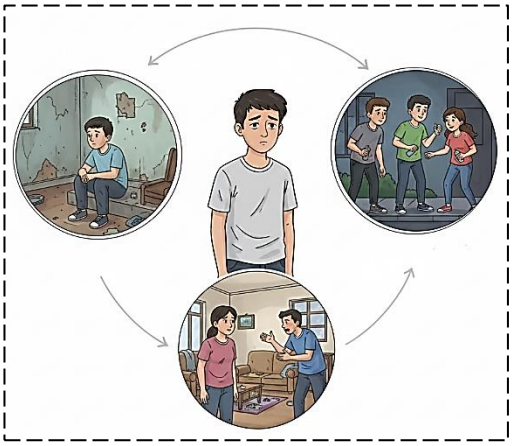
- Stealing
- Violence

- Telling lies
- Drug related crimes
- Sex crimes

Causes of juvenile delinquency

- Poverty
- Bad company
- Parental quarrels
- Overcrowded home
- Influence of media
- Insecurity and stress

Remedial and Preventive Measures



- Vocational training
- Parents' time and support
- Recreational facilities
- Social programmes

Child Labour-Causes And Consequences

A child below 14 years of age working for wages is **child labour**.

Causes

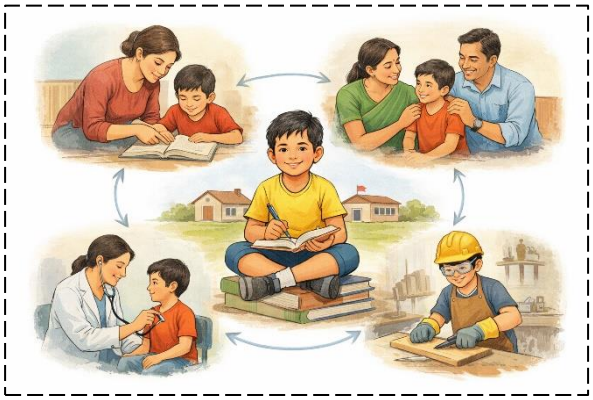
- Poverty
- Illiteracy
- Orphaned or neglected children

- Demand for cheap labour

Consequences

- Deprived of education
- Health problems
- Fewer opportunities for development
- Exploitation

Dealing with the Problems of Child Labour



- Non-formal education
- Awareness among parents
- Health facilities
- Safe working conditions

Socio-Economic Disadvantaged Children

Development is affected due to lack of resources.

Ways to help

- Free education and materials
- Scholarships and mid-day meal
- Vocational training
- Social support

Major Physical Disabilities

When a child cannot perform normal physical activities it is **called physical disability**.

Types

- Difficulty in movement
- Visual impairment
- Hearing impairment
- Speech impairment

How to help disabled children

- Early identification and health check-up
- Special schools
- Assistive devices
- Social inclusion
- Encouragement

What Is Mental Retardation?

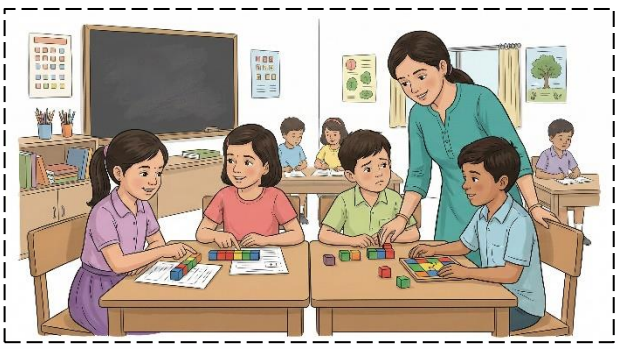
Delay or slow pace in mental development is **mental retardation.**

Causes

- Brain injury
- Lack of oxygen
- Disease

Helping Mentally Retarded Children

- Teach self-care skills
- Teach simple household tasks
- Special schools



- Vocational training

Sexually Transmitted Diseases (Std's/Aids/Hiv/Rti's)

Reproductive tract infections

Infections spread through sexual contact are **reproductive tract infections**.

Examples: Syphilis, gonorrhoea

Symptoms

- Sores, rashes
- Fever
- Problems in genitals

Prevention

- Safe behaviour
- Medical treatment

HIV and AIDS

HIV: the virus that weakens the immune system is **HIV**.

AIDS: the group of diseases caused by HIV is **AIDS**.

Symptoms of AIDS

- Persistent fatigue
- Weight loss
- Fever for long duration
- Infections

Modes of HIV transmission

- Infected blood
- Unprotected sexual contact
- Infected needles
- From mother to child

TOP 5 QUESTIONS

Q-1. What is discrimination against girls?

Answer- Discrimination against girls means girls receiving fewer facilities in nutrition, health, education and opportunities compared to boys. It begins from birth and affects their physical, mental and social development.

Q-2. What is juvenile delinquency?

Answer- Violation of law by children is called juvenile delinquency. It includes stealing, violence, telling lies, drug related crimes and other antisocial behaviours, which are influenced by family, society and environment.

Q-3. What is child labour?

Answer- Working for wages by a child below 14 years of age is called child labour. It deprives the child of education, negatively affects health and limits development opportunities.

Q-4. What is mental retardation?

Answer- Delay or slow pace in mental development is called mental retardation. Such children learn more slowly than other children of their age and require special education, training and additional support.

Q-5. What is the difference between HIV and AIDS?

Answer- HIV is a virus that weakens the immune system of the body, whereas AIDS is the group of diseases caused by HIV. After HIV infection, AIDS may develop in a person over time.

7

CLEANING AND CLEANING MATERIALS

Introduction

A clean house is the basis of health, comfort and beauty. Cleaning is necessary to keep the house clean, organised and germ-free. This chapter explains the meaning of cleaning, methods, equipment, materials and schedule.

Meaning And Importance Of Cleaning

- **Cleaning:** removing dust, dirt and unwanted materials and keeping a place clean and organised is cleaning.

- Keeps the house insect-free
- Ensures health and comfort
- Increases beauty
- **Dust:** loose particles carried by air that settle on surfaces are **dust.**
- **Dirt:** particles stuck to surfaces which are difficult to remove are **dirt.**

Methods Of Cleaning

(a) Dusting: removing dust with a dry cloth.

(b) Shaking and beating: dropping dust from clothes/carpet.

(c) Sweeping: removing dust and waste using a broom.

(d) Mopping: cleaning a surface with a wet cloth is **mopping**.

(e) Washing: removing dirt using water/detergent is **washing.**

(f) Polishing: rubbing a surface to make it shine is **polishing**.

Cleaning Equipments And Materials

(A) Cleaning Equipments

- **Duster:** used to clean dust.
- **Dust pan:** used to collect dust.
- **Mop:** used to clean floors.
- **Polishing cloth:** used for shining.
- **Broom:** used to remove dust.
- **Brush:** used for cleaning different surfaces.
- **Bucket and tub:** used to keep water and solution.
- **Dustbin:** used to collect waste.
- **Vacuum cleaner:** an equipment that removes dust by suction using electricity is a **vacuum cleaner**.

(B) CLEANING MATERIALS

- **Water:** the simplest cleaning agent.
- **Detergent:** detergent is used with water to clean different surfaces.
- **Abrasives:** substances used to remove dirt by rubbing.
- **Acids:** used for cleaning toilets/tiles.
- **Alkalis**: used to remove grease and stains.
- **Bleach:** used to remove stains.
- **Solvents:** used to remove grease/wax.
- **Polish:** used to shine and protect surfaces.

1. Furniture polish

Ingredients	Method	Use
(i) Linseed oil 50 g **(ii) Turpentine 30 g** **(iii) Vinegar 30 g** **(iv) Methylated spirit 30 ml**	Mix all the ingredients and store in a clean bottle.	Apply this mixture to the furniture using a double layer of soft cloth

2. Metal polish

Ingredients	Method	Use
(i) Soap: 2 tablespoons **(ii) Ammonia: 1 tablespoon** **(iii) Boiling water: 2½ cups** **(iv) Bath-brick: 50 grams**	(i) Dissolve soap in boiling water. (ii) Mix Bath-brick and Ammonia. (iii) Let it cool and store it in a bottle.	(i) Shake well before use. (ii) Soak a cloth and wring it out. (iii) Rub with the cloth to clean the metal.

3. Copper cleaner

Ingredients	Method	Use
(i) Fine Sand: 4 teaspoons **(ii) Flour: 2 teaspoons** **(iii) Salt: 1 teaspoon**	(i) Mix all ingredients and store them in a container.	Rub thoroughly on brass or copper surfaces to remove stains.

(ii) Make a paste of this mixture using equal parts of vinegar and water.

Schedule Of Cleaning

Cleaning is divided into schedule:

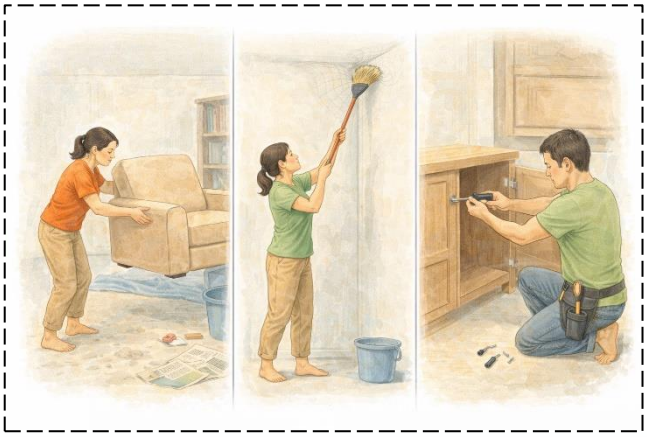
(a) Daily cleaning

- Opening windows
- Removing waste
- Sweeping floor
- Dusting furniture
- Mopping
- General inspection

(b) Weekly cleaning

- Removing unnecessary items
- Cleaning walls/windows/furniture
- Cleaning carpets/curtains
- Removing dust from surfaces
- Mopping

(c) Annual cleaning



- Emptying rooms
- Removing cobwebs
- Repair work

- Polishing furniture/floor
- Cleaning carpets in sun
- Rearranging

TOP 5 QUESTIONS

Q-1. What is cleaning and what is its importance?

Answer- Cleaning is the process of removing dust, dirt and unwanted materials and keeping a place clean and organised. It is necessary to maintain health, comfort, hygiene and the beauty of the house and prevents the spread of germs.

Q-2. Write the methods of cleaning.

Answer- The main methods of cleaning are — dusting, shaking and beating, sweeping, mopping, washing and polishing. These methods remove dirt from different surfaces and keep the house clean.

Q-3. What is detergent?

Answer- Detergent is a cleaning substance made of surface active agents used with water to remove dirt from clothes and surfaces. It is effective in removing grease and stains.

Q-4. What are cleaning equipments?

Answer- Cleaning equipments are the tools used to carry out cleaning such as duster, broom, mop, brush, bucket, dustbin and vacuum cleaner. They remove dust, dirt and make cleaning easier.

Q-5. Write the difference between daily, weekly and annual cleaning.

Answer- Daily cleaning is routine general cleaning done every day, weekly cleaning involves more detailed tasks and annual cleaning is deep cleaning done at long intervals which includes emptying rooms, repair and polishing work.

8

MAINTENANCE OF PREMISES

Introduction

Regular cleaning and maintenance of different surfaces of the house keeps the home clean, safe and durable. Different methods and precautions are required for different surfaces. This chapter explains cleaning of surfaces, repair of equipment and maintenance.

Importance Of Maintenance

- Surfaces of the house are made of different materials.
- Each surface requires special **maintenance.**
- Care of hard, semi-hard and soft surfaces is different.

Maintenance

Maintenance is the process of cleaning, caring and keeping items usable.

Cleaning And Care Of Walls And Floors

- **Walls:** made of paint, wallpaper, tile, wood etc.
- **Floors:** marble, granite, wood, mosaic etc.

Cleaning of walls and floors

Surface	Maintenance	Precautions
Painted Surface	Clean off dust, wash with lukewarm water and detergent, and rinse with clean water.	Do not rub forcefully; do not use harsh chemicals.

Wallpaper	Paste it if torn; clean stains with a soft, damp cloth.	Do not scratch or scrape the wallpaper.
Ceramic Tiles	Clean with hot water and detergent; scrub away stubborn stains.	Do not use excessive acid; rinse immediately after using acid.
Marble / Granite / Mosaic / Cement	Clean with hot water: occasionally clean with kerosene/sawdust; rub lemon to remove stains.	Clean corners regularly (as dirt tends to accumulate there).

Care And Maintenance Of Floor

Cleaning of floors depends on the type of surface.

Floor care

Surface	Maintenance	Precautions
Carpet	Regular cleaning, dry in the sun, use vacuum cleaner, wash dirty carpet with soapy water	Dry before rolling, remove stains immediately
Vinyl / Linoleum	Clean with a damp cloth, remove stains with mild detergent	Do not soak in water, do not use harsh abrasives or soda/alkali
Coir	Cleaning with brush/broom, shake outside, wash with soapy water and dry	Do not let it get too dirty, dry thoroughly

Doormat	Beat it upside down, wash with soapy water and dry in the sun	Essential to dry completely

Cleaning Of Wooden Surfaces

Wooden Surface	Maintenance	Precautions
Plain Wood	Wash with mild soap and warm water and dry, remove stains with the blunt part of a knife.	Clean in the direction of the wood grain, do not use stiff brushes or strong chemicals, do not soak in water.
Polished Wood	Wipe with a flannel cloth, remove stains with spirit/oil.	Clean spilled items immediately.
Painted Wood	Clean with soapy water, wipe with a dry cloth, repaint periodically.	Remove soap traces thoroughly.
Laminated Surface	Clean with a damp cloth, remove stains with mild detergent, use wax/cream polish	Protect from scratches, do not use harsh abrasives.

CARE OF METAL SURFACES

Metals: brass, copper, silver, steel, iron.

Material	Maintenance	Precautions
Brass and Copper	Clean with soap or mild abrasives; rub with salt-vinegar or ash.	Do not use harsh chemicals.

Silver	Wash with warm soapy water, rub with a soft cloth, and use silver polish.	Do not use harsh abrasives.
Steel	Clean with warm water and detergent; remove stubborn stains with mild abrasives.	Harsh abrasives will cause scratches
Iron	Clean and dry after use; apply oil to prevent rust.	Do not leave moisture as it leads to rusting.
Non-stick (Teflon)	Keep oiled; clean with soapy water and dry.	Do not use steel wool or harsh scrubbers.

Cleaning Of Glass, Cane And Plastic

Surface	Maintenance	Precautions
Glass	Clean with newspaper and water, polish with vinegar water. Remove stubborn stains with ammonia/warm water.	Do not use hard scrubbers/abrasives (scratches occur).
Cane	Clean dust regularly, wash with salt water and dry, apply varnish/polish.	Do not soak in water.
Plastic	Remove stains with oil, clean with soap water.	Do not use hard abrasives and bleach.

Electrical Repairs

Before repair switch off electricity supply.

Fuse

- Fuse is made of thin metal wire

- Fuse blows due to short circuit.

What to do when fuse blows

(a) Switch off main switch.

(b) Identify faulty appliance and remove it.

(c) Remove fuse, take out burnt wire and clean.

(d) Insert new fuse wire.

(e) Fix fuse back and switch on main switch.

3 pin plug

- Three wires: phase, neutral, earth.
- Correct connection required while changing plug.

Simple steps to change 3 pin plug

(a) Open the middle screw of the plug.

(b) Loosen screws of three wires and remove wires.

(c) If required remove plastic covering of wire.

(d) Fix positive and negative wires in correct screws (wires should not touch).

(e) Fix positive and negative wires in correct screws (wires should not touch).

(f) Close cover and tighten main screw.

Fans

- Regular oil/grease required
- Noise → bearing problem

- Slow fan → capacitor problem

Room cooler

(a) Keep cabinet clean and paint to prevent rust.

(b) Change cooler pads in summer.

(c) Add oil/grease in fan and pump.

(d) Use filter on pump water inlet.

(e) Maintain water above minimum level.

(f) Switch off electricity while filling water.

Room heater

- Heating element main part
- Regular cleaning necessary

Taps repair

Water supply: pipeline and tap.

Common problem in tap

Tap leakage

Process of repairing tap

(a) Switch off main water supply.

(b) Open handle and remove spout.

(c) Remove old washer.

(d) Insert new washer.

(e) Fix all parts and close tap

Flushing cistern

- Water flows when lever is pressed
- Ball valve controls water level

Possible faults

- Washer damaged
- Valve jammed
- Dirt in tank
- Ball valve damaged

TOP 5 QUESTIONS

Q-1. What is maintenance?

Answer- Maintenance is the process of cleaning, caring and keeping items usable. It increases the life of surfaces, equipment and household items and plays an important role in maintaining cleanliness, safety and beauty.

Q-2. Write precautions while cleaning walls and floors.

Answer- While cleaning walls and floors strong chemicals should not be used, wallpaper should not be scratched and excessive acid should not be used on tiles. Cleaning should be done according to the type of surface.

Q-3. How is wooden surface cleaned?

Answer- Wooden surfaces are cleaned with mild soap and water, wiped with a dry cloth and polished or repainted when required. Water stains are removed using oil or spirit.

Q-4. What is fuse?

Answer- Fuse is a safety device made of thin metal wire which melts and stops electricity supply during excess current or short circuit, protecting appliances and house from damage.

Q-5. What is the main cause of tap leakage?

Answer- The main cause of tap leakage is a damaged washer. To repair it the main water supply is switched off, the old washer is replaced with a new washer and the tap is fixed properly again.

9

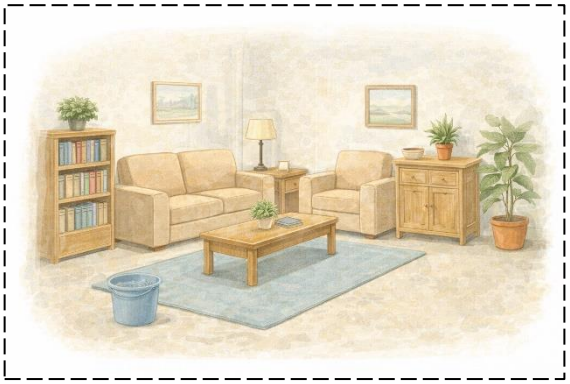
AESTHETICS AT HOME

Introduction

Not only cleaning, but arranging objects in a beautiful and balanced manner also makes the house attractive. Proper colour, lighting, flower decoration and suitable arrangement of decorative items create an atmosphere of peace, beauty and joy in the house.

Importance Of Aesthetics At Home

- It is necessary to keep objects at proper places.
- Disorder causes loss of time and energy.
- Balanced decoration provides comfort and satisfaction.
- Artistic decoration is possible even at low cost.



Flower Decoration

(1) Collection Of Materials

- **Vase:** the container used for arranging flowers is called a vase.
- **Pin holder:** a base with pins on which flowers are fixed.
- **Oasis:** water absorbing foam that keeps flowers fresh.
- **Fresh/artificial flowers**
- **Green leaves**
- **Dry twigs**

(2) Method of flower arrangement

- Place the pin holder or oasis in the vase.
- Decide the shape of decoration (triangle, round etc.).
- Pluck flowers in the morning.
- Cut twigs in different lengths.
- First place the long branch, then other flowers.
- Place flowers at different heights.
- Place big flowers at the bottom, medium in the middle and buds at the top.
- Cover the pin holder with leaves.
- Place against a contrasting background.

Principles Of Flower Arrangement

- The size of decoration should be in proportion to the room.
- Plant material should be 1½ times higher than the height of the vase.
- Maintain balance (upper part should not be heavy).
- Eye movement should be smooth.
- Place flowers at different heights.
- Use large bright flowers sparingly.
- Keep empty space around each flower.

- Flowers, leaves and vase should complement each other.

Floor Decorations

- **Alpana/Rangoli:** decoration made on the floor with colours or flowers.

- Rice flour, maida and dry colours are used.
- Select design according to the occasion.
- Draw double lines.
- Use contrasting colours.
- Fill evenly
- Fill the background also.

Arranging Accessories

Paintings:

- Hang according to wall size.
- Hang straight.
- Provide proper lighting.

Lamps:

- Colour should match decoration.
- Place in corner or above painting.

Cushions:

- Place for colour balance in the room.
- Do not place too many curios together.
- Keep similar material items in groups.

TOP 5 QUESTIONS

Q-1. What is the importance of beautification of home?

Answer- Keeping the house beautiful and organised provides peace, satisfaction and comfort. Proper decoration saves time and energy and makes the house environment attractive and welcoming.

Q-2. What is oasis in flower decoration?

Answer- Oasis is a water absorbing foam placed in a vase in which flower stems are fixed. It helps maintain freshness and moisture of flowers.

Q-3. Write two principles of flower arrangement.

Answer- Flower arrangement should be balanced and should be about one and a half times the height of the vase. Large flowers should be placed at the bottom and buds at the top. Adequate empty space should be kept between each flower.

Q-4. What points should be kept in mind while making rangoli?

Answer- Rangoli should be made according to the occasion. Design lines should be double, use contrasting colours, fill evenly and fill the background so that the design appears clear.

Q-5. What precautions should be taken while arranging decorative items?

Answer- Hang paintings according to wall size, hang straight and provide proper lighting. Keep similar material items in groups and do not place too many items together so that balance and beauty are maintained.