

# *ESSENTIALS OF HOME ECONOMICS-I*

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*HUMANITIES GROUP*

*CLASS 9*



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## CHAPTER 1- INTRODUCTION TO HOME ECONOMICS

### 1.1 Definition of Home Economics:-

#### Definition according to Tate Milderd:

He defined home economics as a combination of two words. The term home economics has a Greek root. “oikos” means home appliance and “nomos” means management. Home economics therefore means something written about family, activities of family members and interpersonal relation.

#### Definition according to William and Lyle:

The education of home economics provides us the guidance of family life. It provides us information about food, shelter and clothing of family members.

#### Definition according to Lippeat and Brown:

Home economics is a science which helps a person to make the best use of one’s resources to meet the requirements of one’s home. A household woman having the knowledge of home economics manages the home in such a way that all the members of family get maximum benefit of the available resources.

#### Point to remember:

The use of everything which is related with home is known as home economics.

### 1.2 Aims and Objectives of Home Economics:

Study of home economics helps in social, financial and education of a country. Training in home economics helps a person to solve different problems of life. Some important objectives of home economics are as follows;

#### i. Commands in Home Management:

A person is made aware of his skills and capabilities. A household woman having the knowledge of home economics manages the home in such a way that all the members get maximum benefit of the available resources, and learns to manage time properly.

#### ii. Identification of Basic Values of Social Life:

Home economics furnishes the girls with such an accomplishment which raises their status in homes as well as in the society.

#### iii. Maintaining Balance Between Income and Expenditure:

Home economics emphasizes on the correct use of money. It studies how we can save money and make best use of our income by purchasing articles of good quality on reasonable prices.

#### iv. Best Use of Family Resources:

Use different new methods to make best use of family resources and expenditures and fulfill all basic needs like food, shelter and clothing in a best way that all family should get maximum benefit from available resources.

#### v. Pleasant Home Environment for Children and Family Members:

Give maximum attention to children’s physical and psychological needs and make peaceful and pleasant environment for every family member.

#### vi. Housing Needs of the Family:

To take care of all needs and requirements of family members and take care of cleaning, food and comfort of each member.

#### vii. Development and Guidance of Children:

Take care of child’s physical, psychological and mental growth and development as well as their personal interests and liking & disliking.

### **viii. Development of Professional Skills:**

By studying home economics a girl can increase her family income by showcasing her artwork as a profession, by arranging exhibition of clothing items and by introducing a new outlet of bakery products etc.

#### **1.2.1 Different Professions/ Fields/ Departments of Home Economics:**

Home economics is not only a subject but it is divided into many professions like;

- i. Food and Nutrition
- ii. Textile and Clothing
- iii. Home Management and Environment
- iv. Human Development and Family Studies
- v. Art and Design

##### **i. Food and Nutrition**

In this subject we study about nutrients, diet, health, balanced and unbalanced diet, methods of cooking and preserving food, sources of food, taste of food, effects of nutrients deficiency etc.

##### **ii. Textile and Clothing**

In this subject we study about importance of dress, selection of dress according to personality, season and occasion, cutting and stitching of clothes, identification of fabrics, preparation and characteristics of different types of clothes, fiber types etc.

##### **iii. Home Management and Environment**

In this subject we study about goals and values, income and expenditures, principles of good health, reasons of diseases, ways to cure any disease, methods of savings, methods of proper disposal of garbage etc.

##### **iv. Human Development and Family Studies**

This subject is about children, family, personality development, behaviors of family members, child's physical, psychological, mental and social development, importance of family members etc.

##### **v. Art and Design**

In this subject we study about principles of art in decorating home, importance of color, principles of selecting and arranging furniture, cleaning of house etc.

#### **1.3 Significance/ Importance of Home Economics:**

Significance of home economics according to Clare Rude Beck;

“Home economics is basically concerned with resources, money, health, clothing and food management by which individual and family needs are fulfilled. Home economics helps a person to spend life in a better way e-g, planning of budget and expenses, relationships with all family members, find the best solution of any problem etc”.

As lifestyle has changed and become more complex, responsibilities of individual also become difficult. By studying home economics a person know about time management and best use of human and material resources. A person also comes to know about care of child's needs and requirements, management of home, human and material resources and becomes a successful personality.

#### **1.4 Relationship of Home Economics with Other Subjects:**

Home Economics is vast subject. It is a science as well as an art. Basically it has been given the grade of science but it is closely related with subjects of science and arts. We face different challenges in our daily life. These challenges should be handled with intelligence and experience.

It is needed for our young girls to understand and fulfill their household and social responsibilities. So they should gain knowledge about home economics and to some extent knowledge of other subjects.

##### **i. Home Economics and Psychology:**

In home economics we study about the problems of people belonging to different age groups. It deals with how a child should be looked after, what diet he should be given, what sort of clothes should he wear and how he should be brought up. These problems can be solved with having the knowledge about psychology of individuals.

In psychology we study about the personality, physical development and needs of a child. We come to know about emotional and psychological behavior of a child. It is necessary to know about psychology of a child during his training. So the subject of psychology becomes helpful to solve the problems of children.

##### **ii. Home Economics and Economics:**

Home economics emphasizes on the correct use of money. It studies how we can save money and make best use of our income by purchasing articles of good quality on reasonable prices. As economics also includes the study of budget and expenses, Home economics is therefore closely related with Economics. We should make our home budget according to our income.

##### **iii. Home Economics and Art:**

We use all elements and principles of art such as lines, colors and conditions of surface, forms, balance, link and prominence in home decoration. These skills are also used in dress designing.

We use these techniques in contrast or union of colors. A well-decorated house or a well-managed dressing seems so much impressive. It is attained only by knowing about basic principles of art. These principles are regarded as essential in any creative work like drawing, sculpturing or making a statue. These are important in making selection of clothes and decorating a house. It is the reason that these two subjects can never be separated.

##### **iv. Home Economics and Citizenship:**

One objective of home economics is to help an individual to develop his personality. It studies how a person can make his personality popular, charming, healthy and good looking. Therefore, home economics includes these topics.

How a girl can become a good sister, respectable daughter, obedient daughter-in-law, a loving and well mannered wife. All above mentioned qualities are essential to become a good citizen.

As house is a basic unit of social life, so a person's behavior in household life has an important place in character building. We can say that house is a model of society.

Since one of the fundamental objects of home economics is to make the girls good citizens, the basic knowledge of civics is essential for the students of home economics.

In this respect, attitude towards elders and children of your same age group is important. It is also important to develop emotions of love and tolerance for other members of society.

##### **v. Home Economics and Chemistry:**

Home economics and Chemistry are related to each other in following ways;

a) Basic elements of our food are chemical.

- b) The methods used to preserve the food are studied in chemistry.
- c) Syllabus of food and nutrition is closely related to chemistry.
- d) Making of clothes from fiber dyeing and other qualities are dealt in chemistry. So both the subjects can never be separated.

**vi. Home Economics and Biology:**

Biology and home economics do not seem to have any relation apparently because in biology we study about animals and plants. But biology is related to home economics to some extent. We study about human growth in zoology. In home economics, we also study about the birth of a child, his security and growth qualities and principles of training a child.

Another important thing which is common in both the subjects is knowledge about digestion of food and calories required for man in different age groups. In this way the study of biological principles is proved helpful in Home Economics.

**vii. Home Economics and Population Education:**

The main objective of the subject of Home Economics is the household betterment. Purpose of population education is betterment of public on national and family level. Actually the main objective of both the subjects is to maintain balance between resources and necessities.

**1.4.1 Interrelationship of All Disciplines of Home Economics:**

**1. Interrelationship of Food and Nutrition:**

We do not eat food only for taste. We should select food and present it according to the principles of art. If we select the edibles of different colors and set them on the table properly they will certainly give a pleasant look. Presentation of food items plays an important role in eating meal. Food should be selected according to different age groups and according to its nutritive value.

**2. Interrelationship of Textile and Clothing:**

We should select dress according to principles of art; it will not only look beautiful but will also enhance our personality. Dress should be selected according to age, professions, seasons and geographical conditions. A dress selected for children should be loose and comfortable. Select dress according to income and status of the family and should be of good quality.

**3. Interrelationship of Home Management:**

Art has an important place in decoration of house. Selection, arrangement and use of everything is affected and arranged according to the art principles then it would be certainly beautiful and comfortable.

If the flowers are decorated in vases and planted in flowerbeds and pots, the house will become more beautiful. A well managed house is example of a good family.

**4. Interrelationship of Home Economics with Individual and Family Physical and Mental Development:**

Home economics lay emphasis on human and family development e-g; their grooming, growth, cleaning, health, personal hygiene and diet etc.

It also plays an important role for the physical and mental development of family, types and importance of family.

**5. Interrelationship of Home Economics with Economical and Social Development of Society:**

Home economics point of view is that a woman should take an active part in social and economical development of society by purchasing articles of good quality in reasonable prices for decoration and beauty

of her home; and using her art skills in making handmade products and sell them and help in financial conditions of her family.

**i. Best use of income and resources:**

A home economist learns how to use the income in best available resources e-g; by providing good education, health, food, shelter to children.

**ii. To prepare the individuals as a wise consumer and citizen**

Consumer means buyer. Every person buys according to his income and necessity. The education of home economics provides us the information to identify our necessities and to buy the best things out of our limited income.

The education of home economics also tells the consumers that we must check the name of the company and information label while purchasing ready-made garments and tin foods because products without labels are normally substandard and of low quality. In presence of label, the complaints can be made to the shopkeeper and the company.

It is also the responsibility of consumer to be vigilant about the way of using and precautionary measures written on the label. If the directions written on the label are not followed then normally the results are not as expected. The consumer is also trained to make buying keeping in view the income and budget of the family, own preferences, activities and necessities so that he proves to be a good consumer.

**iii. Benefits of knowledge of art:**

A girl who has fundamental knowledge of art can make;

- a) Flower pots
- b) Paper flowers
- c) Colored pictures of waste pieces of cloth
- d) Clay pots
- e) Statues of plaster of Paris

**iv. Learning of Skills to Increase Income:**

At home level, use of different skills, hardwork and effort can increase the money. Following ways/ methods can be the cause of increase in money.

- i. Preparation of cakes, biscuits, chips, pickles and jams in the home can increase income and save expenditure.
- ii. Hand embroidery can be done and exhibition of embroidered table mats, scarf and shawls can be arranged.
- iii. Hand knitting and machine knitting of sweaters can be done by taking orders from others to increase income or for own family to save expenditure.
- iv. Decorative items like artificial flowers, mud pots, pictures of different designs, small carpets etc can be made.
- v. Stitching of clothes and needlework can be done to sell items.
- vi. Participate in government saving schemes for example to buy defense saving certificate, special deposit certificate, monthly income certificate, share and prize bonds purchasing.
- vii. Prepare new designs of dress, ornaments, lamp shades, handbags and shoes according to fashion and custom.

**Do you know?**

The status of skilled and ingenious women is much more than household women.

**6. Interrelationship of Home Economics Education with Mental and Physical development of People**

*Composed by Ms Qurat ul ain Farooq*

Physical development means those particular changes in weight, physique and height which grow with the age whereas mental development is related with intelligence and thoughts for example memory, attention, ability, foresight, thought and creative capabilities.

The education of home economics provides the information about development. By knowing the principles of development following benefits are obtained;

- i. By knowing the rules and pace of development, the future of any child can be planned. The parents can guide a child if there is any hindrance in development due to any disease or some other reason.
- ii. While selecting the syllabus, the education of children can be made better by keeping in view the capabilities of the children of different age. In this way the expectations and demands related to the children can be achieved according to their age.
- iii. The trends and behaviors of the children can be judged by the knowledge of development at various stages and their future capabilities can be established and can be guided for better job selection.

### **7. Interrelationship of Home Economics with the Welfare of the Family**

- i. An important factor of the home economics education is to improve the atmosphere of the family and the house. The confidence of the students can be enhanced by making them an efficient manager.
- ii. The students are taught to implement the principle of health education. It is necessary to keep the environment clean to remain healthy. The cleanliness of house includes the cleanliness of kitchen, cleanliness of dress and personal cleanliness etc. To save the eatables from bacteria and cleanliness of water are the most important factors because most of the diseases are spread by drinking unclean water.
- iii. The students are made familiar with first-aid kit. The information is provided about necessary medicines which may be required for the family members when required for routine minor diseases.

### **1.5 Role and Responsibilities of Home Economics in Family and Community:**

#### **1. Role of Home Economics in Economics and Social Development of Community:**

A girl having the knowledge of home economics can work in different fields of the community. She can help her family and work for the development of community as well like proper growth and development of children, knowledge of proper diet for each family member etc. She can work in the field of textile and clothing, human development, food and nutrition and many other related fields because now home economics is not only limited to home.

#### **2. Role of Home Economics in the Preparation of Professional Skill of Individual**

Home economics has been included in the list of professional and technical subjects related with the demands of today. The people carrying professional skills of home economics are getting new jobs. For example director, coordinator, field service worker, expert of production and use of products and textile technicians etc.

Following jobs/ fields can be selected for a home economist;

a. Education: The home economists related with field of education can better understand the psychology of children. They can guide the children to do collective work. By helping to maintain balance in studies and sports, they can involve the young children in various activities according to their physical, social and mental development. They can perform as a best coordinator between parents and children.



b. Social Welfare Programs: Home economists can perform their duties with responsibility in social welfare organizations and agencies. They can get jobs in the welfare organizations of the special, handicapped and spoiled children. The home economists, by participating in civil defense programs, can help the people who are facing different types of problems; to make balanced food plan for the people facing food shortage, to make the people familiar with diet programs for the diseases like diabetes, blood pressure and heart problems.

c. Fields of Journalism, Communication and Advertisement: In these fields, the education of home economics can be helpful in the following ways;

- i. To write essays on new research for guidance of families.
- ii. To inform the public through different magazine about food, textile, home products and their pictures and details.
- iii. Writing articles in newspapers about basic skills for example food & nutrition, health and cleanliness, dress and upbringing of children
- iv. To arrange exhibition about different types of products and things in community/ exhibitions centers.

d. Medical Science Services: Nutritionists can advise the family members and the civil society regarding health management and the rules to control the diseases. For example;

- i. To educate the patients about food.
- ii. To suggest the food supplements.
- iii. To act as in-charge of organizations dealing with food management, food preparation and its supply.
- iv. To check the standard of cleanliness, preservation, quality and usage of food items.
- v. To act as nutritionist with the industrialists and food products manufacturers to prepare new products and to highlight new ideas about their usage.

e. Textile Industry: The professionals of textile and clothing can give suggestions to the industrialists for improving the quality of textiles by making research on trends, necessities and likings of consumers. They can guide the industrialists and the consumers about preparation of designs of the clothes, the characteristics of fiber, the dress and fabrics of home use for example curtains and sofa cloth, children clothes for summers and winters etc.

f. Interior Decoration: Nowadays, the interior decoration of the house has become a regular profession. This art can be adopted as profession. By applying the elements and principles of art and design in interior decoration and by using the colors in furniture and other decorations, the beauty of the house can be enhanced.

### **3. Role of Home Economics in Physical Science:**

Digestion of food, function of nutrients, study of food and nutrition, deficiency effects of nutrients, absorption of food, important food nutrients like carbohydrates, fats, proteins, minerals and vitamins, their digestion and effects of excessive use.

### **4. Role of Home Economics in Social Science:**

According to Park and Burgess, sociology means “the study of collective behavior”.

According to Ogburn and Nimkoff, “sociology means the study of social life, collective behavior and social behavior”.

According to Inkles, “psychology is related to the mental health of the family”.

### **5. Role of Home Economics in Health:**

To improve the health of the society the experts depend on education and research. Through the process of selecting, preparing and cooking food, students develop their creativity and develop sense and skills that will contribute in maintaining their health and well-being.

### **What is the secret of social success?**

Acceptance, success, freedom and life standard are prominent social requirement to spend successful life.

### **6. Role of Home Economics in Practical and Technical Science:**

In the period of agricultural and industrial progress, the education of technical science creates the better understanding and capabilities amongst the students and provides the foundation for good earning profession in future. In the home economics education the chapters of practical projects, agriculture and industrial art have been included for example hand and machine embroidery, creative arts, confectionary and bakery, to save the fruits and vegetables and to look after the house farm.

Besides this, to create interest in the students to do the hand work, to make useful things out of waste material and to create productive capabilities from which they can earn. For example, various embroidered dresses, to do business of home-made food items like jelly, jam, pickles etc.

The home decoration is another field of home economics. By learning the principle of art and design and the technical knowledge of colors, the girls can not only decorate their houses rather can also earn a lot.

### **7. The Social Role of Home Economics in Family:**

The subject of home economics provides us social values and requirements. The behavior of each family member should show love and respect to others.

### **8. The Economic Role of Home Economics in Family:**

To fulfill all primary needs of family members, it is necessary to maintain a balance between income and expenditures. If our expenditure exceeds our income then every individual of family becomes restless and upset. Spend on some policies e-g; deposit certificates, saving certificates, prize bonds etc., to increase the economic condition of family.

### **9. The Social and Economic Role of Home Economics in the Development of the Society/ Community:**

The progress of society is a collective movement which actually is the desire to live better life by combined line of action of people and groups. This is an educational and practical movement. The people struggle to fulfill their basic needs on self-help basis. Till the time the person does not make effort himself, the progress of the society is not possible.

The women are more than 50% of the society. If they join for the progress of the society, the resources of the family will be increased manifold. The women having education of the home economics possess a better understanding to solve the problems of family and house.

### **10. Role of Home Economics in Domestic Life:**

The relation of husband and wife, parent and children, religion, moral values, health and personality are those factors which form a strong family. The home economics understanding the view points of all family members guides to solve their problems and maintaining their relations. The persons educated in home economics helps to maintain power of the family, psychological and physical security, success and unity.

Family is a basic unit of the society. Husband and wife are the founders of the family which form the basis of new family despite being from two different backgrounds and atmosphere. Therefore, the living

style of the family and the domestic life is surely affected by the personal thoughts, personalities, experiences and external atmosphere of these two persons.

Every family has a common culture which is under the influence of society and religion. The education of home economics teaches to mold the personality and character of the family members to live a happy life with each other. It also guides the students about various aspects of home management for example brought up of children, food and nutrition, requirement of dress and stitching, health and cleanliness, and better use of resources. The women qualified in the education of home economics are the most valuable asset of any family. These women contribute towards the definite progress of their family and house.

### **11. Role of Home Economics in Development of Society/ Community:**

The education of home economics plays an important role in various factors concerning welfare of the society particularly the own family. For example;

- i. To provide details of food, dress and other necessities of different families to the government institution.
- ii. Economics plans of different families, methods of work simplification and to have consultation with the family and its members about all information regarding trend of the users.
- iii. To help the women in specific situations for example to guide the working women or the families under debt, to look after handicapped and weak persons.
- iv. To coordinate with experts of nutrition, teachers and home economics experts for making the family life better.
- v. To arrange the program for social welfare of the society and to cooperate for its implementation in collaboration with some group.
- vi. To cooperate with agricultural workers and volunteers to meet the necessities of rural families.
- vii. To solve the individual problems by visiting door to door.
- viii. To take part in social welfare projects of the society.

### **12. Practice of Leadership Qualities**

The home economics trained people can work as a leader for social welfare works of the society. For example;

- i. To arrange training program for young people.
- ii. To establish day-care center for the kids.
- iii. To act as administrator in public housing projects.
- iv. To become part of social service for guidance of housewives in the society.
- v. To act as administrator of a residential hotel or to act as warden of a hostel.
- vi. To perform the duties of food management in a hotel or a hospital.
- vii. To work as nutritionist with food-items manufacturing institutions.
- viii. To act as fashion designer.
- ix. To act as products expert in textile factories.
- x. To act as interior designer.

Note: All these programs can also be arranged in the schools or community centers.

**CHAPTER 1- INTRODUCTION TO HOME ECONOMICS  
QUESTIONS**

**1. Choose and encircle the correct answer from the options given below.**

- i. The education of home economics covers which matters of the home and the family life?  
(a) goodwill            (b) activities            (c) resources            (d) goals
- ii. Home economics is that management of resources which fulfills the necessities of \_\_\_\_\_  
(a) Individual & family (b) economics & social (c) spiritual & emotional (d) health & cleanliness
- iii. The subject of home management has \_\_\_\_\_ on other subjects.

- (a) Preference            (b)less value            (c) importance            (d) limitation
- iv. Home economics is actually a professional science in which how the realities related to the house are evaluated?  
 (a) Partially            (b) impartially            (c) intentionally            (d) unintentionally
- v. The mental development of child is related to what?  
 (a) Weight & figure    (b) height            (c) intelligence & thoughts (d) trend or behavior
- vi. Family is the basic \_\_\_\_\_ of society?  
 (a) atmosphere            (b) security            (c) culture            (d) unit
- vii. Most of the diseases like typhoid, diarrhea, hepatitis etc are spread due to which kind of water?  
 (a) dirty            (b)heavy            (c) unclean            (d) contaminated

**2. Write short answers.**

- i. Define home economics.
- ii. What are the important points of the definition of home economics?
- iii. Write the importance of home economics.
- iv. Write the relationship of home economics with physical health and mental development of individual.
- v. Write a note on the wise consumer and citizen.
- vi. Write a note on the home economics and welfare of the family.
- vii. What is the lifecycle of home economics?
- viii. What is the home management in the life cycle of home economics?
- ix. Write the relationship of home economics and physical science.
- x. What is the relationship of home economics and social sciences?
- xi. Write practices of leadership qualities and role of home economics.

**3. Write detailed answers.**

- i. Write the aims and objectives of home economics.
- ii. What are the different professions/ fields of home economics? Write about each profession briefly.
- iii. Explain the relationship of home economics with other subjects.
- iv. Write a note on the best use of resources at individual, family and social level.
- v. Discuss the development of skills and creative abilities in the education of home economics.
- vi. What is the role of home economics in the preparation of professional skill of individual?
- vii. Write the role of home economics in the development of society.

**CHAPTER 2-INTRODUCTION TO FOOD AND NUTRITION**

**2.1 DEFINITION OF FOOD AND NUTRITION:**

**2.1.1 Definition of Food:**

Any solid or liquid substance which when taken by the body provides it with necessary materials to enable it to grow, to replace worn out damaged parts and to function normally.

The food which we obtain from vegetable or animal sources has different color, taste and smell.

**2.1.2 Definition of Nutrition:**

Nutrition is the nourishment or energy that is obtained from food consumed or the process of consuming the proper amount of nourishment and energy.

The study of nutrients and their relationship with food and living things is called nutrition.

### **What do you know about nutrition?**

Nutrition is that knowledge with the help of which we take better food and set habits of meal to protect ourselves from diseases.

Nutrition is that subject of science which provides information about need of nutrients in the body, their presence, importance, amount of nutrients in food and their quality.

#### **2.1.3 Definition of Nutrients:**

“Food is composed of different chemical elements arranged in a variety of ways to form molecules. These are called nutrients.” There are many different nutrients and each has its own function in the body. Each nutrient is vital to life and the health of an individual will suffer if any one of the nutrients is in short supply.

Our food is mainly composed of these nutrients:

- i. Carbohydrates
- ii. Fats
- iii. Proteins
- iv. Vitamins
- v. Minerals
- vi. Water

#### **Macro Nutrients:**

These are the nutrients which our body needs in large amounts. They are proteins, fats, carbohydrates and mineral elements like sodium, calcium etc. These are known as macro nutrients.

#### **Micro Nutrients:**

These are also some nutrients which are needed in smaller amounts. They include vitamins and essential fatty acids. These are known as micro nutrients.

#### **What is Food nutrient?**

The chemical compound present in food which is responsible for one or more function in the body is known as food nutrient.

Food nutrients are essential for man's health, development and survival, and nutrients are present in large quantity in different types of food.

#### **What are macro-nutrients and micro-nutrients?**

Proteins, carbohydrates and fats are required in large quantity in the body that's why these are called macro-nutrients.

Vitamins and minerals are required in small quantity in the body that's why these are called micro-nutrients.

### **2.2 EFFECTS OF MALNUTRITION:**

#### **2.2.1 Definition of Malnutrition:**

Malnutrition is defined as poor health as the result of not digesting enough nutritious food.

Malnutrition means incorrect and unbalanced intake of nutrients.

An example of a case of malnutrition is a family starving because they cannot afford any food.

#### **What is malnutrition?**

Malnutrition means the deficiency and excess of food which leads to states of over-nutrition and under-nutrition and their diseases.

## **What is malnutrition?**

When there is deficiency or excessive supply of important nutrients in the body for a long time on the basis of inappropriate nutrition then a man suffers from different diseases. This condition is known as malnutrition.

### **Forms of Malnutrition:**

#### **1. Under-Nutrition**

It means inadequate nutrition resulting from lack of food or failure of the body to absorb or digest nutrients properly.

#### **2. Over-Nutrition**

A form of malnutrition in which nutrients are over supplied relative to the amounts required for normal growth, development and metabolism.

#### **2.2.2 Effects of Malnutrition on Physical Development of Individual:**

Malnutrition increases the risk of infection and infectious disease, and moderate malnutrition weakens every part of the immune system.

##### **1. Height and Weight:**

In children it leads to low height and less weight.

Enlargement of stomach due to edema (swelling from excessive accumulation of watery fluids in cells and tissues)

##### **2. Physical Structure:**

It leads to deformities, usually as result of calcium, vitamin D or vitamin C deficiency.

Deformity means abnormality in shape of body parts and organs.

##### **3. Skin:**

Loose skin and wrinkled (marasmus), shiny and edematous (kwashiorkor), dry, patchy, poor wound healing.

##### **4. Eyes:**

Eyes become yellow or red in colour and seem watery. It leads to dark circles.

##### **5. Teeth and Gums:**

Red and swollen bleeding gums and yellow teeth.

##### **6. Hair:**

Dull, brittle, hair, dry and rough.

##### **7. Sleep:**

Restless sleeping hours and fatigue.

##### **8. Behavior:**

Lazy and lethargic and weak in studies and other daily activities.

##### **9. Body Parts: musculature**

Muscles get wasted, particularly in buttocks and thighs.

By taking junk foods the body becomes bulky and has excess of fats. It experiences digestive problems.

### **What does fatness or chubbiness indicate?**

Fatness or chubbiness does not indicate health but it indicates disease which is known as obesity.

### **Define Protein Calorie Malnutrition (PCM):**

It refers to a form of malnutrition where there is inadequate calorie or protein intake. Children of 1 to 1 ½ yrs of age suffer from this disease.

Kwashiorkor (protein malnutrition)

Marasmus (deficiency in calorie intake)

### **Do you know?**

The disease of malnutrition is known as Protein Calorie Malnutrition (PCM) in which one condition is called Marasmus and the other is called Kwashiorkor. Especially 1 to 1 ½ years old children suffer from these diseases and it can lead to death due to ignorance.

### **2.3.1 BASIC FUNCTIONS OF FOOD:**

Food is necessary for performing the functions of different organs of the body. Food acts like a fuel to perform our different functions. It contains many organic molecules. These molecules are carried to the blood through the digestive system and these are transported to the cells. In the cells these molecules are oxidized during which the chemical bonds are broken and energy is released. Food performs the following function in our body;

#### **1. To provide heat and energy:**

After the process of oxidation of food, our body gains heat and energy from it. This energy is utilized in our different tasks like studying, walking, running and respiration in our body. In addition to these tasks, the temperature of our body remains constant due to this fuel. This energy is also needed by the body during sleeping because energy is also utilized in beating of heart, breathing of lungs and some other functions.

#### **2. Growth and repair of our body (mainly cells):**

Food is also responsible for the growth and repair of cells. The bones, muscles and cells of the child are small and soft when the child born. The muscles and bones of child not only become strong when grows but bones and muscles also increase in size. All this growth is only possible with the intake of good diet. Many cells get damaged or become useless due to continuous work. Food is important for the growth and repair of bones, teeth, heart, kidney, lungs, blood and hormones and cells.

#### **3. Proper functioning of human systems and to produce immunity against diseases.**

The basic function of food is to keep our body healthy and to produce immunity against diseases. To make our body strong against environmental pollution like air, water, bacteria of sand so that the body can fight against diseases. It is also important for proper functioning of human systems and organs.

### **Do you know?**

If any person gets injured in an accident and his bones also get broken then food plays important role in healing of wound and also makes blood.

### **Have you ever noticed?**

When you remain hungry for a long time span or you are fasting, the ability of brain functioning becomes less and the energy of body also gets low gradually.

### **Functions of nutrients in our body:**

<b>Nutrients</b>	<b>Functions</b>	<b>Sources</b>
<b>Carbohydrates and Fats</b>	Provide heat and energy	All types of grains, wheat, rice, honey, sugar, oil etc.
<b>Proteins</b>	Repair cells and tissues	Meat, fish, chicken, milk, chick peas, beans etc.
<b>Vitamins and Minerals</b>	Proper working of body organs, immunity against diseases.	All kinds of fruits and vegetables

### **2.4 STUDY OF BASIC NUTRIENTS:**

#### **1. Carbohydrates:**



Carbohydrates are the compounds form of carbon, hydrogen and oxygen atoms. So they are called hydrates of carbon or carbohydrates e-g.

- i. Sugar
- ii. Starch
- iii. Cellulose

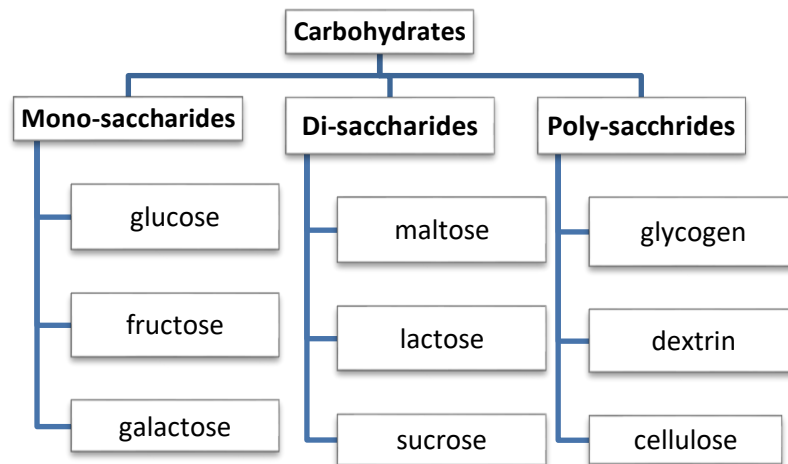
Carbohydrates are the most easily available elements of our food. They are also taken in great quantity. Excess carbohydrates are stored as glycogen in the liver and muscles cells beneath the skin and causes obesity. Four calories are obtained from one gram of carbohydrate. Glucose an important carbohydrate occurs in all living things.

It dissolves very easily in water and is present in our cells. It is transported through blood circulation to all parts of the body. It is the main substance from which living things obtain energy.

### **Types of Carbohydrates:**

There are three types of carbohydrates:

- i. Mono-saccharides (simplest form)
- ii. Di-saccharides (made of 2 mono-saccharides)
- iii. Poly-sacchrides (long chains of mono-saccharides)



### **What are the sources of sucrose, maltose and lactose?**

In disaccharides, sucrose is fruit sugar, maltose is starch sugar and lactose is known as milk sugar because these are present in fruits, grains and cereals, and milk respectively.

### **Sources of carbohydrates:**

Sugar, honey, gur, different kinds of grains like rice, flour, maize, pulses, gram, groundnuts, chilgoza, ginger, onion, dry fruit, green vegetables, sugar cane, lentils, beet roots etc.

### **Functions of carbohydrates:**

The main function of food containing carbohydrate is to generate energy in the body. The carbohydrates are converted into simple sugars like glucose during the process of digestion. Glucose is directly absorbed in the cells and there is no need to digest it.

Excessive sugar is stored in the liver in the form of glycogen. Carbohydrates also help us to digest proteins and fats.

- i. They provide heat and energy to our body
- ii. They make food delicious and tasteful by providing sweetness in it.
- iii. Some proteins are also got through carbohydrates.

- iv. They also act as ‘protein sparer’ so that proteins can be used for its primary functions rather than as a source of energy.
- v. It rebuilds muscles, makes enzymes and produces antibodies. Antibody removes foreign bacteria and viruses.
- vi. Vitamins and minerals salts are present in pulses and brown flour.

#### **Effects of carbohydrates deficiency:**

- i. It leads to reduced body weight, lazy and weak.
- ii. Brain is affected due to deficiency of glucose.
- iii. Due to deficiency of fats, heat and energy is affected.

#### **Effects of excess of carbohydrates:**

- i. If carbohydrates are taken too much, a great quantity of them remains in our intestine because our body cannot consume all of them. These remaining carbohydrates get rotten and create gastric trouble and indigestion because they prevent the digestion of proteins and vitamins.
- ii. The excess of carbohydrates is converted into fats and stored under the skin, this causes obesity.
- iii. It is noticed that people in our country mostly suffer from diabetes due to excessive use of carbohydrates.
- iv. Teeth damage with the excess use of sweet and sugar products.
- v. Due to increased weight, it becomes difficult to walk and a man becomes mentally slow.

## **2. Proteins:**

### **What is the meaning of proteins?**

Protein is derived from a Greek word ‘proteios’ which means ‘be the first position’. Protein has the primary value for health and life.

The best sources of proteins are goat, cow, chicken and fish.

Proteins are the compounds made up of amino acids. Amino acids are organic compounds, which are nitrogen. Sulphur is also found in some amino acids. Amino acids are linked together in the form of a chain. There are about twenty different amino acids that occur in nature. Some proteins are fibrous, they form different structures in the body like muscles, bones and skin. They also occur in our blood and cells.

These are the most important nutrient because they nourish our body and strengthen its tissues, cells and muscles. Proteins contain nitrogen, which makes the million of cells of our body. Proteins also repair the wounded cells and give them a new life that is why they are called ‘builders of the body’. One gram of protein provides 4 calories. Human proteins are quite different from those of animals and vegetables. When we take them as our food, the stomach changes their nature in our intestine. Our body accepts only this changed form of proteins.

### **Amino Acids:**

Different proteins have different quantities of amino acids. Our food must contain 8 amino acids. Amino acids should be present in our food because our body cannot produce amino acids. These amino acids are called essential amino acids and the food which contains them is called complete protein.

Amino acids which our body produces by itself and there is no need of gaining them as food is called non-essential amino acids.

### **Sources of proteins:**

Proteins can be obtained by two sources;

#### **i. Vegetables sources:**

Things derived from vegetation as potatoes, carrot, turnips, radish, flour, green vegetables, pulses and all kinds of fruit contain second-rate protein.

This type of protein is less in price than animal protein. It provides heat and energy to body but it is called incomplete protein due to absence of essential amino acids.

#### **ii. Animal sources:**

Things derived from animals like milk, butter, curd, cheese, meat, fish, eggs, liver, kidney etc. contain first-rate proteins in more or less quantity.

It is advisable to take both kinds of proteins in our food.

Protein is an essential food element. About 20% of our food should consist of protein. Requirement of protein depends on age, height, weight, gender, hobbies and the type of protein.

#### **Functions of proteins:**

- i. Basic purpose of protein is growth and repair of body.
- ii. Proteins are very important to repair cells, tissues, muscles, veins and other organs of body.
- iii. It provides heat and energy.
- iv. Many functions of the body remain normal due to the presence of protein.
- v. It is very necessary for mental and physical growth of children.
- vi. It is also important for prevention from food and skin treatment.
- vii. It maintains the amount of RBCs in the blood.
- viii. It provides amino acids to produce enzymes and hormones in our body.
- ix. It produces antibodies which creates immunity in the body against diseases.

#### **Effects of proteins deficiency:**

- i. Lack of protein effects on the growth of children, especially from birth to five years of age are affected. Height and mental abilities are affected due to lack of proteins.
- ii. If the protein deficiency is not recovered at time, it will cause a disease known as 'Kwashiorkor'. Children suffering from this disease may face the problem of less mental growth. Hair of patients also becomes weak and dry.
- iii. A healthy man can also be affected by the lack of protein. Resistance power is lessened due to protein deficiency.
- iv. It leads to 'Anaemia' due to lack of RBCs in the blood.

#### **Effects of excess of proteins:**

- i. If the continuous intake of proteins exceeds the required amount then it causes obesity and heart problems.
- ii. Liver experiences more pressure due to which kidneys can stop working.
- iii. Risk of cancer increases in the lower part of large intestine thus bones also weakens in old age.

### **3. Fats:**

Chemically, fats are produced by the reaction of fatty acids and glycerol. These are compounds of carbon, hydrogen and oxygen. Fats are important nutrients. One gram of fat provides 9 calories. It protects other elements of food. Fat not only digests food but also transports some vitamins which are soluble in fats, to the other parts of body.

Fat present in the food becomes a part of the body digestion, or it is excreted from body. Food having fats comparatively requires more time in digestion than boiled food. Food cooked in fats is more delicious.

**Fatty Acids:**

These are compound of glycerin and different acids. There are two types of fatty acids;

- i. Saturated fatty acids
- ii. Unsaturated fatty acids

Saturated fatty acids cause a big amount of cholesterol in blood. There are chances of heart diseases by increasing cholesterol level in blood. Blood pressure is also raised. So we should lessen the use of saturated fatty acids. These are obtained from animal sources.

Fatty acids are formed in the body due to excessive use of carbohydrate. Some fatty acids are not produced by the body and it causes bad effect on skin and growth. Such fatty acids are required and gained by food and are called essential fatty acids.

Unsaturated are usually present in vegetable oil like soya bean oil, sunflower oil and canola oil etc.

**What is the effect of excess use of saturated fatty acids?**

The excessive use of saturated fatty acids increases the amount of cholesterol in blood due to which the possibility of heart diseases increases.

**Sources of fats:**

Fat can be obtained by two sources;

Animal fat

Vegetable fat

**i. Animal fat**

It includes milk, butter, egg yolk, cod liver oil etc.

**ii. Vegetable fat**

It is gained from peanuts, sunflower, olive, mustard seeds, sesame seeds, canola oil, dry fruit like almond, pistachio, walnut, coconut and grain like maize.

Although animal fat is more saturated than that of vegetable fat but it has vitamin A and D also which vegetable fat does not have naturally.

Requirement of fat depends on weather, work and physical structure of body. People living in cold regions need more fat and hard workers also need more fat. About 50-60 grams of fat is required daily. Bulky people should use less fat in their diet, because less amount of fat provides more calories.

**Functions of fats:**

- i. It provides fuel for our body.
- ii. It gives necessary elements for skin and hair.
- iii. It helps in digestive system.
- iv. It stops the unnecessary use of proteins.
- v. It also produces some vitamins.

**Effects of fats deficiency:**

- i. It weakens body and bones become prominent due to loss of fat layer under the skin.
- ii. It decreases energy and body feels laziness and can't work properly.
- iii. Due to dry and patchy skin, wounds appear.
- iv. The problem of constipation becomes common in children.
- v. Due to lack of fat soluble vitamins, the diseases of these vitamins are caused.

**Effects of excess of fats:**

- i. The body becomes fat and D shaped. It also causes obesity which leads to many diseases.

- ii. It causes fatal or life threatening diseases like blood pressure, stroke, heart attack or failure and arthritis.

#### **4. Vitamins**

The word 'Vitamin' is a combination of two words; 'vital' meaning important and 'Amines' meaning chemical state/ form. Vitamins means 'important nutrient for life'.

##### **Important information:**

Vitamins are those organic compounds which do not provide heat and energy and also do not increase weight.

##### **Functions of vitamins in the body**

The body requires very little amount of vitamins but their deficiency has a deep effect on development. For good development appropriate quantity of all vitamins are necessary in every stage of life. All vitamins carry out following functions in our body:

- i. These are important for physical development and strength of nerves.
- ii. It creates immune system against diseases.
- iii. It is important for proper functioning of digestive system and for digestion of minerals.
- iv. It is important for good eyesight and for strong gums and teeth.

##### **Types of vitamins**

1. Fat soluble vitamins

2. Water soluble vitamins

##### **1. Fat soluble vitamins**

###### **Vitamin A**

These are soluble in fats which are obtained in large quantity from animal sources. It is found in large amount in human liver which is less in early age (childhood) but with age it increases.

###### **Sources:-**

###### **Animal sources:**

It is found in fish-liver, animal-liver, kidneys, egg yolk, milk, yellow vegetables like carrot, pumpkin, cabbage, tomatoes, coriander, and yellow fruits like peach, apricot, mango. It is found as 'retinol'(animal form of vitamin A) in animal sources. Due to fat soluble, there is no loss of vitamin A while cooking.

###### **Vegetable Sources:**

In vegetables, it is found as carotene which converts into vitamin A in the body.

###### **Functions:**

1. It is important for maintaining eyesight and health of eyes.
2. It plays important role in making enamel of teeth.
3. It provides protection against various diseases of nose, ear and digestion.
4. It is important for structure and health of skin cells. It also saves from acne and freckles (chaiyan)

###### **Effects of vitamin A deficiency:**

1. Human suffers from night blindness in which tear formation stops in the eyes, eyeball becomes dry, in light eyes starts blinking, if this state prolongs the man becomes blind.
2. Rough skin, dry hair and hair fall are the important signs of its deficiency.
3. It leads to lack of immune system. It causes viral infections in humans
4. The enamel of teeth becomes weak. Teeth lose their shine. Nail cracks.
5. The inner skin of breathing vessel becomes dry. It causes nose, ear and throat (ENT) diseases.
6. It causes diseases of digestive system.

**Effects of excess use of vitamin A:**

1. It causes nausea, headache, vomiting and loose motion.
2. Skin damages and lips corners become ulcerative.
3. It causes hair fall and special pain in hands and feet.
4. It leads to drowsiness and dizziness and weak eyesight.

**Vitamin D**

These are fat soluble vitamins which are also called Cholecalci Ferol. Due to being non soluble in water, it is not wasted while cooking.

**Sources:-**

There are two important sources of vitamin D:-

1. It is present in large quantity in cod fish oil, egg yolk, butter, cream, liver and milk.
2. Its most important natural source is sunlight. Vitamin D is gained by the chemical action when sunrays are entered in the body. Due to this, it is also called sunshine vitamin.
3. It is not obtained from vegetable sources.

**Functions:**

1. It helps to absorb calcium and phosphorous in the body.
2. It makes bones and teeth strong.
3. It cures the problem of joints and makes the backbone strong.

**Effects of deficiency of vitamin D:**

1. The deficiency affects the development of teeth of children. The teeth appear late. Teeth do not remain straight and looks ugly.
2. It affects the absorption of calcium and phosphorous. Due to which the bones do not remain straight and become D-shaped. The bones of children become soft, feet become flat and body becomes ugly. This disease is called Rickets.
3. In elders, internal weakness of bones occurs. Due to which bones become soft and hollow, backbone become D shaped, difficulty is faced in walking and climbing stairs, continuous pain bones of legs and lower part of waist, this disease is called Osteomalacia. In this disease, bone may break by a mild mishap.

**Effects of excess use of vitamin D:**

1. Loss of appetite
2. Feels severe thirsty
3. Nausea
4. Complaint of diarrhea and constipation

**Interesting information:**

In our country, the deficiency of vitamin D is not common due to plenty of sunlight. But people who are living in congested areas or people who take unbalanced diet suffer from the deficiency of vitamin D.

**Vitamin E**

**Sources:-** It is found in raw grains, vegetable oil, banaspati ghee, salad leaves, green leafy vegetables, egg yolk, milk, soya-bean, red bean, almonds, pistachio, groundnuts, yeast and chocolate.

**Functions:**

1. It ensures supply of vitamin A and vitamin C for the body by protecting them from calcination (raakh)
2. Its use has been proved important for fertility.
3. It is important for functioning of nervous system.
4. It keeps the man young and old age appears late.

#### **Effects of deficiency of vitamin E:**

1. Normally the deficiency of vitamin E does not occur in humans, but if it occurs the development is affected.
2. Nerves and body organs become weak.
3. Women do not become pregnant.

### **Vitamin K**

#### **Sources:-**

It is found in green vegetables like cabbage and spinach, tomatoes, orange rind, soya-bean oil, egg yolk, liver etc. This vitamin keeps on forming naturally in certain quantity in the intestines.

#### **Functions**

It creates the ability of clogging (blockage) the blood so that blood can be saved from wastage due to a wound.

#### **Effects of deficiency of vitamin K:**

1. The effects of its deficiency are not much seen. But if liver is defected, its deficiency may occur.
2. Its deficiency may cause jaundice.
3. The ability of clogging the blood becomes less. If there is a wound, it becomes difficult to stop the blood.

#### **Effects of excess use of vitamin K:**

Nausea and vomiting occurs. Working of liver is affected, due to which it does not work properly.

#### **Important information:**

Due to lack of blood clotting in newborn, haemorrhage leads to the wastage of large amount of blood.

## **2. Water soluble vitamins**

### **Vitamins C**

Its chemical name is ascorbic acid. It is found excessively in juicy citrus fruits and fresh vegetables. It is soluble in water and is wasted by light and heat, and is also wasted during cooking. Therefore such fresh fruits and vegetables should be eaten without cooking after washing.

#### **Sources:-**

It is found excessively in fresh juicy fruits like malta, orange, lemon, grapefruit, guava and pineapple etc. besides this, it is found in large quantity in vegetables like green chili, cabbage, cauliflower, tomatoes, tamarind (imli), salad and potatoes.

#### **Functions**

1. It builds immune system in the body against bacteria of various diseases.
2. It keeps teeth and gums healthy.
3. It helps in healing the wounds.
4. It is important for making of red blood cells.

#### **Effects of deficiency of vitamin C:**

1. It cause ‘scurvy’ in which mood/ behavior remains irritating, gums swell and start bleeding, teeth become weak and lose
2. Nose starts bleeding, blood veins become weak due to which blue spots appear on the skin.
3. Red blood cells become less due to the lack of iron absorption.

### **Vitamin B-complex**

This vitamin is a compound of many similar vitamins which are compulsory for the health and life of all living beings. The common name of all these vitamins is Vitamin B-complex. It includes vitamin B<sub>1</sub> (thiamine), vitamin B<sub>2</sub> (riboflavin), vitamin B<sub>6</sub> (pyridoxin), vitamin B<sub>12</sub>(cobalamine) and niacin (vitamin B<sub>3</sub>). Though very little quantity of these is required in food but their presence is necessary in the food.

#### **Sources:-**

These are obtained from eggs, yeast, liver, meat, milk, lentils, green leafy vegetables, fruits, dry fruits and grains.

#### **Functions**

1. It makes nervous system and brain healthy and strong.
2. It keeps digestive system in order and promotes appetite.
3. These are responsible for keeping various tissues and intestines in order.
4. These are helpful in digestion and absorption of carbohydrates and proteins.
5. They keep heart, liver, stomach and skin healthy and strong.

#### **Vitamin B-complex, their sources, functions in body and effects of deficiency**

<b>Vitamin</b>	<b>Sources</b>	<b>Functions in the body</b>	<b>Effects of deficiency</b>
<b>vitamin B<sub>1</sub> (thiamine)</b>	Raw grains, wheat, bread, soft parts of mutton (heart, liver, kidney), cow meat, fish, chicken, lentils/pulses, milk and green vegetables	<ol style="list-style-type: none"> <li>1. Helps to convert carbohydrates into energy after digestion,</li> <li>2. Help organs, heart and nervous system to work properly.</li> <li>3. Responsible to stop tiredness and leads to appetite</li> </ol>	It causes ‘beri beri’, loss of appetite, complaint of vomiting and constipation, loss of memory, palpitation, swelling and pain in stomach and intestine, are the specific symptoms of deficiency.
<b>vitamin B<sub>2</sub> (riboflavin)</b>	Milk, heart, liver, kidney, eggs, grains, green leafy vegetables	<ol style="list-style-type: none"> <li>1. Necessary for metabolism of fiber foods and proteins into the body</li> <li>2. Important for health of skin, nose, ear, lips and tongue</li> </ol>	<ol style="list-style-type: none"> <li>1. Lips and lips edges swells, tongue swells and eating becomes difficult.</li> <li>2. Burning and swelling of eyes</li> <li>3. Weak eyesight</li> </ol>
<b>vitamin B<sub>3</sub> (niacin)</b>	Meat, groundnut, eggs, bread, heart, liver, kidney, lungs etc, green leafy vegetables, grains	<ol style="list-style-type: none"> <li>1. Helps in metabolism and absorption of fiber foods in the body</li> <li>2. Important for proper functioning of brain system, skin, stomach and intestines.</li> </ol>	<ol style="list-style-type: none"> <li>1. It causes ‘Pellagra’</li> <li>2. Weakness, skin diseases like pimples, acne etc</li> <li>3. It causes dehydration, diarrhea and digestion problem</li> <li>4. Mental diseases like fear, weak memory, madness and insomnia (loss of sleep)etc</li> </ol>



<b>vitamin B<sub>6</sub></b> <b>(pyridoxin)</b>	Meat, chicken, fish, raw grains, lentils/pulses, liver, eggs	<ol style="list-style-type: none"> <li>1. Necessary for basal metabolism and absorption of proteins in the body</li> <li>2. important for converting glycogen into glucose</li> <li>3. important for proper functioning of organs and nervous system</li> </ol>	<ol style="list-style-type: none"> <li>1. skin becomes rough, fat and spotty</li> <li>2. pain in stomach, complaint of vomiting</li> <li>3. feels weakness</li> </ol>
<b>vitamin B<sub>12</sub></b> <b>(cobalamine)</b>	Liver, kidney, heart, fish, chicken, eggs, milk	<ol style="list-style-type: none"> <li>1. Necessary for proper functioning of nervous system.</li> <li>2. Important for development for red blood cells.</li> </ol>	<ol style="list-style-type: none"> <li>1. Causes Pernicious Anaemia (deficiency of red blood cells)</li> <li>2. Pimples in young age</li> <li>3. Mental weakness</li> </ol>

## 5. Minerals

Minerals act as chemical ingredients in the formation of body. These are 1% of our whole body. There are about 29 types of mineral in human body but out of these 16 minerals are important for development of body. For example calcium, phosphorous, iron, chlorine, sulphur, zinc, cobalt, bromine, fluorine, iodine, sodium, potassium, magnesium, and silicon etc which are found in the form of compounds. These are important for repairing of tissues and to continue the working of human cells as vitamins, proteins and carbohydrates are.

Minerals are required for body in very little quantity daily but the effects of their deficiency are prominent and may also prove fatal. Minerals are also called ‘Ash Elements’ because the ash which is left after burning of food consists of calcium, phosphorous, sulphur, nitrogen and chlorine.

### Sources

These are present in large quantity naturally in all animal and vegetable foods. For example fish, meat, milk, eggs, grains, lentils/ pulses, dry fruits, peas, green leafy vegetables etc

### Functions

1. Important for health and development of bones and teeth and building of body structure.
2. Creates regularity in body systems and works in building of body
3. Keeps heart beat in order
4. Helps in making and cleaning of blood
5. Keeps brains system in order
6. Helps in proper functioning of kidneys

### Interesting information:

Some minerals are required in large quantity in the body like calcium, phosphorus, iron etc, and some minerals are required in small quantity for example sodium, potassium, magnesium, chlorine etc.

### What is known as ash elements?

Minerals are also called ‘Ash Elements’ because the ash which is left after burning of food consists of calcium, phosphorous, sulphur, nitrogen and chlorine.

### Minerals, their sources, functions in body and effects of deficiency

Minerals	Sources	Functions in the body	Effects of deficiency
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<b>Calcium Phosphorous</b>	Milk and milk products, green leafy vegetables, meethi, saag, peas, fish, chicken, meat, eggs etc	<ol style="list-style-type: none"> <li>1. Necessary for Development and building of bones and teeth. Works with vitamin D</li> <li>2. Makes the blood thick</li> <li>3. Create regularity in expanding and contracting of heart</li> <li>4. Make cells with the help of fats.</li> </ol>	<ol style="list-style-type: none"> <li>1. Absorption of vitamins is affected due to which calcium is not absorbed in the body and children suffers from Rickets and elders suffer from Osteomalacia</li> <li>2. In the case of wound, blood being thin does not clog and starts wasting.</li> <li>3. Palpitation and irregularity in heart beat.</li> <li>4. Pain in muscles and nerves</li> </ol>
<b>Iron</b>	Meat, chicken, fish, eggs, liver, dry fruits, green leafy vegetables, potatoes etc	<ol style="list-style-type: none"> <li>1. Makes red blood cells and is necessary ingredient of hemoglobin.</li> <li>2. It is present as myoglobin in tissues of organs which are responsible to provide oxygen to cells.</li> <li>3. It is necessary for proper development especially for newly born, young girls and pregnant women.</li> </ol>	<ol style="list-style-type: none"> <li>1. It causes Anemia. Red blood cells reduce in number and size due to which one becomes pale.</li> <li>2. Complain of tiredness and breathing problem starts due to lack of oxygen in the body</li> <li>3. One becomes weak, loses weight and feels giddy (chakar)</li> </ol>
<b>Iodine</b>	Sea foods, fish, prawns, green leafy vegetables and cod liver oil	<ol style="list-style-type: none"> <li>1. It is important for thyroid glands and regularizes various chemical actions of the body.</li> <li>2. Necessary for physical and mental development</li> <li>3. Regularize the functioning of muscles and nervous system.</li> <li>4. Necessary for basal metabolism</li> </ol>	<ol style="list-style-type: none"> <li>1. Causes goiter in which throat glands become large in size</li> <li>2. Mental development of children is affected which endangers mental retardation</li> <li>3. Development of new born is affected in which weakness, short height, rough skin, dryness, tongue becomes large and lips become fatty due to disorder in absorption of nutrients</li> </ol>

## 6. Water

It is the basic ingredient of food. Water makes the major part of our body. 55-65% of body weight consists of water. It enters in our body as a simple food and is stored in the body as required. Water is a simple compound which consists of 2 hydrogen atoms and one oxygen atom. Its chemical formula is H<sub>2</sub>O. Clean water is colorless, odorless, and tasteless and is clear of minerals and bacteria. A normal man requires 8-10 glasses of water daily. Taking too much water during meal is harmful. Therefore there is no harm in taking water two hours after the meal.

### Sources of water, their function in the body and effects of its deficiency

Sources	Functions in the body	Effects of deficiency
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<p>River, clean water of well, fruit juices, vegetables juices, milk, lassi, tea cold drinks etc. Besides this, it is also present in large quantity in meat, vegetables and fruits especially water melon, melon, malta, pomegranate</p>	<ol style="list-style-type: none"> <li>1. Helps in digestion of food</li> <li>2. Helps in absorption of digested food in the blood after diluting.</li> <li>3. Excretion of minerals and waste materials in the form of sweating, urine etc.</li> <li>4. Helps in maintaining the temperature of body</li> <li>5. 70% of red blood cells and 92% of white blood cells consists of water.</li> <li>6. Keeps soft the joints and muscles of the body</li> <li>7. Maintains the freshness of skin</li> <li>8. It is important for eyesight and hearing</li> </ol>	<ol style="list-style-type: none"> <li>1. In summers, excess sweating, disorder of stomach, vomiting and diarrhea causes dehydration which can be fatal.</li> <li>2. Leads to deficiency of minerals in the body and causes restlessness. Excess discharge of minerals from body can cause death.</li> <li>3. Blood becomes thick due to which heat from inner parts of body is not discharged and body temperature increases dangerously and causes high temperature</li> <li>4. Nervous system is affected. It also causes disorder in human movements.</li> <li>5. Shortage of water in hot areas can cause human death</li> </ol>
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### **Important information:**

Drinking too much water during meal is harmful for digestion however there is no harm in drinking water after 2 hrs of taking meal.

## **2.5 DIET AND HEALTH**

### **2.5.1 Definition of Health:**

Health means “the fitness of the physical appearance of the people, their movements, feelings and their consciousness”. A healthy man possesses comparatively more energy and capability to do work. He can enjoy the life in better way and can fight against the diseases easily. Fresh air, clean water, light exercise, proper sleeping and balanced diet are very important factors to remain healthy.

### **What is meant by health?**

According to World Health Organization (WHO), good health is a health which is obtained from balanced food and in which there are signs of complete physical, mental and emotional health of human body and there are no signs of any disease or weakness.

### **2.5.2 Role of Food in Maintaining Health**

There is deep relation between food and human health. The health of a person depends upon nutrients which he obtains from his balanced food in daily life. The mental and physical health of a person is directly affected by the type of food he uses.

With the excess or deficiency of nutrients, the health starts deteriorating. The common symptoms of bad/ weak health are pale skin, dullness of eyes, increase and decrease in weight, weakness of body, less development, shortage of blood, various types of pain in the body etc. The deterioration of physical health affects the mental health as well.

Following principle may be adopted for good health and balanced food:

- i. Intake of all types of food
- ii. To maintain balanced food and weight
- iii. Avoid the excess use of fats
- iv. More use of fiber food

- v. To avoid much use of salt and sugar

### **2.5.3 Satisfactory Nutritional Status**

#### **Nutritional Status:**

The term 'nutritional status' is used to measure health which is related to the deficiency and appropriateness of nutrients in the body.

According to Robinson, nutritional status means the health of an individual which is affected by the intake and use of nutrients in the body.

The different nutrients present in the food helps in the development and repair of pores of the body. The strong food provides calories which helps a person to perform his routine works. The other nutrients create immune system in the body. If a man looks healthy and his body has fully developed and he possesses appropriate immune system against the different diseases, he will be called well-nourished and his development will be called a satisfactory development.

To measure the development status, the experts have suggested some standards which indicate the development status of height and weight according to age of children and adults. Especially the development status of children is a proof that the children are getting balanced food.

#### Measurement of different parts of the body:

To measure the development of child, following parts of the body are measured;

- i. To measure increase in the weight: to compare the weight according to standard height and weight measurement table.
- ii. To measure height: to measure standard height according to standard height and weight measurement table suggested by experts.
- iii. To measure circumference of arm: to judge the development status by comparing the circumference of the arm with the proposed table.
- iv. To measure head and chest: to ensure appropriate food for development of the child body including head and chest which should be proportionate to the rest of the body.
- v. To measure thickness of skin: the thickness of skin indicates the amount of fats stored in the body. To measure this, a special instrument called Lange is used.

### **2.5.4 Relationship of Nutrition to Good Health**

Our physical and psychological health depends upon the nutrition, its quality and quantity available to our body. Food having good nutrition should have the following characteristics;

1. All necessary nutrients should be provided in appropriate quantity.
2. The food should be digestive and be sufficient for the stomach.
3. Food should be balanced in quantity and should be easily available.
4. The meal should be prepared in traditional manner.
5. Food having good nutrition creates following affects on human health;
  - i. The face looks fresh and satisfactory
  - ii. Intelligence appears in eyes and eyes looks bright and shiny.
  - iii. Hair become smooth, thick and has natural shine.
  - iv. The teeth remain clean, leveled and shiny.
  - v. The skin becomes smooth, soft, fresh and spotless.
  - vi. Height and weight is proportionate according to age.

- vii. Senses remain strong, work capability is more and the skin does not feel the tiredness.
- viii. The ability to bear and capability to fight against diseases increases.

### 2.5.5 Relationship of Diet and Physical Activities

Food is required not only for the activation of internal and unintentional actions of the body rather its necessity increases for any intentional movement and activity. The energy required for all types of body movements is obtained from the food.

The need of food and energy is very much increased for the persons who are very active in their professional life whereas those who have to work while sitting for example office work or computer based work etc need less energy. A student who plays the game on computer consumes half energy as compared to the one who is walking around and consumes 1/5<sup>th</sup> of the energy as compared to an athlete/ sports man. The children play more therefore they require more calories.

If a woman having weight of 55kg finishes a work in one hour then the calories required for different works in one hour will be as under;

Work	Calories / Hour
Resting on bed	56
Sitting silently (reading newspapers or using computer)	72
Washing utensils	104
House cleaning	122
Walking with high speed	145
Home works needing more energy	271
Mopping, washing clothes, swabbing etc.	362

Similarly, to determine the nutritional needs of an individual following activities and actions are grouped together;

<b>1. Light work -140-150 calories/hour</b> <b>Men:</b> office workers, lawyers, doctors, teachers, bankers, shopkeepers etc. <b>Women:</b> light household works, working women, teachers, bankers etc
<b>2. Medium work - 175-240 calories/hour</b> <b>Men:</b> agricultural farmers, laborers, mason, fishermen, soldiers, students etc. <b>Women:</b> students, maids, light industry workers, tailoress etc.
<b>3. Hard work -225-300 calories/hour</b> <b>Men:</b> carpenter, laborers, lifting weight, swimming, playing tennis <b>Women:</b> household works requiring physical effort for example swabbing, mopping, washing clothes, gardening
<b>4. Extreme hard work -300 or more calories/hour</b> <b>Men:</b> digging, coal mine workers, forest-cutting workers, stone-crushing laborer

### The calories required in 24 hrs for various activities

Nature of work	Light work (Calories)	Medium work (Calories)	Hard work (Calories)	Extreme work (Calories)
<b>Men-65kg weight</b>				
Resting on bed (8hrs)	500	500	500	500
Professional work (8hrs)	1100	1400	1900	2400
Unprofessional activities	700-1500	700-1500	700-1500	700-1500
Total expenditure of energy	2300-3100	2600-3400	3100-3400	3600-4400

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Average need of 24hrs	2700	3000	3500	4000
<b>Women-55kg weight</b>				
Resting on bed (8hrs)	420	420	420	420
Professional work (8hrs)	800	1000	1400	1800
Unprofessional activities	580-980	580-980	580-980	580-980
Total expenditure of energy	1800-2200	2000-2400	2400-2700	2000-3200
Average need of 24hrs	2000	2200	2600	3000

### 2.5.6 Relationship of Diet and Malnutrition

Malnutrition means that nutrients are not present in the food in required quantity and proportion for example a person uses energy foods to fill the stomach but does not include milk and fruit in his food. The importance of appropriate and balanced food can be witnessed by the effects of its deficiency. An important reason of malnutrition is the lack of knowledge about nutritional needs because people do not pay attention to make the food balanced. Particularly the effects of malnutrition are more and can be seen clearly in the children of 1-1 ½ years of age.

To explain the malnutrition Gomez presented his view that the division of malnutrition depends upon loss of weight according to age. Its different levels are as under;

#### Different Levels, Their Symptoms and Causes of Malnutrition

Levels of malnutrition	Symptoms and Causes
<b>1. Malnutrition of first level</b> Use of low level energy and protein foods	According to age and gender the weight of patient is 80-90% of his normal weight. To feed less milk to children, to delay the use of supplementary foods. The state of Protein Calorie Malnutrition -PCM appears.
<b>2. Malnutrition of second level</b> Inappropriate use of energy and protein foods	According to age and gender, the weight of patient is 60-65% of his normal weight. Inappropriate and less use of milk and fiber foods, occurrence of diarrhea, marasmus and other diseases due to lack of knowledge about the principles of health care
<b>3. Malnutrition of third level</b> High level deficiency of nutrients	According to age and gender, the weight of patient goes down to 60%, or below, of his normal weight. Occurrence of marasmus and kwashiorkor due to very less quantity of nutritional needs of the children, due to lack of care and treatment occurrence of other diseases leading to fatal

## CHAPTER 2-INTRODUCTION TO FOOD AND NUTRITION

### QUESTIONS

1. Choose and encircle the correct answer from the options given below.

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- i. How many kinds of nutrients are there?  
(a) 3 (b) 4 (c) 5 (d) 6
- ii. Body needs little quantity of vitamin and minerals so what these are called?  
(a) macro-nutrients (b) micro-nutrients (c) essential nutrients (d) unsaturated nutrients
- iii. Protein calorie malnutrition affects the children of which age group?  
(a) 3-9 months (b) 1-1½ year (c) 2½ -4 years (d) 4-6 years
- iv. The chemical compound present in the food which is responsible to perform one or more actions in the body is called what?  
(a) nutrient (b) nutrition (c) vitamin (d) minerals
- v. How much percentage of human body consists of water?  
(a) 1/3<sup>rd</sup> (b) 2/3<sup>rd</sup> (c) 1/4<sup>th</sup> (d) 3/4<sup>th</sup>
- vi. Maltose is known as which sugar?  
(a) starch sugar (b) milk sugar (c) fruit sugar (d) vegetable sugar
- vii. How much nitrogen is found in protein?  
(a) 14% (b) 16% (c) 18% (d) 20%
- viii. Unsaturated fatty acids are found in liquid form in normal temperature, from which source it is obtained?  
(a) animal (b) grains (c) vegetable (d) milk, butter, cream
- ix. Which vitamin is not obtained from vegetable sources?  
(a) vit A (b) vit B (c) vit C (d) vit D
- x. Which mineral salt is important for making red blood cells?  
(a) calcium (b) phosphorous (c) iron (d) iodine

**2. Write short answers.**

- i. Define food.
- ii. What is called nutrition?
- iii. Write the names of nutrients.
- iv. Write the definition of malnutrition.
- v. Write the three basic functions of food.
- vi. Write down the effects of excess use of carbohydrates
- vii. What is meant by essential amino acids and non-essential amino acids?
- viii. Which disease occurs in children due to protein deficiency?
- ix. Write the plant / vegetable sources of protein.
- x. Write the names of essential fatty acids.
- xi. Write the effects of excess use of fats.
- xii. What is the meaning of the word 'vitamin'?
- xiii. Write the types of vitamins.
- xiv. Write the sources of vitamin A.
- xv. What is the best source of vitamin D?
- xvi. Write the functions of vitamin C in the body.

- xvii. Write the names of five vitamins included in vitamin B complex.
- xviii. Write the functions of minerals.
- xix. Write a note on the importance of water.
- xx. Define health.
- xxi. What is meant by nutritional status?
- xxii. Write the effect of good nutrition on human health.

### **3. Write detailed answers.**

- i. Write the definition of malnutrition and write its effects on the human development.
- ii. What are the basic functions of food in our body? Write in detail.
- iii. Write the functions of carbohydrates in body and write the effects of its deficiency.
- iv. Write the importance of protein, functions of protein in body and effects of its excess.
- v. What are the functions of vitamins in body? Write in detail.
- vi. Write the functions of vitamin D in body and write the effects of its deficiency.
- vii. Write a detailed note on vitamin B complex.
- viii. Write about important minerals, their sources, functions and effects of the deficiency.
- ix. What is meant by satisfactory nutritional status? Write various methods of measuring development of the child.
- x. Write the relationship of diet and physical activities.
- xi. Write the division of malnutrition according to the theory/ view of Gomez.

## **CHAPTER-3 UNDERSTANDING OF FOOD AND DIET**

### **3.1 Definition of Balanced Diet:**



Healthy diet is one of the basic needs of human being. Balanced diet is necessary for appropriate growth and efficiency of body. The diet which is necessary to maintain one's health, produce resistance to diseases and to perform routine work correctly is called balanced diet. Food we eat daily consists of different nutrients for e.g Protein and calcium in milk, vitamins and minerals in fruits and vegetable.

### 3.1.1 Difference between Balanced and Unbalanced diet:

Balanced diet	Unbalanced diet
<ol style="list-style-type: none"> <li>1. Right proportion of nutrients for the appropriate growth of body.</li> <li>2. Produce resistance against diseases.</li> <li>3. Proper amount of calories is given to the body , and gives energy to the body.</li> <li>4. Height and weight of the body is according to age, fresh skin , healthy teeth , eye sight are due to balanced diet.</li> <li>5. Long life , healthy and young.</li> </ol>	<ol style="list-style-type: none"> <li>1. Wrong proportion of nutrients which effect health.</li> <li>2. Victim of many diseases; become weak and lazy.</li> <li>3. Calories requirement is not fulfilled, results in laziness and fatigue.</li> <li>4. Reduce weight, improper appetite and diseases due to deficiency of different nutrients.</li> <li>5. Aged, weak and insomnia (loss of sleep).</li> </ol>

### 3.1.2 Examples of Balanced Diet:

When selecting balanced diet; It is important to select proper time for e.g breakfast , tea (10:00 – 11:00 am) , lunch , afternoon tea, dinner etc. There should be balance in calories for example breakfast 25% , Lunch 35% , Dinner 40% calories. Calories distribution according to light work of normal male and female are as follows

#### MENU FOR NORMAL MALE AND FEMALE

Male 2000 calories/day	Female 1600 calories/day
Breakfast : Egg Omelette 1 Slice + butter 4 Tea 1 cup 11:00 am : Seasonal fruit Lunch : Salad 150 gm Kofta curry 100 gm Chapatti 3-4 Seasonal fruit 1 Afternoon tea: Namak paray 100 gm Tea 1 cup Dinner : Chicken Pulao 100 gm Raita 100 gm Forni /kheer 150 gm	Breakfast : Seasonal fruit 1 Yogurt / chapatti 150gm/1 Tea 1 cup 11:00 am : Seasonal fruit 1 Lunch : Salad 100 gm Palak ghost 100 gm Chapatti 2 Fruit 1 Afternoon: Namak paray 100 gm Tea 1 cup Dinner : Shami kebab 1 Daal masoor ¾ cup (30gm) Boiled rice 2cups (cooked) Custard jelly 150 gm

### 3.1.3 JUNK FOODS:

## What is junk food?

According to Michal Jackson (1972), junk food is an informal term related to meal which is less in nutritional value but high in calories, fats and sweetness.

In 13-17 years of age many changes like physical , psychological and social appears. In this age there is development in growth and needs of healthy diet increased. Calorie requirement for girls is 2200-2500 kcal and for boys 3000-3400 kcal.

Dietary requirements are changing day by day. People like junk foods which are lacking essential nutrients like proteins , vitamins and minerals and other essential nutrients. Foods include salted snack foods, for e.g Pizza , burger , sandwich , shawarma , steaks , French fries , potato chips etc and sweet dishes include cream cake , biscuits , ice-cream , brownies , candy , cola , chocolate etc are junk foods.

### Selection of Alternative Food Items:

JUNK FOODS	HEALTHY FOODS
<b>Chips / sweet biscuits</b>	<b>1 apple / banana</b>
<b>Cola</b>	<b>Plain water</b>
<b>French fries</b>	<b>Boiled potato/ rice</b>
<b>Double burger with pizza</b>	<b>Single burger</b>
<b>Mayonnaise / oil sauce</b>	<b>Ketchup / yogurt</b>
<b>Fats / Oily foods</b>	<b>Brown bread / roasted items</b>
<b>Chicken pizza extra cheese</b>	<b>Vegetable pizza</b>
<b>Chocolate / candy / Ice-cream</b>	<b>Fruit</b>
<b>Cream cake / pastry</b>	<b>Plain cake / salty biscuits</b>

Young generation prefer junk foods due to shortage of time and due to their hobbies. They are mostly doing their work by sitting in front of computer and television. Because of heavy intake of calories in the form of junk food, people are obese and obesity causes many other dangerous diseases like diabetes, by taking large amount of calories in the form of sweet things. To save people from effects of junk foods, it is important to take healthy and balanced diet.

## 3.2 Basic Food Groups :

This is true that for a healthy man balanced diet is very important , in which all food nutrients are present in right proportion for our convenience , food specialists have divided foods in 5 food groups in which all the nutrients exist which are essential for the nourishment of the human body. You can make your diet balanced by including at least one thing from each of groups in your daily food.

### 3.2.1 Food Groups :

1. Milk and milk products.
2. Meat , fish, chicken and eggs.
3. Vegetables and fruits.
4. Cereals and pulses.
5. Fats and sugars.

#### 1. Milk and milk products:

Milk is the whole food. It is the first diet of infant. It contains all essential nutrients which are important for the growth and development of the body. Milk is also important in all ages of life. Milk is the most important source of protein and calcium. Besides these nutrients it is also a good source of carbohydrate, fats, Vit B complex, and minerals as well. It is good to take milk in its pure form. Milk products like yogurt, cheese, butter, cream, buttermilk, kheer and many other sweet things are a good source of milk.

### **What do you know about milk?**

Milk is best source of calcium which is important for development and growth of bones and teeth. No other diet is its alternate. So, people of every age group must include some amount of milk in their diet daily.

### **2. Meat, Fish, Chicken and Eggs :**

In this group, high quantity of proteins are included in which necessary amino acid is included which is good for growth of the body. One of them should be included in meal daily. We get 20 g of protein from 100g meat, Iron, phosphorus and vitamins are also there. Heart, kidney and liver have a lot of quantity of iron but vitamin A is not enough while one egg has almost 6 gm protein. Eggs should be used daily or thrice in a week. If meal cannot be selected from this group then beans, grains and dry fruits can be used instead of them.

#### **Important information:**

There are no carbohydrates in meat but there are a lot of fats in it.

### **3. Fruits and Vegetables :**

Fruits and vegetables provide vitamins and salt to save our body from diseases. Body needs great quality of fruits and vegetables for correct and balanced physical system. It creates colour, taste and innovation in diet.

Vegetables are important part of our diet. All vegetables are source of vitamins, salt and cellulose. It helps to create balance in stomach and provide fiber to body. It can save our body from diseases so it is called “Guard food”. So we should add one fruit or vegetable daily in our daily routine diet.

Fruits are easily available in our country. Fruits provide more energy and gluten than vegetables. Yellow coloured fruits like mango, peach, apricot are good source of vitamin A whereas orange, lemon, grape fruit have great quantity of Vit C. Fruits are essential in addition to routine diet because they've a great quantity of vitamins, salt etc.

#### **Do you know?**

Fruits and vegetables are the best source of vitamins and minerals. Fruits and vegetables give the feeling of satiety but very less calories are obtained from them because fats are not present in them.

### **4. Cereals and Pulses :**

In this group wheat, grains, gram, corns are included which are used for getting 65-70 calories in our country. Plain grains provide us iron, thiamine, riboflavin and protein. All grains become digestible after cooking. Carbohydrate and protein found in grains but essential amino acid is lacked here so we should use all meals to get balanced diet.

#### **Do you know?**

In Pakistan, there is use of wheat bread as basic diet.  $\frac{3}{4}$ <sup>th</sup> part of cereals consists of carbohydrates whereas protein is obtained in very less amount.

### **How many parts of cereals and pulses group must be included in our daily diet?**

One part (serving) is equal to  $\frac{1}{2}$  bread,  $\frac{3}{4}$  cup of rice,  $\frac{3}{4}$  cup of porridge. In our daily diet, 3-4 parts of the group of cereals and pulses must be included.

### **5. Fats, Sugar , Butter And Margarine :**

Butter , margarine , ghee and oil are those diet which provide us heat and energy. With their help other food ingredients like Vit A,D,E,K and calcium can work in a better way. They create ability to fight against disease to make our body healthy.

Sweet things like sugar , honey , jam , jelly , sweet drink and sweet have a lot of calories. These things should be used carefully because the excessive use can be the cause of diabetes, heart disease and obesity.

### **3.2.2 Food Pyramid of Basic Food Group :**

#### **What is food pyramid?**

Food pyramid is a diagram which tells us that which food should be included in our diet. This guidance helps us in selecting appropriate food.

In the beginning of 20 century , experts clearly the science of nutrition so that people cannot only get the practical training of nutrition but also can judge either they are taking balanced diet or not.

Today we can get help from food pyramid which provide balanced quantity of protein , carbohydrates , vitamins and salt. Food pyramid trains us to get balanced calories.

### **3.2.3 IDENTIFICATION OF FOOD GROUPS AS SOURCES OF NUTRIENTS :**

#### **Group of Grains :**

In food pyramid , grains are preferred, one person should get 6-11 parts (servings) of diet from the **group of cereals and pulses** daily. Plain grain not only provides Vit-B , salt especially zinc but also cellulose that saves us from cancer.

#### **Group of Fruits and Vegetables :**

To get Vit A , one should select green coloured vegetables and for vit C tomato , lemon and oranges. Fruits should be used after washing without peeling off. Yellow and orange coloured fruits like mango , guava , papaya etc gives Vit-A and salt. Juicy fruits like orange , grape fruit and lemon provide Vit C and B.

#### **Group of Meat and Eggs :**

From this group , one thing should be selected and added daily to get more protein , grains , cereals etc because they are a good source of Vit – E , salt and cellulose.

#### **Group of Milk , Cheese and Yogurt :**

Plain milk should be selected from this group. Yogurt and cheese should be added but 2-3 glass milk should be included daily.

#### **Group of Fats and Sweet things :**

Instead of desi ghee , olive oil should be used. Fats should not be used excessively. Sweet thing should not exceed more than 10% of daily diet. In kheer , custard and porridge, sugar should be used less and natural sweet things should be used.

### **3.3 Nutritional needs of Individuals;**

### **3.3.1 Definition of Nutritional Needs :**

“The amount of each nutrient needed by the body is called nutritional needs / nutritional requirements”.

From childhood to adulthood and from adulthood to old age, man spends his life from different stages. New cells are developing in the body while other cells disturb due to accidents, weight or diseases and other cells are needed to be developed, instead of them. In this way there is increase and reduction in needs of food.

Body demands energy to work and to be active which can be got only through diet. The people who are working more need more energy and the people who take rest more need less energy. Besides this all physical systems like digestive system etc need a balanced diet to work properly. There is a difference in the pace of every person's physical growth and activities so they need different diets.

#### **Important information:**

The nutritional needs of any two persons can be familiar but cannot be exactly the same.

The nutritional needs of every person are different from another person. The same diet which is called a balanced diet for any person can be called an unbalanced diet for another person.

### **3.3.2 Factors Affecting Nutritional Needs :**

The food preferences are getting changed in different parts of age to create balance in the pace of development and health. Nutritional needs can be measured through energy that we can get from food. For this measuring purpose calories are used.

National Council of Research has measured average calories in adult men and women. A woman who lives in a temperate climate needs almost 1800-2100 calories while a man who lives in the same climate needs 2150-2450 calories.

#### **These factors affect the nutritional needs ,**

1. Age
2. Gender
3. Nature of work
4. Climate
5. Body structure
6. Physical condition

#### **1. Age :**

Nutritional needs are measured according to different age groups. There is a great change that appears in nutritional needs within the passage of time. Instead of elders, children need more diet, because during childhood they grow rapidly and are active physically. So that's why they need more calories. Height and weight reach to their maturity till the age of 20 so they need only such functions which can make it balanced and their health remains the same. Old people need less diet than youngsters because they do not do such hard work that youngsters do. So their need for calories reduces but they need a balanced diet to maintain their health.

#### **2. Gender :**

Gender also affects the nutritional needs. Men's needs are more than women because they do work hard and their physical structure and height require more calories.

### **3. Nature of Work:**

There are different nutritional needs according to nature of work. The people who do more hard work and labors, they need more calories while less energy is required in resting position. So these people are divided into four groups.

#### **1. People who do light work:**

The people who work in offices like lawyers, doctors and teachers.

#### **2. People who do average work :**

Students, fishermen , laborers who work in mechanic industry and housewives.

#### **3. People who do hard work:**

Hard workers, laborers, swimmers, farmers etc.

#### **4. People who do more physical work:**

Hard workers: People who work in forest to cut down trees and who work in coal mine etc.

#### **4. Climate :**

In winter season , more energy is required so use of fried food , dry fruits and roasted diet are increased. In summer season , the use of cold drinks and fruits are increased specially water melon and melon ( less food is taken if water is used excessively )

Excessive use of water reduces the quantity of food.

#### **5. Body structure :**

Fat man needs more diet than smart man according to body structure. If a person has more than average weight of his age then he should select such diet that has neither fats nor energy.

#### **6. Physical condition :**

Sick person needs more food and nutrition to get energy. Similarly pregnant women also need more energy for the development of children.

### **3.3.3. Nutritional needs of different age groups :**

#### **1 .Infants:**

The best diet of infant is mother feed. Milk fulfills their nutritional requirements of this age. So it should be given till two years of age. If mother feed is not available than milk of cow or buffalo and formula milk can be given to them. But it should be cured after boiling. Besides this milk bottles and other utensils should be sterilized when child is at the age of 6 months he should be given solid food along with milk. Each new food should be started with less and at one time only one thing is given. At first , other food should be given in liquid form , soft and then in form of solid. From 2<sup>nd</sup> month , a few drop of orange should be added in infants diet , because vitamin C is needed. It is not stored in body and it is not included in milk. At the age of five month , yogurt , boiled rice , soft mince , apple pulp , vegetable soup , cereals ,banana pulp can be given.

In the age of 10-12 month biscuits , rusks , bread , soft fruit like apple , banana , egg should be given but it should be kept in mind that all diet should be digestive and full of nutrition. So that their need of protein , vitamin can be completed.

1. Milk 4-5 cups
2. Kheer 3 spoons
3. Mince / chicken 2 spoons
4. Biscuits 2-3
5. Egg 1
6. Boiled rice or soft rice with yogurt 2 big spoon
7. Banana 2 big spoons
8. Potato carrot 2-3 spoons.

## **2. Pre-schools :**

Children from 1-2 years of age are affected with depletion of energy because in this age children grow rapidly. His nutritional needs increase so eating habit should be developed from the beginning. After two years of age almost 4 glass milk should be given. After 3-4 years of age solid food like meat, vegetable, fruit and fats should be increased and milk should be reduced. Pre-schools can be given juice of three fruits, milk, yogurt, fruits , biscuits , rusk , carrot and tomatoes in mid of two regular meals. If things between two meals are increased and they remain hungry for most of the time then they become aggressive, they will not be active enough and take less interest in games. It affects their development negatively.

## **3. School going children :**

6-12 years of age children are more active physically and mentally. In this period , they feel hunger after playing, Their diet should be completed in quantity and taste. Children mostly don't like to eat vegetables but like fruits. According to nutritional needs protein , vitamin should be included in daily meal.

Children learn eating habit from school and also affected from elders. So good eating habits needs to be developed among children. Spicy food should be avoided and balanced diet should be selected.

If child doesn't take breakfast then solid food like egg , chicken , sandwich and fruit should be given so that their studies do not effect.

Children need more water than elders so fruit juice , soup , milk and other items can also be given to them. After each meal fruits , ice-cream , biscuits , dry fruits can be given to them.

## **4. Adolescent :**

13-17 years of girls and boys need more energy. They need protein because of height, development of organs and bones. Their diet requirements are increased.

In this period , calcium is required more for the development of bones. Iron should be included. Girls need more iron than boys. Boys eating habit is better than girls. They need more protein , carbohydrate , vitamin , fats more than other people. Their meal should have a variety of food.

### **Which kind of food should not be given to children in excess?**

The children must not be given cola drinks, ketchup, french fries and pickles in very large amount or in excess. They must be encouraged to take healthy diet.

Adolescences must not eat chocolates, toffees and different sweet and oily things between different meals of the day. Instead of it, they should eat any fruit or sweet-dish after meal.

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## **5 . Pregnant and lactating women :**

Pregnant and lactating women not only need diet for them but also for their children so they need balanced diet. Their diet should be rice , meat , vegetables , eggs , milk , fruits etc because they've to fulfill the requirement of a child. If these ingredients are depleted then child start bringing up from stored energy of mother's body, which greatly affects the health of mother. Following are the instructions that are needed while giving meal to pregnant women.

1. Give balanced diet . All basic nutrition food groups like meat , egg , milk , fruit , vegetables etc. avoid sweets and fat dishes.

2. Fruits and vegetables are given more so that they can remove constipation.

3. Nausea can be removed by taking lemon or orange juice before taking breakfast.

4. Suggest digestible meal at one time less food than more should be given in difficult periods.

5. Milk , yogurt , lassi should be included alone with other diet so that they need of calcium should be fulfilled for strong bones.

6. Avoid eating spicy foods.

7. Egg meat and kalaji should be given to fulfill the requirement of iron.

8. Avoid taking very oily things and sweet things to avoid feeling of heaviness.

Mothers feeding milk have more nutritional needs than pregnant women. More quantity of milk , cereals , ghee , milk , roti , and meat should be included in diet to fulfill the need of child's milk.

### **Do you know?**

During pregnancy, the need of blood is 20% more which can be fulfilled by excessive use of protein.

More amount of iron also protects from blood shortage.

## **3.3.4 Selection of Food according to the Nutritional needs of Individuals :**

### **Basic food groups , their ingredients and daily quantity required.**

<b>Basic food groups</b>	<b>Daily quantity</b>
1. Milk or milky products ( calcium , protein , phosphorus , vit-A , vit-D etc )	1. children : 3-4 glass adults : 2 glass pregnant women : more than 3 glass Lactating women : 4 or more than 4 glass and milk , yogurt , ice-cream and porridge.
2. Meat , fish , chicken and egg (protein , fat , vit-A , vit-B , calcium , phosphorus , Iron , iodine etc )	2. Twice a day ( 60-85 g at a time ) Kalaji , kidney and heart once a week.
3, Fruits and vegetables ( carbohydrates , vit-A , Vit-B (complex) , Vit-C , Vit-E , calcium , potassium and iron etc.	3. 4 times a day 1 orange , lemon , peach , plum , carrot etc Green vegetables , spinach , salad etc. Banana , grapes , apple , peas etc.
4. Grains/ pulses (protein , carbohydrates, vit-B , vit-E and iron etc)	4. 4 times daily 1 chappati , 1 slice of bread , ¾ cup pulses , ¾ cup boiled rice.



5. Fats and sweet dishes ( Carbohydrates , fatty acids etc )	5. Butter , margin (1-2 tsp) , Sweet dishes.
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### **CHAPTER 3-UNDERSTANDING OF FOOD AND DIET**

**1. Choose and encircle the correct answer from the options given below.**

- i. Balanced diet is called the combination of \_\_\_\_\_.
- (a) nutrients                      (b) protein                      (c) minerals                      (d) vitamins

*Composed by Ms Qurat ul ain Farooq*

- ii. How many food groups are there?  
(a) 2 (b) 3 (c) 5 (d) 6
- iii. Vegetables are called \_\_\_\_\_ type of food?  
(a) protective (b) building (c) creative (d) full of energy
- iv. Junk foods are full of \_\_\_\_\_.  
(a) nutritional value (b) fats (c) nutrients (d) vitamin & minerals
- v. According to the nature of work, which needs are different?  
(a) health (b) nutritional (c) amount of water (d) development
- vi. Which diagram guides us about the requirements of daily nutritional needs?  
(a) food pyramid (b) table (c) determining nutrition (d) serving size
- vii. Milk is the best source of \_\_\_\_\_ nutrient.  
(a) cellulose (b) iron (c) vitamin C (d) calcium
- viii. Which nutrient is present in large amount in heart, kidney and liver?  
(a) iron (b) calcium (c) carbohydrates (d) vitamin A
- ix. Which food intake increases in winters?  
(a) watermelon (b) melon (c) dry fruits (d) drinks
- x. Till which age mothers should breast feed her child?  
(a) 3 months (b) 6 months (c) 1 year (d) 1 ½ years
- xi. In which month orange juice could be given to infants?  
(a) 2 months (b) 5 months (c) 8 months (d) 12 months
- xii. Pregnant women should avoid the excess use of \_\_\_\_\_?  
(a) fruits & vegetables (b) fatty & sugars food (c) cereals & pulses (d) milk & dairy products

## 2. Write short answers.

- i. Define balanced diet.
- ii. What is called unbalanced diet?
- iii. Define junk foods.
- iv. Give examples of junk foods.
- v. Write the names of basic food groups.
- vi. Write the nutritional value of fruits and vegetables.
- vii. Write the definition of food pyramid.
- viii. Write the importance of cereals and pulses group according to food pyramid.
- ix. Define nutritional needs.

## 3. Write detailed answers.

- i. Clarify the difference between balanced and unbalanced diet.
- ii. Write a note on junk foods.
- iii. Explain the nutrition of basic food groups.
- iv. Discuss the factors affecting nutritional needs.
- v. Explain the nutritional needs of infants.
- vi. Explain which things should be kept in mind while making food plan for pregnant and lactating women.

## CHAPTER 4- FOOD PREPARATION

### 4.1 Cooking

#### **4.1.1 Methods of Food preparation:**

In our daily diet plan, there are some foods which we should take in raw form e.g. vegetables like carrot, cabbage, tomato etc. Always use vegetables after washing them, make sure that there should be no dust particle on them. There are some food items like meat, pulses, eggs and some vegetables which should be used after cooking.

#### **Reasons of cooking food:**

1. Food become soft, tender and digestible.
2. Food becomes tasty.
3. Food becomes free of impurities and germs, because many germs are easily killed at boiling point.
4. Unpleasant smell of foods like cabbage, eggs, turnip, and fish is removed after cooking.
5. Food cooked in many different methods, give variety and taste.
6. Many nutrients are wasted during cooking and frying.

#### **4.1.2 Different Methods of Cooking:**

##### **1. Dry heat cooking Method:**

Baking

Grilling

Roasting

##### **2. Moist heat cooking method:**

Boiling

Steaming

Stewing

##### **3. Frying method:**

Pan frying

Shallow fat frying

Deep fat frying

##### **4. Microwave cooking method**

#### **1. Dry Heat Cooking Method:**

##### **i. Baking :**

Baking is a method of cooking food that uses prolonged dry heat, normally in an oven but also in hot ashes, or on hot stoves. The most common baked item is bread but many other types of foods are baked. Heat is gradually transferred from the surface of cakes, cookies and breads to their centre. Biscuits, cakes etc can be baked in baking tray or Pyrex.

##### **ii. Grilling :**

Grilling is a quick method of cooking and is therefore suitable for snacks and for saving meals. The surface of the food is quickly sealed, and the flavor is well developed.

##### **iii. Roasting :**

Roasting is a method that uses dry heat where that air covers the food, cooking it (with 2 drops of oil) evenly on all sides with temperatures of at least 300° F.

## **2. Moist cooking method:**

### **i. Boiling:**

Boiling is the method of cooking food in boiling water, or other water based liquids such as stock or milk. In this method boiling temperature reaches to 100° C. We mostly boil food such as eggs, rice, pulses, vegetables etc.

### **ii. Steaming:**

Solid pieces are typically cooked at a relatively low temperature. Steaming is suitable for the least tender cuts of meat that become juicy and tender with slow moist heat method. Fill half or 1/4<sup>th</sup> of the pan and place stand in it. Then cook food over it.

### **iii. Stewing:**

Cooking in a pan with a lid on it at moderate/medium temperature is called stewing. After tenderizing in less water, meat, chicken, or vegetables are cooked in less fat/oil.

## **3. Frying method:**

Frying is a quick, convenient and popular method of cooking, which involves high temperatures. Oil, ghee, fat, crème, or margarine are used for frying or cooking things.

### **i. Pan Frying:**

This technique involves less oil than deep frying. This method entails cooking food in an uncovered pan at moderate amount of fat; French toast, parathas are fried in this way.

### **ii. Shallow frying:**

Shallow fried foods are often battered. It is a high-heat process, promoting browning shami-kabab, chapli kebab, paratha, French toast. Frying is a cooking method in which foods are cooked in hot fat. In this, half of the thing is dipped in oil like pieces of fish, cutlets.

### **iii. Deep Frying:**

Deep frying (also referred to as deep frying) is a cooking method in which food is sub-merged in hot fat, such as oil. Pakora, chips, fish, chicken are deep fried.

## **4. Microwave cooking method:**

A microwave oven, commonly referred to as a microwave, is a kitchen appliance that heats and cooks food by exposing it to electromagnetic radiations in the microwave spectrum.

Some avoid using silver equipments, some plastics containers and food wraps are specially designed to resist radiations from microwave. Products may use the terms “microwave safe”.

### **Advantages:**

1. Food is cooked very quickly.
2. The food can be cooked and served in the same dish, which saves washing up.
3. There is less heat destruction of nutrients as cooking time is short.
4. It is useful for preparing foods and meals that are required quickly.
5. It prevents fire and hot stove accidents.

### **Disadvantages:**

1. Utensils used for microwave are costly as compared to other utensils.
2. Food will not become crisp and may not develop characteristic flavors, colors or textures.
3. It is easy to overcook food, so careful attention must be paid to timing.

### **4.1.3 Methods of Maintaining Nutrition During Cooking:**

Everyone of us have good knowledge about food buying, cooking, cleaning etc and how to maintain their nutritive value. By reducing the loss of nutrients during cooking of food, malnutrition can be controlled.

#### **Maintaining nutrition/ nutritive values of meat:**

- i. Wash meat of all types properly with running water.
- ii. Cook meat properly and make it tender and soft because protein present in meat become hard if not properly cooked which causes indigestion.
- iii. Avoid overcooking of meat because protein is wasted in overcooking.
- iv. Use steaming method for cooking of heart, kidney, liver; use frying method for cooking fish.

#### **Maintaining nutrition/ nutritive values of Eggs:**

- i. Eggs should be cooked on low flame, because protein coagulates when cooked on high flame.
- ii. Eggs increase its volume, in beating process that's why they are used for baking items like biscuits, sweets, cakes etc.
- iii. Most important quality of egg is binding that's why it is used for kebabs, puddings, gulab jaman etc.

#### **Maintaining nutritive value of milk:**

- i. Always use milk after boiling. Raw milk is indigestible.
- ii. Boiled milk is free of impurities and germs because many germs are killed during boiling.

#### **Maintaining nutritive value of vegetables:**

- i. Always buy fresh vegetables, good vegetable is without stains.
- ii. Always wash vegetables before peeling and cutting.
- iii. To maintain freshness in vegetables use 2-3 tablespoons of vinegar in water for washing them.
- iv. Try to peel vegetables with sharp knife and peel them thinly.
- v. Try to cut or peel vegetables just before cooking time because by peeling before vitamin c mixes with air and there is a chance of their loss.
- vi. Use boiling method for cooking vegetables and don't waste water after boiling as it contains minerals.
- vii. Cook vegetables with closing lid.
- viii. Vegetables (like turnip, carrot, potatoes) be cut in large and thick pieces to avoid wasting vitamin c, vitamin B-complex and minerals.
- ix. Don't keep cut vegetables in water for long time because vitamins and minerals are wasted by dissolving in water.

#### **Maintaining nutrition/ nutritive values of Fruits:**

- i. Fresh fruits skin should be without wrinkles and stain, and wash them with clean water.
- ii. Wash those fruits which are eaten with skin thoroughly with water like apple, guava etc.
- iii. Store fruits in cool/ dry places like fridge if necessary to keep them for 1 or 2 days.

#### **Maintaining nutrition/ nutritive values of Rice, Grains, Pulses and Wheat etc:**

- i. Grains include rice, maize, pulses and cereals. The purpose of cooking is the softening of cellulose, proteins and carbohydrates, and to make them digestible.
- ii. Wheat is a grinded and used as flour. The outer layer of bran is removed during grinding of flour due to which its normal salts like thiamine, iron, phosphorous, magnesium and cellulose is wasted.
- iii. If pressure cooker is used to cook pulses then its nutritive value can be saved.
- iv. Rice should be soaked before cooking. Most of the time people waste water after boiling of rice due to which soluble vitamins and minerals are wasted so we should use that particular water for cooking.
- v. The size of grain, amount of water, presence of absence of skin, temperature and cooking method affect the cooking and cooking time of cereals.

## **4.2 Meal service/ Food service:-**

### **4.2.1 Principles of Meal Service:**

- i. Utensils for meal services should be clean.
- ii. Table cover should be attractive and presentable.
- iii. Pour food according to the size of serving dishes.
- iv. Food should be presentable.
- v. Use flowers for table decoration.
- vi. To enhance the presentation of dish, it can be decorated with salad leaves, green chillies, coriander and cut tomatoes.

### **4.2.2 Methods of Meal Service:**

1. Trolley service
2. Tray service
3. Eastern method
4. Western method
5. Buffet service

#### **1. Trolley service**

- i. Use trolley for the food service because it is an easy way to transfer food.
- ii. The upper portion of trolley is used to place food items and the lower part is used to put glass, spoons, plates, cutlery etc.
- iii. Paper napkin can be used on each plate or tissue paper box can also be used for this purpose.
- iv. Trolley can be taken towards the guests, so that they can take plates with napkins and cutlery. Similarly they can take food from the upper part of trolley.
- v. After sometime trolley can be taken again in front of guests.
- vi. Used utensils can be put on covered part of trolley in front of guests.
- vii. Don't put filled glasses on trolley because the trolley is shaky.
- viii. Put jars and jugs in the lower tray of trolley.

#### **2. Tray service**

There are two methods of tray service;

- i. To arrange the tray for one person
- ii. To arrange the tray for multiple people

##### **a. Tray for one person**

- i. The standard size of tray is 12" x 18". The size of tray should be according to one person serving.
- ii. Spread tray cover on tray and tray cover should be without wrinkles.
- iii. Use those utensils for tray serving which can be used for multiple purposes.
- iv. The meal or food should be served in such a way that saucer or the bowl should be in front of the patient or the guest. Dish should be on the right side and the napkin should be placed over the plates.
- v. The glass of water should be placed on the upper right side of the tray. A small floral decoration can also be placed on the left side of the tray.
- vi. The covering of the plate should be light and delicate with colorful lace around it.

##### **b. Tray for multiple people**

- i. For two or more people, plates, bowls and napkins should be placed in the upper right part of the tray.
- ii. For two or more people, a separate tray for beverages should be served. Cup's handles should be on one side.

#### **3. Eastern method**

- i. Food is served on carpet or floor by placing a “Dasterkhwaan” of multiple motifs of different colors.
- ii. In this method, foods are served in a very simple way. No forks, spoons or knives are used.
- iii. Food should be placed in the center. Water jugs should be placed at some distance.
- iv. Recite “Bismillah” before eating. Rice are eaten with hands.
- v. Green tea is served after meal.

#### **4. Western method**

Food is served on table. Spoons, forks and knives are used for eating. Two styles of western method of meal service are;

Informal method

Formal method

##### **a. Informal style of meal service**

In this style, food is served in different bowls and dishes on table.

Glasses should be placed on right side of plates.

Sweet dishes should be served after meal.

Place chairs on its place after eating.

##### **b. Formal style of meal service**

- i. In this style, a host/ hostess serve the meal. Food should be served to the host first so that if the guest is unaware of the method of eating the food, he should follow the host.
- ii. A separate table mat is placed in front of everyone on which cutlery is put on. The knife and spoon are to be placed at the right side of the platter and the fork is to be placed on the left side of platter.
- iii. The bowl for soup is placed on the top of the set of plates and the second plate is placed for main meal.
- iv. Food is always served from the left side so that a person can easily put the food in his plate. Water or juices are served from the right side of the person.
- v. The tea or coffee cup should be in front of the person.
- vi. Main dishes are served first then side dishes are served. Roti or rice are placed with side dishes.

#### **5. Buffet method**

- i. When there are many people then the meal is served in buffet style. In this method, people move here and there to choose the food they want to eat and the table is attractive as compared to other methods of food service.
- ii. The floral arrangement should be seen by the guests as they are standing around the table.
- iii. The bowls of food, plates and cutlery is served at the same time on the table. In this, guests can take their meal turn by turn. It is basically a self-service of meal.

#### **4.2.3 Attractive Ways of Serving Meal or Food:**

Following factors/ points should be kept in mind to make it appealing and attractive.

1. Selection of table cover, mat and tray cover
2. Selection of napkin
3. Selection of cutlery
4. Table setting/ mat setting
5. Flower arrangement
6. Serving of meal

##### **1. Selection of table cover, mat and tray cover**

- i. Select table covers, napkins, mats, flowers and tray covers according to the color scheme of room.
- ii. Try to create balance while selecting table covers, napkins and mats etc.

- iii. Table covers and napkins should be without wrinkles and of thick cotton fabric.
- iv. Drop table cover evenly from all sides of table and tray cover from both sides while spreading cover.

## **2. Selection of napkin**

- i. Mostly napkins are of white color or any light color. They are chosen according to the color of cutlery.
- ii. Napkins should be ironed, starched, neat and without wrinkles.
- iii. Standard size of the napkin is 18 sq inch. Napkin is used to clean our hands and it protects our clothes from staining.

## **3. Selection of cutlery**

- i. Selection of cutlery is according to the table cover color, napkins and other arrangements. There should be balance between these two things.
- ii. A large plate, quarter plate, bowls for sweet dish and glass should be of unique design, shape and size that look more attractive.

## **4. Table setting/ mat setting**

- i. Table setting is always done according to the meal service. Arrangement of bowls and dishes is done according to the number of persons and kind of meal.
- ii. Size of a table or mat should be large enough so that a large plate, quarter plate, bowl, spoon, fork, knife and glass can easily be arranged.
- iii. A standard space of 20" is required for each individual. Type and size of utensils depend upon arrangement of dishes so that the person is comfortable.

## **5. Flower arrangement**

- i. Arrange the flowers in the middle or on both side of the table with equal distances.
- ii. Flower arrangement should not be so huge that it may create hindrance while talking.
- iii. A small fresh flower arrangement can be placed on left side of a tray. Make sure that flower petals do not fall in dishes.

## **6. Serving of meal (presentation of meal)**

- i. Presentation of food is very important in serving of meal.
- ii. Meal can be made more attractive and colorful with colorful vegetable salads.
- iii. Tomatoes and boiled potatoes can be served with kababs as it seems more attractive.
- iv. Serve hot meals very hot and cold things very cold e-g. ice-creams, custards, jelly etc.
- v. If table is small and dishes are more in number then do not place all dishes at one time. Sweet dishes and fruits can be served at the end.

### **4.2.4 Eating Manners and Etiquettes:**

1. Wash hands with soap and water before start starting.
2. Recite "Bismillah" before eating.
3. Start eating when all family members have filled their plates.
4. Take care of every member and serve dishes to them which are placed near to you.
5. Eat food slowly and chew properly.
6. For pleasant environment, there should be light conversation between members.
7. Avoid any type of criticism on food.
8. Avoid over-eating. Eating quickly causes indigestion.
9. All members should take care of time and should be present on the table on time.
10. Use right hand for eating.
11. Do not waste food. Always take food which you can finish easily.
12. Avoid drinking too much water between the meals.



13. Avoid leaving table when everyone is still eating.
14. Thanks to Allah after finishing food.
15. Wash hands after taking meal.

#### **4.2.5 Importance of Cleanliness in Meal Service:**

1. In serving meals, utensils, napkins and table covers should be neat and clean.
2. Self hygiene is also important while serving meal.
3. Wash hands properly before serving meals.
4. Cutlery and glasses should be neat and clean.
5. Neat and clean room and table not only show the management and neatness of a woman but are also good for health. Utensils should be matching in designs and of good color.

#### **4.3 Food Storage:**

Many countries in this world are facing problems of food shortage but our country is blessed with many food items. With the increase in population, we have to save food to avoid shortage. There are three basic factors of food storage;

1. Type of food
2. Quality of food
3. Storing time before using food.

##### **4.3.1 Principles of Food Storage:**

1. Storing place should be near cooking area or kitchen.
2. There should be neat net/ wires on the door of storing area.
3. Doors of storage area should be sealed in such a way that no insect or mouse can enter when the door is closed.
4. All the cupboards and shelves of storing area should be neat and clean.
5. The food storing boxes should be sealed and have labels on them.
6. Perishable food items for example meat, milk etc should be stored in fridge or refrigerator.
7. Use stored food items according to the order of storing them i-e; the item which you store first, use it first.
8. Defrost fridge or refrigerator at least once in a week and clean them properly.
9. Try to make shelves on store walls because that area is cooler and drier.
10. Try not to pass any sanitary pipe lines from store or storing area because this may spoil food early and if that leaks then it will damage all food items.
11. All vegetables with roots i-e; onion, garlic and potatoes, should be stored in open air in a basket.
12. Avoid storing chemical agents or washing powder in store near food items because they can spoil food items very easily. In summers, their temperature may rise with heat then fumes and smell of chemical agents may enter into stored food items.

##### **4.3.2 Importance and Purposes of Food Storage:**

Purpose of storing food is to save food from spoilage, bacteria or fungus and keep food fresh for a longer period of time.

###### **1. Preventing wastage of food:**

When fruits and vegetables are ready they are brought into shops in a bulk and some are spoiled due to huge bulk. Dry food items e-g; rice, wheat, flour and pulses can be stored easily in storage area and is free of insects and mouse. Fresh food items can be spoiled easily due to insects, sunlight and rain. Try to keep them away from these things if you want fresh items.

###### **2. Minimizing nutrient loss:**

Another purpose of storing food is that they can be easily available in their off season as well. We can use them after their season but remember that stored food should be kept away from direct sunlight and dampness because vitamins and minerals will be wasted in this way.

### 3. **Minimizing food shortage:**

By storing fruits and vegetables one can get balanced diet and some storage food items can easily be exported to those areas where people are suffering from shortage of food items like fish and other sea food.

### 4. **Providing variety in food:**

Fruits and vegetables can be stored and used in jams and pickles. By this you can give different variety in food.

#### 4.3.3 **Different Methods of Food Storage:**

There are different methods of storing foods e-g refrigerate them, keep them in dry place, make pickles, chutneys and jams etc.

##### 1. **Store food items in refrigerator**

Food items can be easily stored in refrigerator. In cooling temperature of 0°C -4°C, food items cannot be spoiled and in refrigerators this temperature is constant. Perishable food items like milk, egg and meat etc can be easily stored in refrigerators for a longer period of time.

##### 2. **Store food items in freezer**

Less microorganisms can affect the frozen food items. Freezing can affect the quality of fresh fruits and vegetables. The temperature of freezer is -6°C in which perishable food items like fish and meat can easily be stored for longer time period. Use polythene bags for storing meat by cutting them in small pieces. Avoid refreezing them after defrosting.

##### 3. **Store fruit and vegetables after drying**

This is the best old method of storing food in which we use minimum quantity of water so that bacteria cannot infect food items as bacteria grow in water. Grapes, apricot, vegetables like turnip, mint leaves, peas etc can be stored in sunlight for 3-4days.

##### 4. **Make jams, pickles, chutneys and murabbas for storing fruits and vegetables**

Vegetables can be stored for one year maximum in the form of pickles and fruits in the form of chutneys, jams, jelly and murabbas. Mango, apple and carrot are used for making murabbas.

#### **Suggested Temperature for Storing Food**

<b>Food Items</b>	<b>Temperature</b>
Frozen item	20°C to -10°C
Fish and sea food	11°C to -5°C
Meat and chicken	3.3°C to 0.6°C
Milk and milk products	7.8°C to 3.3°C
Fruits and vegetables	7.2°C to 5.1°C
Eggs	10°C to 7.2°C
Packed items	21.1°C
Dry food items (wheat, sugar, rice etc)	22°C to 15°C

#### 4.3.4 **Standard Methods of Food Storage:**

For storing food it is important to create an environment which is free of germs and bacteria. Food is divided in two types for storing foods;

Storage of perishable foods

Storage of non-perishable foods

### **1. Storage of perishable foods**

Perishable foods are milk and milk products, butter, cheese, yogurt etc. Foods which are easily rotten by direct sunlight and hot summers are called perishable foods like fish, meat, ghee, banana, leafy vegetables etc. Perishable foods can be stored for a week in refrigerator in cold weather. Try to buy fresh food for eating.

#### **i. Milk and milk products**

Milk is spoiled easily that is why it is used after boiling. Place milk in the upper portion of refrigerator and cover it.

If there is no refrigerator then you can store milk in a jug and store it in a cool place and cover with muslin cloth.

#### **ii. Meat**

If you want to store meat for a longer period of time then cut it in small pieces and store it in polythene bags and place it in freezing portion of fridge. Minced meat is rotten more easily as compared to pieces of meat.

If there is no fridge at home then store meat in a cool and dry place with a cover of wet muslin cloth.

Cooked meat is stored for 12-24 hours as compared to raw meat.

#### **iii. Eggs**

Eggs are stored in winter season for a longer period of time as compared to summer season. Refrigerator has space for storing eggs. In cool place, eggs are stored for a longer time period. Besides this, eggs are stored in water or oil in which their shell doesn't get dried that helps them increasing their storage time.

#### **iv. Fruits and vegetables**

- i. Wash fruits and vegetables with clean water or you can also use some antibacterial agent like potassium permanganate.
- ii. Store fruits and vegetables in fresh air.
- iii. Be careful while storing fruit and vegetables.
- iv. If any fruit or vegetable is rotten or stained then separate it from other fruits and vegetables.
- v. Store juicy fruits e-g; oranges, lemons etc, at 14-16°C in refrigerator. All fruits and vegetables are stored in the lower portion of refrigerator except bananas because the color of banana changes at very cool temperature. If refrigerator is not available then store some vegetables in shade on wet sand because it is not hot e-g; potatoes, ginger, garlic etc.

### **2. Storage of non-perishable foods**

In our country, dry food items such as rice, pulses, wheat, tea and spices brought from market for a month should also be stored carefully.

Store rice and meat in large boxes. In wheat carbohydrates, proteins, vitamins and mineral salts are present but in whole **wheat, bran is** in a larger quantity.

Keep the pulses and cereals in closed jars in order to avoid insects and moisture may not enter. Food preservative e-g; salt and turmeric powder should be applied if you want to store for a longer time period.

## **4.3.5 Care of Refrigerator and Freezer:**

### **1. Refrigerator**

The purpose of refrigerator is to provide cool temperature to food so that bacteria may not come in contact with them.

### **Principles of using refrigerator**

1. Avoid overloading the refrigerator.
2. Avoid opening the refrigerator again and again because it may spoil the food.
3. Cooked food like qorma, pulao and kabab are stored in less deep boxes so that the coolness can reach to their bottom.
4. Store perishable food items such as milk and milk products in the upper portion of fridge.
5. Store fruit and vegetable in the refrigerator after washing them.
6. Store eggs in the separate portion made for storing eggs.
7. Door shelves can be used for storing water bottles and juices etc.
8. Place food items in such a way that cool air can touch all four sides of the item.
9. Freshly cooked food and milk should be stored in the refrigerator after cooling.

### **Care and cleanliness of refrigerator**

1. Clean refrigerator daily and clean weekly by removing all food items like fruit, vegetables, water bottles etc. Use a sponge and then towel to dry it. Try to keep the refrigerator empty for some time then place food items when its temperature reaches to 2°C.
2. Also clean the handles and bottom of the refrigerator.
3. Fungus in a refrigerator is due to dampness which can be cleaned with white vinegar and baking soda.
4. If you want to switch off the refrigerator for a longer time period then take out its main plug, open its doors and defrost it. Then dry it with towel and close its doors.

## **2. Deep Freezer**

Many bacteria, yeast and fungus cannot interact with frozen food because frozen food items may be saved from bacteria or fungus for a short time period at a temperature of 0°C to - 10°C.

### **Principles of using freezer**

1. Freeze food items in small packets because they can be frozen easily and one can take out only required food item.
2. Fill the packet or box properly.
3. Polythene bags should not be very huge in size.
4. Separate meat and fish bags from other food products so that blood or water of meat may not mix with other items.
5. Foods stored in polythene bags do not lose its freshness and quality for some time period because they are air-tight.
6. Pre-cool freezer when storing food items at least before two hours.
7. First cool the food at room temperature before storing them in freezer so that the electricity consumption is less.
8. Label each food item and put the date of freezing on polythene bag because it is difficult to recognize frozen food item and use according to order.

### **Care and cleanliness of freezer**

Freezer should be defrosted when the thickness of ice layer is about 5mm or ¼ inch on its walls.

1. Freezer should be cleaned properly after 2-3 months.
2. Surface of freezer should be dry and free of water; electricity can be saved this way and its quality as well.
3. Avoid touching the walls of freezer with hands because hands may stick with ice and you may feel burning.

4. Switch off freezer before cleaning.
5. Avoid using sharp knife or tools for removing ice and use only scrapper or plastic stem.
6. When cleaning inner portion of freezer use a solution of luke warm water and baking soda to remove stains/ spots.
7. After cleaning, wash the freezer with water and dry it with soft fabric or sponge.
8. If you don't want to use freezer for a longer time period then close it after properly drying its walls and inner portion.
9. Place freezer at a distance of 1foot from the wall so that its fan can work properly without any hindrance in order to make its quality better.
10. Avoid opening the door of freezer without any purpose because by doing this electricity and cooling may waste.

#### 4.4 Safety Measures in the Kitchen:

Kitchen is the most important area of a house. It should be built near dining area. Size of the kitchen should be according to the size of family.

Place the equipments in kitchen in such a way that things don't create any hindrance while working. Preparing items like knife, cutting board should be near the preparing area for cutting and cleaning of meat and vegetables. Cooking equipments such as spices and cooking utensils should be placed near the cooking area. This will cause less fatigue.

Arrangement of kitchen should be according to the English alphabet U or L because this arrangement saves time and energy.

Following points should be kept in mind while arranging/ designing a safe kitchen;

1. Shelves of the kitchen should be according to the standard height.
2. There should be proper arrangement of fresh air and light.
3. Besides natural light, proper artificial lights should also be arranged.
4. There should be a proper place for washing and drying of utensils.
5. There should be a proper arrangement of purifying water.
6. There should be a door of net to prevent kitchen from flies and insects.
7. No curtain should be hung near the stove.
8. Avoid using cheap electric equipments for kitchen.
9. Proper electrician or specialist must check the electrical appliances like fridge, refrigerator, microwave etc after every few months.
10. Avoid using rusty utensils as these utensils can cause many diseases.
11. Place kitchen utensils in order so that frequently used items can be taken out easily.
12. Place heavy utensils like large cooking pans and pressure cooker in lower cabinets.

#### 4.4.1 Safety Practices to Prevent Accidents in the Kitchen:

Careless attitude can cause accidents in the kitchen where catching fire is a common accident. Accidents that occur in the kitchen are due to many reasons like slippery floor, large or hot cooking utensils fall down on floor, burning of hands. Safety practices to prevent such accidents in kitchen are as follows;

Place of accident	Reason	Safety measures
<b>Fall or slip on floor</b>	i. Wet floor	i. Clean floor daily
	ii. Particles of food or spilled oil on the floor	ii. Clean it before and after cooking
	iii. Mop or other cleaning objects lying on the floor	iii. Place the cleaning objects on a specific place

<b>Injury due to light tools</b>	<ul style="list-style-type: none"> <li>i. Excessive use of sharp knives or scissors</li> <li>ii. Use of broken tools</li> <li>iii. Improper place for storing tools</li> </ul>	<ul style="list-style-type: none"> <li>i. Sharp tools should be out of children reach</li> <li>ii. Avoid the use of sharp and pointed tools</li> <li>iii. The tools should be kept at a proper place</li> </ul>
<b>Heavy utensils</b>	<ul style="list-style-type: none"> <li>i. Placing heavy utensils on upper portion of the cabinet</li> <li>ii. Placing hot pan at the corner of stove</li> <li>iii. Stove is on without any purpose</li> <li>iv. Keep the door of oven open</li> </ul>	<ul style="list-style-type: none"> <li>i. Place heavy cooking utensils in lower part of the cabinet so that they are unable to fall</li> <li>ii. Place hot pan in the center of stove and its handles on inner side of stove</li> <li>iii. Turn off the stove after use</li> </ul>
<b>Dress</b>	<ul style="list-style-type: none"> <li>i. Use of starched, nylon and open apron for cooking is the reason of catching fire</li> <li>ii. Use of slippery or formal shoes in the kitchen</li> </ul>	<ul style="list-style-type: none"> <li>i. Avoid using starched or nylon clothes and button the apron properly</li> <li>ii. Use safe shoes and chappal for kitchen</li> </ul>

#### 4.4.2 Safety Measures during Food Preparation in the Kitchen:

There is a relationship between kitchen and health of family. Following are some safety measures which should be followed during preparation of food in the kitchen;

1. Avoid wearing loose and long clothes while cooking. Use apron or overall, tie up long hair and both sides of dupatta.
2. Avoid wearing nylon clothes while cooking because nylon catches fire very easily, shrink and stick to the body and burn skin easily.
3. Burn only necessary stove and make sure that all other stoves are turned off.
4. If coal based stove is to be used then use it outside the kitchen in some open area.
5. Keep the handles of frying pan and sauce pan away from fire. Keep the children away from stove. Use the spoons with wooden handles.
6. Make sure that cooking equipments are screwed tightly before using them.
7. Lift the pan of boiling water carefully and make sure that lid of pan is fixed because steam burn face and hands very badly.
8. Take help from others when lifting heavy pan from one place to another.
9. One must immediately start rolling on the floor if his/her clothes catch fire. If possible cover the person with a blanket or heavy clothes tightly. Running to ask for help could be more dangerous as it provides more oxygen to the fire and it blazes. Lying on the floor prevents fire from reaching the face.
10. Close the match box properly before rubbing match stick on its side. Keep the match box at considerable distance from the body while rubbing and scratching.
11. Wood, coal, oil, gas etc are used for cooking. Use them carefully. Never throw burning match stick on the floor instead put it out and place separately.
12. Keep the match box out of the reach of children.
13. If you have to burn a gas stove and the match stick is extinguished, turn off the stove and burn the match stick again.
14. Keep the level of oil normal in the oil stove. If the stove catches fire, cover it with sand or blanket to extinguish instead of throwing water or blowing.

15. Keep lids of the utensil closed while frying. If the oil is present in utensil and catches fire, immediately cover it with lid and turn the stove off.
16. While frying put fish and pakoras in the oil from corner of the pan. There is a chance of splatter if we put the things for frying in the center of oil.
17. Remove all the steam of pressure cooker by removing weight. Don't open the lid until the steam is removed. If there is steam it is not easy and safe to open the pressure cooker.
18. Size of the utensil must not be bigger than stove as it may become dangerous by turning over.
19. Label all the things in the kitchen. Medicines, spirits and toxic chemicals should be kept out of reach of children and should be placed away from the food items and spices.
20. Knives, daggers and all sharp instruments must be kept out of children reach. Put the knife upside down after using.
21. Immediately clean the spilled oil and water from the floor to avoid slipping over. Pick all the peels of fruits and vegetables from the floor to avoid slipping.

#### **4.4.3 Prevention of Minor Accidents in the Kitchen:**

First aid kit is essential to be placed in the kitchen. It should contain burnol, dettol, mercurochrome lotion, tincture iodine, bandages, pain killers, cotton bundle and tape bandages.

1. It is usual to get a small burn while working in the kitchen. Use burnol, vinegar, blue ink or mustard oil to relieve pain. Don't cover the burn with the bandage as it may get worst.
2. Don't burst a blister.
3. In case of injury or bruise, clean it with dettol and use tincture iodine or mercurochrome.
4. In case of usual injury, there is less blood flow which stops itself. If the blood-flow does not stop use tincture iodine or red medicine. Consult the doctor if the wound is deep.
5. If anyone eats poisonous things immediately consult a doctor. Before reaching the doctor, try the patient do vomit by giving him highly salted water which will wash and clean his stomach.
6. If there is any accident which is due to spreading of gas then immediately take the person out in fresh air after losing his clothes.

## **CHAPTER 4-FOOD PREPARATION**

**1. Choose and encircle the correct answer from the options given below.**

*Composed by Ms Qurat ul ain Farooq*

- i. The food becomes tasty and delicious with cooking. How does it affect enzymes?  
(a)no excretion (b) acidity (c) more excretion (d) affects late
- ii. What is used in moist heat cooking method?  
(a) water (b)fats (c) heating on coals (d) oven
- iii. Which utensils are used in microwave oven?  
(a) traditional (b)metal (c) specific (d) plastic
- iv. Which nutrients are wasted by not cooking rice in their soaked water?  
(a) protein (b) fiber (c) vitamin & minerals(d) fats
- v. Dastarkhawan and tray covers should always be of which fabric?  
(a) cotton (b) silk (c)thin (d) dark color
- vi. What is the appropriate standard size of tray in inches for one person?  
(a) 14” x 16” (b) 16” x 20” (c) 12” x 20” (d) 12” x 18”
- vii. In formal style of western method, the meal starts from which person?  
(a) host/hostess (b)guest (c) lady (d) aged
- viii. What is the standard size of napkin in square inch?  
(a) 12” (b)16” (c)18” (d) 22”
- ix. At least how many times refrigerator should be defrosted in a week?  
(a) one time (b)two times (c) three times (d)not a single time
- x. How the food can be stored for creating variety in meal?  
(a) on cool place (b) by protecting from moist and rain (c)by making pickle, chutney, jam and murabba (d) by protecting from insects

## 2. Write short answers.

- i. Write the reasons/ purposes of cooking.
- ii. Which are moist heat cooking methods?
- iii. Write the benefits of microwave.
- iv. Write the methods of maintaining nutritive value of eggs during cooking.
- v. Write the basic principles of meal service.
- vi. Write the method of tray setting for more than one individual.
- vii. How the meal is served in buffet style?
- viii. What are the factors of food storage?
- ix. Write the method of cleanliness of refrigerator.
- x. How the minor accidents in the kitchen can be prevented?

## 3. Write detailed answers.

- i. Write the principles and methods of cooking.
- ii. Write the principles of maintaining nutritive value of meat during cooking.
- iii. How the meal is served in western method?
- iv. What is the importance of cleanliness in meal service?
- v. Write different methods of food storage.
- vi. Write the accidents and safety practices to prevent accidents in the kitchen.
- vii. Which safety measures should be followed during food preparation in the kitchen?

## CHAPTER-5 INTRODUCTION TO CHILD CARE AND DEVELOPMENT



## **5.1 Meaning and Definition of Human Development:**

### **5.1.1 Definition of Growth and Development:**

There are many changings that appear in human from beginning to death. These are social, psychological and biological changings. They are called as growth or development. Development and growth is the combination of two words. Growth and development cannot be separated.

Development is such a kind of changing that increase the abilities to do work for example strength of bones and limbs; power of walk and run. These changings are internal and external. Development of a man continues till death.

Growth is all about physical and organic changings that appear in different time period of age. These changings are appeared from early years of life to adult age, meaning till the age when child becomes adult. It includes making of new cells and physical growth.

#### **According to experts:**

When the child grows up, he spends a successful life if his childhood passed pleasantly.

### **5.1.2 Definition of Human Development:**

The changings that appear in one's life in height, size and physique are called human development. With the passage of time, two types of changings are appeared in man and these two changings (quantitative and qualitative) are given importance in study of human development.

#### **1. Quantitative changes:**

These are physical changes that can be felt through open eyes for example weight, height, size, and physique of one person. This growth is the cause of other changings in physical structure, bones and teeth even internal organs like size of brain, heart and stomach.

#### **2. Qualitative changes:**

These changings means the abilities and skills of one that appear with the passage of time that can be shown when man starts walking and running. Internal and external changings depend on each other. For example with the passage of time when child grows, with the physical growth different abilities start appearing and completed when child becomes adult. Then he becomes able to comprehend the real meaning of life. In this way, quantitative changings becomes the cause of qualitative changings that cannot be separated.

## **5.2 Significance of Studying Human Development**

Human development is a scientific knowledge which provides information about the different features of person's personality and its growth.

Important points of significance of studying human development:

1. Psychologists inform about the different time period of child's growth and describe the relation between different habits of children. They also point out their abilities and necessities of these periods.
2. Information is provided about signs and procedures of average development/ growth of child. When the special signs are not appeared in special parts of life, when this is cleared that this child is not with his age fellows, and if signs are appeared before the exact time then such child will be considered fast than others.
3. If a child is not growing normally with his other age fellows then parents great concern create curiosity. When the parents come about the reason, they try to find out the way to remove them and bring them to the normal life. So in this way man and society get strength.

4. There are different procedures of development and each procedure has its own physical, mental and emotional changings. Reaction against each changing in life is different from each other and these changings leave a deep effect in psychology of children.

Parents' interest and knowledge about these changings can be the cause of their guidance and relaxation for example gender based changes.

- New born child has no ability to do something and to comprehend something. With the passage of time, according to his age, he develops his abilities. If parents know about the mental and physical abilities of a child then they have expectations but according to their abilities. They know about their child's developmental task, because success in any part life give him happiness and confidence. Whereas failure disappoints them that becomes the cause of creating problems in life and create a space in child's life, which ultimately creates inferiority complex in child.
- The children get confidence when their needs are fulfilled according to their age and when their abilities are increased and they are saved from psychological problems. Children use the abilities in their own different ways during growth through which their interest can be clearly recognized and can be guided for the future life profession according to their interest so that they can live a successful life.
- Maturity is the completion limit of development when the development is completed.

### **There are four important points of development/ growth**

#### **1. There is own pace of growth of different parts of the body.**

For example, the foot of little children grows in more speed than other parts of body asymmetrically. The head of premature baby grows speedily and the head of new born baby is bigger than the other parts of the body.

#### **2. There are signs and completion limits for each part of body.**

The growth of each part is completed in early life but still each part has its own signs and completion time of development. For example, height of man is increased till 25-26yrs of age, mental growth is completed till 18 yrs of age.

#### **3. In development changings, there are evolution and in evolution.**

The important changings that appear are physique of child, size and height of children, the growth of new hair, teeth etc.

In the procedure of development, changings are of two types; evolution and in evolution. In any part of age these changings take place. This procedure is going on in whole life.

#### **4. Development rate of each child is different from other.**

Some children develop at a very fast rate physically and mentally. A few children has average rate of development and some have slow rate that can become the cause of anxiety for parents. This rate is under the influence of inheritance and environment.

### **5.2.1 Aspects of Human Development:**

Human development is a continuous procedure in which human body parts reaches to its maturity with their own speed. There are two important features/aspects of development.

- i. Cephalocaudal
- ii. Proximodistal

**i. Cephalocaudal**

It means development from head to foot. Brain and neuro system develops first and then remaining part of body because mind creates regularity in behaviours and organs.

After birth, child first of all learns to control his head, then his eyes and face. He learns to control his movement and neck. At the end, he learns to walk. First new born baby moves his head and neck then learns to sit before standing. He also learns crawling before walking.

**ii. Proximodistal**

According to this rule, direction of human development is determined. Maturity of movement starts from central part of body to external parts. First, he controls his body then feet, then hand and gets skills in fingers. In the same way, new born baby learns to control his legs then feet and at the end learn to control fingers.

**5.2.2 Developmental Tasks of Different Stages:**

Development is an act of training which stream speedily towards maturity. Different time period of life for example infant, childhood and youth, this is called ‘early abilities’. These are necessary and important points which are very important to get success and create harmony in life. Failure in any stage can create complexities in the procedure of development.

Expectations from each other in family or society are changed with the passage of time and age. The success of any person depends on that he should perform his duties for family and society according to his age so that he can get satisfaction and relaxation in society.

**Developmental Tasks of Different Stages**

<b>Infancy (birth – 2 ½ yrs)</b>	<b>Early childhood (2½- 6yrs)</b>	<b>Middle childhood(6- 12yrs)</b>
<b>Physical activities</b>		
1. Physical balance, balance in sleeping and awakening time.	Balance in play and rest, participate in any activity actively.	To get physical activities like cycling, playing ball, climbing over tree.
<b>Diet</b>		
2. Use milk and solid according to age and learn to eat and drink.	Accept the taste of new food and learn to eat.	Learn how to eat, how to spend money and to learn how to fulfill their needs.
<b>Basic skills</b>		
3. Get toilet training	To learn to change dress, to get proper control over toilet training, to understand time and place.	To learn to know physical changes and girlish or boyish character.
4. Learn use of physical activity, skill of crawling, walking and running.	To learn skills of running, climbing, jumping, throwing and catching ball.	To understand how to write and read, to get skill in maths and science.
<b>Feelings</b>		

5. Learn to trust others and be loyal to other.	Learn to express feelings of love, anger, sympathy, worries and happiness	Learn to control the feelings in different occasion for example, in worries, joy and grief, learn to solve problems
<b>Personality development</b>		
6. To learn about right and wrong and learn to obey elder.	Learn to make decision themselves, begins to do work	Learn to help in household and understand home problems, and fulfill the needs in a fair way
7. Learn to speak and converse others	Learn to talk meaningfully, to ask questions confidently	Learn to have respectable relation with class mates and elders
8. Learn to get confidence on his personality	Learn to understand his parents and environment, identification of self	Learn to get self confidence and self-reliance and individuality
9. Learn to get confidence, to create connection or relation	Learn to create relation among different people and parents, listen to the instructions of others carefully.	Learn to create feelings of love and faithfulness with individual of school and home.
<b>Young age (13-19yrs)</b>		<b>Adulthood (20-40yrs)</b>
1. Learn to understand the purposes of height and abilities, and create harmony among them, accept physical changings		To get profit from abilities, energy and work hard
2. Learn to use their resources according to their abilities, learn not to waste money and to save money etc.		Adopt good ways for learning according to own wish and interest
3. To pay the social duties and fulfill the responsibilities		Make proper planning for family and children, and fulfill the basic needs
4. Learn to select right career for future and get guidance from parents and teachers		Try to enhance income and struggle to get knowledge
5. Try to overcome the problem of life and dependence of parents		Learn to fulfill the duties and create balance between house and work place
6. Respect the parents and teachers, control anger, discussion and rebellious attitude		Try to make strong relations with relative and wife
7. Make relation with relative, neighbors and other people		Fulfill household responsibilities and select the life partner wisely
8. Learn to make difference between good and bad, to save from bad habits, adopt good habits		To save from bad habits and adopt good one
9. Boys should learn to earn in good ways and girls should learn to get skills in household		Try to make positive and good relation with relative, in-laws, and get skills in household

### 5.2.3 Factors Affecting Growth and Development

There is a specific way of development in all living beings. Human development starts from embryo and ends till last movement of life. The pace of growth is different in each period of child's life.

Human development is a complicated process. Inheritance and environment affects human development. If one does not get proper environment and food then development is deeply affected. Parents love and affection play an important role in growth of social development.

Followings are the factors that affect human development;

1. Individual factors
2. Biological factors
3. Social factors

#### **i. Individual factors**

It affects the individuality of a person. Each person has its own different qualities. These qualities include wisdom, knowledge, abilities, feelings, views and nature.

#### **ii. Biological factors**

It includes qualities like physical structure, health and energy, face, brain, strength of nerves and performance of glands that are inherited from parents. Future development of these qualities is affected by environment.

Human development is the result of inheritance and environment. For example, a child is wise and able but due to lack of proper education, his development becomes slow. Similarly, depletion of food becomes the cause of change in physical growth and physical structure.

#### **iii. Social factors**

Social values, customs and tradition also affect the growth of each person. Natural climate, facilities of natural resources, fertile land, economical resources and difficulty or ease in living style etc. all these above mentioned factors affect the social growth and help to mold the personality of a child.

House, school, neighbor, teacher and social links play an important role in purposes, aims, negative and positive thoughts of child.

### **5.2.4 Role of Genetics and Environment on Human Development:**

Two important factors affect human development; genetics and environment

#### **1. Genetics or Heredity**

Genetics means those qualities that one inherits from one's parents or forefathers by birth for example color and texture of face, head, structure of bones, height, color of hair and eyes etc.

Mental abilities like wisdom, pace of reaction, behavior like anger or emotional feelings, special interests like painting and creativity etc are inherited. Often children resemble wife's parents but sometimes they resemble with other member of family except their own parents.

#### **2. Environment**

Environment means those physical, social and geographical factors that are helpful in human growth or become the cause of hindrance in human development. Physical or geographical environment means weather, climate, land, living style, living facilities, pollution free air etc. Fresh and clean environment help to grow the child in a special way to make him healthy.

Whereas, social environment for example, friends, family, institution and society are also responsible for the human development. Environment also creates ability to build personality and creates harmony between society and one's life.

It (environment) also affects human development under these aspects;

**i. Physical growth**

Environment plays an important role in the growth of body, physical structure, weight and height. All these changings appear in a proper and balanced order. Food, climate, living facilities etc help in physical growth.

**ii. Organic growth**

It means the development of child's organs through which they learn to play, jump, exercise or perform different tasks. The proper growth of organs helps to create ability to have a proper physical balance.

**iii. Mental growth**

Mind grows with the cooperation of man and environment. According to H.H Goddard "wisdom is a name of understanding the problems of future and solving present problems".

**iv. Social growth**

It is all about to learn to live and link with other people. Family background, parents, friends, teachers, relatives, education etc are responsible for better social growth.

**v. Emotional growth**

Environment not only teaches a child to control feelings or emotions but also teaches him to express in a proper way. It also teaches them different things to become favorite personality of society.

**5.2.5 Impact of Proper Development on Human Health and Wellbeing:**

Proper development of children is important for their health and wellbeing. To become a good person, it is necessary to fulfill the requirement of society. The child should actively take part in social activities to become active member of society and to show their skills.

According to Havighurt "success and failure of all the things done in different phases of life has great importance in the development of the child". The outcomes of proper and balanced development are as follows;

1. Children are powerful and healthy but unbalanced diet, stress, weak family background affect the child's health and growth.
2. Child uses his energy in a positive way. They do not become disappointed and do not express disappointments rather develop the abilities to pay individual and collective responsibilities and become useful member of society.
3. When children get love and affection, they behave in a better way with other people of society.
4. Children get deeply involved in work and work hard. They take deep interest and face every difficult task as a challenge.
5. They also accept their failure whole heartedly. They try to perform the task in a better and know about the reasons of failure.

**5.2.6 Difference between Development and Growth**

<b>Growth</b>	<b>Development</b>
1.Change in physical structure, bones, organs, nerve cells and mental system is called growth	1.These are qualitative changings which create abilities to strengthen different work
2.These are quantitative changings that can be felt through eyes for example change in size, height, weight etc	2.These are qualitative changings that cannot be felt without act for example ability to do different work or to learn new skills
3.These changings can be measured for example height in feet and inches, weight in kg etc. , measure in the form age like two yrs etc and education	3.This is a process of development from birth to death, it includes physical and mental changings
4.These changings are appeared in a form of physical structure , hair, teeth etc.	4.These changings include mental abilities, physical power, skill of hand and fingers.

### **5.3 Principles of Growth and Development:**

Human development is a continuous process. The principles are as follows;

- i. Development has distinctive characteristics
- ii. It is a stepwise/ sequential process
- iii. The pace of development and growth is different
- iv. All stages of development and growth are sensitive

#### **i. Development has distinctive characteristics:**

Every part or organ has its own pace of development. In other words, it increases from simple way to complexity. For example in physical growth, child moves his arm, then thumb and catch his toy with index finger. Small children first learn to walk, then jump and climb stairs.

#### **ii. It is a stepwise/ sequential process:**

It is in special sequence. According to Piaget “Human does not remain in constant condition, he keeps on changing from the stage of embryo till death”. Any change does not appear suddenly. It is a continuous process which takes child to maturity. In these changings, physical changes such as height and weight, change in thinking, physical balance, child’s confidence and social behavioral changes are included.

#### **iii. The pace of development and growth is different:**

Pace of development in each child is different from other. For example, height of few children increases more than others. It depends on many factors like inheritance, diet and exercise. Each person has different personality which highlights his individuality.

#### **iv. All stages of development and growth are sensitive:**

According to scientific research, there are many sensitive and soft period of life. Freud proved that it is identified right in childhood that what will be the child’s career. According to Erickson “Whatever child learns depends on his needs e-g; diet, attention and love”. First 2-5 yrs of child life are very important in child’s personality. Commonly, the habits that children adopt in childhood, becomes strong when he becomes young. Growth of childhood is more sensitive than young age.

## **CHAPTER 5-INTRODUCTION TO CHILD CARE AND DEVELOPMENT**

*Composed by Ms Qurat ul ain Farooq*

## QUESTIONS

### 1. Choose and encircle the correct answer from the options given below.

- i. The biological, social and psychological changes that take place in human life are called\_\_\_\_\_?  
(a)development (b) growth (c) growth & development(d) qualitative
- ii. What proves to be helpful in understanding the capabilities and specific demands/ needs of the children?  
(a) education (b) inheritance (c) environment(d)knowledge of development & growth
- iii. At the time of birth the head of a new born baby is \_\_\_\_\_ in volume as compared to other parts of the body?  
(a) bigger (b) smaller (c) equal (d) heavy weight
- iv. The rate of growth of the child is affected by the inheritance, environment and \_\_\_\_\_?  
(a) needs (b) experiences (c) demands (d) family
- v. What is duration for mother feeding?  
(a) Birth to 1year (b) birth to 1½ years (c) birth to 2½ years (d) 2 to 5 years
- vi. How many principles of human growth and development are there?  
(a) 2 (b) 4 (c) 6 (d) 7

### 2. Write short answers.

- i. Define growth and development.
- ii. Identify the factors affecting growth and development.
- iii. Write the effects or role of genetics/heredity on human development.
- iv. Write the effects or role of environment on development.
- v. Write the impact of proper development on human health and wellbeing.
- vi. Differentiate between growth and development.

### 3. Write detailed answers.

- i. Explain the significance of studying human development.
- ii. What are the different aspects of human development?
- iii. Explain the principles of growth and development.
- iv. Write the developmental tasks of different stages.



## CHAPTER 6-DEVELOPMENTAL CHARACTERISTICS

### **Different Areas of Development:**

There is a continuous changing and development in different areas of personality. It is a complicated process which is continuous and sequential. Development is not only physical growth but collectively it is a name of personality of a man which includes mental, social and emotional qualities. Thus development is linked with different areas of life which has effect on one another. The different areas of development are as follows;

1. Physical development
2. Motor development
3. Cognitive development
4. Social development
5. Emotional development

#### **1. Physical development**

Physical development means the growth of internal and external parts of the body. It includes physical structure of child (thin or fat, active or lazy), physical condition (healthy, weak, disable, sick, powerful, strong) child's weight, complexion, hair, etc. this development is linked with emotions, diet, exercise and interests.

#### **2. Motor development**

It means the growth of organs. It is linked with the development of muscles, cells, tissues and veins. It depends on the ability of keeping balance in different stages of life. For example; ability to stand, run, sit and catch, and ability to do any physical activity.

#### **3. Cognitive development**

It is related with child intelligence and wisdom. It is linked with child comprehension skills which depend on five senses for example; seeing, smelling, tasting, hearing and touching. Cognitive development leaves deep effects on child's personality.

#### **4. Social development**

It is linked with child's relation with other people and behavior with family members. For this, there are three principles: one is to accept other and have strong willpower, second is to become other favorite person and adopt good manners and last one is to love and sacrifice.

#### **5. Emotional development**

It means feelings and emotions. It is linked with the development of feeling and ability to express emotions. For example; anger, hatred, happiness and sadness.

### **Eight (8) Stages of Development:**

Human development is organized. It completes through many procedure. Each period has some specifications. So it is divided into different stages.

#### **1. Pre-Natal**

It is beginning of human life development. It is from pregnancy to birth. This stage of development is faster than other stages of life.

#### **2. Infancy and Toddlerhood**

This stage is from birth to 3 years of age where infancy continues to one and half year to two years. In this stage, child depends upon others for basic needs. During this period child not only learns to speak but also learns to move.

### **3. Early Childhood**

This period is from 3-6 years. It is also called pre-school period. At this stage, child starts to do his work but needs guidance from elders.

### **4. Middle Childhood**

This period is from 6-12 years when child start going to school regularly and start realizing new responsibilities.

### **5. Adolescence**

This is from 12- 20 years. It is the beginning of youth when boys and girls start feeling organic changes. Recognition of self and identification of social character are important features of this age.

### **6. Early Adulthood**

It is from 20-40 years. The person has become adult and begins to spend his married life, increases social connections/ contacts and select right career.

### **7. Middle Adulthood**

This is from 40-60 years.

### **8. Old Age**

This is from 60 years of age till death.

#### **Important information:**

The growth and development of children is done stepwise and with special sequence and appropriateness.

### **6.1 Neo-Natal Stage**

The term neo-natal is used for infants. It is from birth to four weeks when the child tries to adjust in new environment.

#### **6.1.1 Development during Neo-Natal Stage:**

The development of this stage depends on following factors;

1. Physical development of child at birth
2. Physical movements and activities
3. Senses
4. Sleep
5. weeping

#### **1. Physical Development of Child at Birth:**

##### **i. Physique**

Infant has soft and small muscles. The development of legs and neck is less than hands and arms. Bones are soft and can be easily turned. Skin of children is also soft, hair are soft and shinny, and color of eyes is usually grey, black or blue which changes with time.

##### **ii. Weight**

At birth, the weight of child is 3.5kg. The weight of child is less in early days after birth but starts increasing in second week. Boys' weight is more than girls'.

##### **iii. Height**

At birth time, the height of child is normally 50cm. Boys are well heighted than girls.

#### **2. Physical Movements and Activities**

Infants need help to move. He is only able to cry and move his legs and hands. For example, the child can take little naps in a day and move head, legs and arms etc.

The movements which the child can do after birth are called reflex and reflex actions. These responses/ actions are not intentions or planned but are required that he does for his safety. Following are the reactions which are kept remain in child for three months and then they will be changed. For example;

**i. Swallowing and Sucking Reflex:**

As soon as something is given to infant's mouth, he starts trying to suck and swallow in reaction.

**ii. Rooting Reflex:**

When infant's cheeks are touched, he tries to move his head.

**iii. Grasp Reflex:**

When a thing is given to infant, he catches the things strongly.

**iv. Walking Reflex:**

If tries to stand him up, the child tries to put his foot one by one on the floor/ surface in a walking manner.

**v. Falling or More Reflex:**

Child is mostly afraid of loud voice and bright light and unconsciously feels that he will fall. As a result, he tries to spread his arms, open his hands and catch the thing.

**3. Senses:-**

**i. Sense of Seeing:**

Infant can see but his centre of sight is only 20cm. He sees only those things which are closer to him. He can see towards light but faraway things do not attract him.

**ii. Sense of Hearing:**

Infant can hear. He breathes, moves his arms and foot, and his eyes in reaction of any voice. He leaves drinking milk after hearing loud sounds and start weeping. If he weeps then he keeps quiet after hearing his mother's voice.

**iii. Sense of Smell and Taste:**

Infant can smell and taste. He turns his face towards other side when he smells bad. Milk smells good to him and he opens his mouth for milk.

**iv. Sense of Touching:**

Infant has a sense of touching. He tries to change his position if he feels pain. If water is hot and cold, he starts weeping. When anyone takes him in his lap he becomes happy and satisfied.

**4. Sleep:**

Infants mostly spend their time in sleeping and only wakeup when he feels hungry. Sleeping time is according to his habits. Mostly infants take 20-24 hrs sleep. Some children can sleep for five hours at one go while other children sleep for two hours. After three months of age, child feels difference between day and night. He uses to sleep at night time mostly because during day noise and light disturb their sleep.

**5. Weeping:**

All infants know to weep. It is their way of expression. Infant weeps for his own needs when he feels hungry or thirsty, in uncomfortable situation or pain, feels fear of darkness or loneliness. He feels fear of loud noise and gas trouble in stomach. Infants can feel relaxed by hug.

When child of three to four weeks weeps, his voice becomes loud without tears but some children weep without tears only to get attention from others.

## **6.2 Infancy to Toddlerhood:**

This period of human development is time of self-reliance.

### **6.2.1 Development during Infancy**

#### **i. Physical and Motor Development**

This period is from birth to three years. Physical development starts from birth but the development of physical structure is different in every period. For example, infant development is from head to toe. His head is normally bigger than his legs or arms but gradually develops legs and arms.

At birth time, the child has no teeth but then infancy teeth appear. There are apparent changes in child's digestion system. Heart beat of infants and one month child is almost 100-140 times per minute which gradually reduces while an adult heart beat is 72 times per minute. At birth time, mostly child weight is 3-3.5kg which increases within a year to 9.07 kg. One month old child turns his neck left to right. Five months old child can hold his neck and at six months of age, he learns to turn a side. Child learns to stand up at the age of 10 months. One year old child takes a few steps without any help and fall down but gradually learn to walk properly. Two and a half or three years old child starts to walk normally. He starts jumping, catching, throwing ball etc at this stage.

#### **ii. Cognitive Development**

After the birth, mostly the child has different crying sounds like weeping, coughing, cackling etc. In the beginning, the child speaks one word sentence like water (mum), mother (ma), no (ni), do do (milk) etc. according to survey, 18 months old child can speak almost 10 words and till two years he learns at least 30 words but can understand 200-300 words. Child vocabulary and intelligence depends on environment. Girls mostly can learn to talk early than boys.

#### **iii. Social and Emotional Development**

Child's social development starts from mothers training after birth. Mother's feelings, environment and behavior towards child affect child's personality. Besides, behavior of other members like father, brother, sister and elders also have an effect on child's social development.

Early six years of age are not so important for child's social and emotional development but during 6-18 months of age child feels the presence of others. He likes to play alone with his toys. He possesses a smile to show happiness and weep to show unpleasant emotions.

## **6.3 Early Childhood:**

This period is from 3-6 years. This period is also called pre-school period.

### **6.3.1 Development during Early Childhood:**

#### **i. Physical and Motor Development**

Physical and motor development is very fast during 3-6 years. Physical strength also increases and child roams everywhere. He climbs stairs without any reason and he creates balance and continuity in physical movement. His favorite activities are to run, jump, throw a ball, play hide and seek etc.

#### **ii. Cognitive Development**

In early childhood, child speaks complete sentence. Their words are clear and they can speak confidently. Although, they are not able to pronounce difficult words but they talk in very good way. With the passage of time, they use to speak correct word and enhance language skills. In this period, the child use to live in day dream and hear stories with great interest. Girls like to play with dolls and boys mimic elders. It is also called a period of curiosity. Children use to ask questions to increase their information and enhance their

mental abilities. Satisfactory answers can guide them in a positive way. Social family, environment, intelligence and behavior of other people of society also affect child cognitive development.

### **iii. Social and Emotional Development**

During early childhood period, child likes to play alone even in the presence of other children. He plays alone. This period is called 'ego-centrism'. Child likes to adopt different habits to create harmony to environment. For example, at the age of 3-4 years, he learns to eat meal independently. He tries to wear his dress, socks, tie his laces himself etc. If the child is encouraged at this stage, he will become independent. Child of 3-5 years of age learns the training of brushing his teeth, washing face and hands, taking baths etc.

#### **In which age child has growth of milky teeth?**

The first tooth of child appears at the age of 6 months whereas child has growth of all milky teeth till the age of 4 years.

#### **Define the individual difference in children's mental abilities.**

The individual difference between mental abilities of children is due to health, economic status, social training and gender.

#### **Important information:**

During early childhood, the control on large muscles is prominent as compared to small muscles.

#### **Do you know?**

During early childhood, the child knows people, location, time and specific things well.

## **6.4 Middle Childhood**

This period is from 6-12 years of age. In this period, child starts going to school regularly and develops links with age fellows, teachers and other people of society. It is a period of independence and responsibility when the child is in its full strength.

### **i. Physical and Motor Development**

In this period, child weight and height increase. The pace is very slow. Harmony is created among physical and motor abilities. Girls and boys development are in balance but 12 years girl look bigger than boys in height and age. There are some physical changes in children like voices, girls' voice is soft and boys' are heavy.

9-12 years old boys are energetic and active. Their favorite hobbies are cycling, boxing, weight lifting, cricket, football etc. while girls like to take interest in music listening etc. the main features of this age is strength of organs and movement of body.

### **ii. Cognitive Development**

Middle childhood is the peak of cognitive development. In these years, mind works very fast. Child likes to take information from environment and things with great curiosity. He uses to ask different questions and at this stage different visits to historical and informative places are useful. 6-12 years old child has such abilities to solve their problems and enhance their knowledge. It depends on their intelligence, experience, social environment and position. Specially problems of school like reach on time, do work on time, preparation of exams and take interest in different curricular or co-curricular activities.

### **iii. Social and Emotional Development**

In this period, family and school problems, social relation and gender experience are common. Expression of sudden feelings like anger and happiness are important features of this period. Self concepts are also clear. Child becomes able to create harmony among relations of age fellows, teachers and parents' upbringing.

In this period, child likes to work in group form. They have strong feelings for relatives, parents and friends, and do not bear anything against them. They respect them and become aware about their own responsibilities. Their thinking and speaking power also changes.

**Which period is the period of fastest ups and downs?**

According to Erikson, middle childhood is the period of fastest ups and downs.

**6.5 Adolescence:**

**6.5.1 Development during Adolescence:**

This period is from 13-18 years. The main features of this period are physical changing and strength which are important for identification of girls and boys characters and gender differences.

**i. Physical and Motor Development:**

This period is called a personality changing period. Normally girls at the age of 13 years and boys at the age of 15 years become mature. In adolescence, motor development is important. Boys seem more powerful than girls. In girls, physical development becomes fast during the age of 12-15 years and in boys during the age of 15-16 years.

Physical development in adolescence depends on intelligence, inheritance, diet and health. Physically healthy children become mature early than weak children.

**ii. Cognitive Development:**

In adolescence period, special behaviors are developed in children. Their cognitive development is in process. They enhance their information and experience. He knows about his environment and can solve the problem.

**iii. Social and Emotional Development:**

In this period, they completely know about their social values, religion, laws and discipline. Child respects his parents and teachers. He actively participates in social progressive tasks and can be the member of society. The social circle of adolescence is very wide and they want to make neighbors, relatives and other people their friends.

They mostly show their anger, rebellious nature etc. But it is the timely situation, they overcome it. The reasons of these problems are physical changing, change in social role, academic record, mental pressure and pocket money.

**Important point:**

According to Skinner, cognitive development is at its peak at the age of 20 years.

**CHAPTER 6-DEVELOPMENTAL CHARACTERISTICS  
QUESTIONS**

**1. Choose and encircle the correct answer from the options given below.**

- i. How many areas of development are there?  
(a) 2 (b) 3 (c) 5 (d) 6
- ii. What is age of the period of infancy and toddlerhood??  
(a) birth -3 years (b) 3-6 years (c) 7-8 years (d) 9-10 years
- iii. What is the standard height of the child in neo-natal stage?  
(a) 30cm (b) 40cm (c) 50cm (d) 70cm
- iv. According to an estimate, the child of 2 years can understand how many words?  
(a) 30-50 (b) 50-100 (c) 100-150 (d) 200-300
- v. What is age of the period of early childhood?  
(c) 3-5 years (b) 6-8 years (c) 9-10 years (d) 10-12 years
- vi. The period of early childhood is known as \_\_\_\_\_?  
(a) eating period (b) egocentrism period (c) emotional period (d) maturity period
- vii. Middle childhood is the period of which age?  
(a) 3-5 years (b) 4-8 years (c) 7-11 years (d) 6-12 years
- viii. How are the children of 9-12 years of age in middle childhood?  
(a) lazy (b) energetic & active (c) weak (d) fatty
- ix. What is the age of adolescence?  
(a) 6-12 years (b) 13-18 years (c) 18-20 years (d) 20-22 years
- x. The social circle of adolescent is very \_\_\_\_\_?  
(a) wide (b) narrow (c) unnecessary (d) very small

**2. Write short answers.**

- i. What is meant by human development?
- ii. Define cognitive/ mental/ psychological development.
- iii. What is meant by social development?
- iv. What are the stages of child development? Write names.
- v. What is the normal weight of child at the time of birth?
- vi. Define the period of infancy.
- vii. Explain the cognitive development of the period of early childhood?
- viii. Write the physical development of the period of middle childhood.
- ix. Define the period of adolescence.
- x. Write the importance of social development of the period of adolescence.

**3. Write detailed answers.**

- i. Explain different areas of human development.
- ii. On which factors the development of neo-natal stage depends?
- iii. Write a note on the physical, motor and social development of the period of infancy.
- iv. Write a note on the cognitive, social and emotional development of the period of middle childhood.
- v. Write a note on the physical, motor and cognitive development of the period of adolescence.

**CHAPTER 7-BEHAVIORAL PROBLEMS OF CHILDREN**

**7.1 Definition and Types of Behavioral Problems:**

**7.1.1 Definition of Behavior:**

It is the way in which one acts or conducts oneself, especially towards others. Behavior is the way of acting; it is also referred to the etiquettes of a person. According to Schiamberg and Smith, “A response of an individual or group to an action, environment, person or stimulus is known as his behavior”.

### **Important information:**

According to Ruch, face is the measuring tool of emotions.

### **7.1.2 Definition of Behavioral Problems:**

For child’s normal growth and development, love and care is very important. A child who is deprived of love and care, faces many psychological problems like his skills and self-confidence remain incomplete. When a child is not satisfied with his needs and requirements, he faces many problems.

Children think that nobody loves them. He has no importance in family and outside the family. He develops inferiority complex. He adopts bad habits because he wants to gain some attention. He shows some behaviors like;

- |                    |                            |                  |
|--------------------|----------------------------|------------------|
| 1. Jealousy/ envy  | 2. Fear                    | 3. Rude behavior |
| 4. Fighting        | 5. Breaking things         | 6. Anger         |
| 7. Stammering      | 8. Bed and clothes wetting | 9. Very shy      |
| 10. Hugging mother |                            |                  |

### **7.1.3 Difference between Normal and Deviant Behavior:**

#### **1. Normal Behavior:**

A person having normal behavior is very cooperative, friendly, trustworthy and polite.

- i. **Cooperative:** A child of 4 yrs of age learns cooperation. They want to play with other children.
- ii. **Adopt Challenges:** They want to adopt or accept new challenges in life because they want to win any challenge.
- iii. **Friendly:** They are friendly by nature.
- iv. **Trustworthy:** People can trust them easily.
- v. **Polite:** They are very polite, soft spoken, humble and kind with others.
- vi. **Love and Care:** they show love and care to everyone.
- vii. **Sharing:** They share their things with others. They care about others feelings.

#### **2. Deviant Behavior:**

It is opposite to normal behavior. Deviant means irregular, unusual and unexpected behavior. A person having deviant behavior is non cooperative, jealous, irritating and creates problems for others.

- i. **Not cooperative:** Such children are not cooperative. They don’t want to play in group and with other children.
- ii. **Fighting:** They are always fighting with their siblings and age fellows. They show attitude to others and are aggressive.
- iii. **Annoying:** They are very irritating for others. Their nature is very annoying and troublesome to others.
- iv. **Jealous:** They are jealous by nature and develop inferiority complex. They always think themselves less important than others.

### **7.2 Reasons of Behavioral Problems:**

#### **7.2.1 Types of Behavioral Problems and their Solution:**

##### **1. Fear**



This habit is also present in very child. Usually a child aged between 2-6 yrs feels afraid of anything. If a child is afraid then it is responsibility of his elders that they act kindly and politely and do not make fun of that child.

### **Types of Fears:**

#### **i. Natural Fears:**

This kind of fear is the result of natural feelings. It is quite natural and the parents should not worry much about it. When a child is grown up, he will automatically leave fear from these things. A child is generally afraid of the following things, which is natural.

- a. Loud noise
- b. Moveable vehicles
- c. Feeling fear on seeing unfamiliar things or human beings
- d. Being alone in darkness or in any unfamiliar place.
- e. Animals of different types.
- f. Beggars.
- g. Graveyard

#### **ii. Imaginary Fears:**

This type of fear relates to the imagination and understanding of the child. He fears from the things that we cannot find out the reasons for his being afraid of.

He fears from;

- a. The things of daily use as ropes, wires, clothes, shadows etc.
- b. Idea of being locked up in the room.
- c. Idea that house may catch fire.

### **2. Bed Wetting**

According to Gesell, "A child learns to control his urinary bladder during daytime first".

They learn control at the stage of 2-2½ years and if they do bedwetting after 6 years then they have some psychological problem. If they do bedwetting, others make fun of them which results in irregular behavior. Children do not generally pass urine on the bed after 3years of age. Boys learn full control on urine late than girls. Sometimes when a mother thinks that the child is completely dry, he may have a sudden urine pass. The child should not be scolded for this as the matter is quite beyond his control. You should behave politely and make them to leave this habit with care and love.

It is wrong attitude to tell horror stories at bed time. After listening horror stories or watching such dramas on television, children wet the bed. So you should be careful about it. Give them water or milk in less quantity before sleeping and ask them to go to bathroom before sleeping.

### **3. Thumb Sucking and Nail Biting**

It is necessary to tell you that this habit is harmless in children. People think that it is very bad habit. Usually when children become grown up and have their own activities, they leave this habit.

If a child is pushed back early from breast feeding or allowed for a little time then he is not satisfied. He fills this deficiency by sucking the thumb or by nail biting. If a child is fed till proper time according to his requirement then this habit does not become strong.

If a child does not leave this habit after a specific age then it is obvious that he has some deficiency of anything or he is searching any shelter from some danger or when he has done something wrong. It is possible that he gains some happiness by sucking the thumb or nail biting.

Children of 1-2 yrs of age suck their thumb or bite nails when they feel their environment uninteresting. So you should provide amusing things and interesting toys for them.

When a child begins to take interest in his surroundings, he feels no need to suck his thumb or bite nail. Thus the habit is gradually removed.

#### **4. Jealousy**

Jealousy is like envy but includes suspicion. Jealousy is often to do with competition e-g; sometimes you may be jealous of a brother or sister because you think your parents love him or her more than they love you, or you may feel jealous about your friend and want to have all his or her attention all of the time.

To stop jealousy, make the child realize his importance in family, appreciate his good deeds/ behavior and involve the child in taking care of young sibling.

#### **5. Telling Lies**

People always think this habit as bad habit. It is a fact that all people in the world tell a lie under specific circumstances. Sometimes very educated and noble persons also tell a lie when it is important for someone's help. If children learn to tell a lie, they generally develop this habit and go on practicing it.

##### **Reasons:**

- i. They want to hide any weakness.
- ii. When they have made any damage and they want to escape from punishment.
- iii. Sometimes they tell a lie in order to enjoy some benefits.
- iv. Some parents expect too good behavior and conduct from their children. They want to see them on a very high good level. In such cases, when a child cannot prove himself according to their wishes, he begins to avoid facts and starts telling a lie.

##### **Methods to remove the habit:**

- i. Elder family members should remove any terror from the mind of a liar child and try to clear out/ escape the things of which the child is afraid and tells a lie.
- ii. We cannot train a child by anger, fear or punishment. It is fact that a child learns all truth and ethics gradually. When he become grown up he will be trained completely.
- iii. If you always punish a child or put him to shame for his faults and bad habits, he then develops the habit of telling a lie in order to maintain his self-respect and avoid punishment.

##### **Remember:**

A child often learns to tell a lie from elders or his playmates. Sometimes parents make many promises to children only to stop them from weeping or please them for time being. But later on, when the promise is not fulfilled the children come to realize that they were false statements. As a result they also try to do the same practice. You should behave very wisely with your children.

#### **6. Fighting:**

Fighting is a child behavior that is listed at the top of undesirable child behaviors. This is a normal behavior in children. Children usually fight with their siblings and parents also snub them in anger but too much fighting is not good. They have to control anger because this may become harmful for others.

Children usually fight on sharing of toys with one another. Make them to share things with other children and take care of others also as fighting hurt others. Tell them to treat everyone with love and care.

#### **7.2.2 Causes of Behavioral Problems:**

Reasons of behavioral problems are as follows;

1. A child is hungry most of the time, when he feels loneliness.

2. When they are worried, tired after school or not physically fit.
3. When they feel boredom or their surrounding environment is not interesting.
4. When there is arrival of new child in the family, they feel unimportant.
5. When parents are always busy in fighting with each other. This leaves negative impact on child.
6. When parents always snub their children, and show anger. Children face problems like inferiority complex and lack of self confidence.
7. Extra-restrictions also lead to behavioral problems.

### **7.2.3 Role of Parents in Behavioral Problems:**

Parents don't behave normally with their children when;

1. They are facing some social or financial problems. Parents should not discuss their problems or issues in front of children.
2. They are worried about training of children.
3. Due to some tension or death or emergency problem in family.
4. Fatigue or some job tensions
5. They are not healthy or have some disease like blood pressure, heart problem etc.
6. They are so much busy in their work and do not have much time for family.
7. They have no knowledge about proper diet, needs and requirements of children as well as their training and development.
8. Not expecting from children according to their age level. Expecting more from them. Parents should not expect more from children as they are in learning process.

### **7.2.4 Role of Siblings in Behavioral Problems:**

Some behavioral problems in siblings are very common and natural, children usually face problem after the arrival of a new child in the family. First child is treated with more love and care than second child.

After arrival of a new child in family, first child feels loneliness, jealousy and less important in family. This is very common. Parents should maintain a balance.

Another reason is when there are large number family members then parents cannot give attention to every child.

### **7.2.5 Role of Friends, Classmates and Teachers in Behavioral Problems:**

School plays very important role in social development of a child. A child spends 6-7 hrs in school. He learns cooperation, tolerance, patience etc in school. Teachers, classmates and friends play a very important role.

#### **i. Role of Friends and Classmates:**

1. Child likes to play with his age-mates, playing with elder children develops inferiority complex because they are more sensible and intelligent so that child feels that he is weak in playing.
2. Due to some failure, a child loses his self confidence, then role of a friend or classmate is very important to rebuild confidence. They should encourage him for a second chance.
3. It is a sign of popularity if friends depend on you.
4. Jealousy creates unhealthy effect on relationships.
5. Child must prepare himself to hear any criticism by his friends and other people so that he can improve his skills.

6. The children who don't follow rules and regulations, their friends and classmates feel hesitate and children feel loneliness.

## **ii. Role of Teachers:**

Teacher is the most respectable person in the world like parents. They give you training and education. But there are some reasons which are responsible for behavioral problems in students;

1. Too much strictness and rude behavior with students.
2. Favoritism of some students.
3. Class strength is huge that teacher can't give attention to each student.
4. Extra home work is given to the students due to which they do not have enough time for extracurricular activities and for their family members.

## **7.2.6 Methods to Reinforce Positive Behavior:**

### **1. Role Model:**

Avoid using abusive language in front of children. Always try to present an ideal character in front of them.

### **2. Motivate Them instead of Criticizing:**

Motivate children by hugging them and taking interest in their work, understanding their problems and try not to de-motivate them.

### **3. Expectations:**

Do not expect too much from children. Always encourage them on what they do.

### **4. Understand Traditions:**

A child should always try to understand family traditions, because a person can live a respected life when he bothers about some specific norms and values.

### **5. Direct Connection:**

Always try to have direct conversation with children, share their problems and help them in their work.

### **6. Admit Bad Behavior:**

Try to admit your fault in front of your child e-g; say sorry for your bad behavior with them without for any specific reason.

## **7.3 Avoiding and Handling Behavioral Problems:**

### **7.3.1 Stoppage of Negative Behavior in Children:**

- i. Avoid conversation:**  
Avoid talking with child when he does something wrong. Let him realize his mistake.
- ii. Avoid physical connection:**  
Avoid hugging them for some time when children are doing something bad.
- iii. Show your anger:**  
Show your anger when a child is doing something wrong. Appreciate other children if they are doing something good in front of your children.
- iv. Avoid warning your child:**  
Avoid warning your child, give them punishment when needed.
- v. Avoid eye contact:**  
When a child is adopting some bad habit, avoid eye contact with them for some time. Turn your face and show your anger.
- vi. Show less interest:**

Show less interest in their activities for some time. Give no attention so that the child will realize that he has done something.

**vii. Make corrections:**

Immediately stop them if they adopt wrong behavior. Try to make corrections after some time by telling them difference between right and wrong.

**7.3.2 Role of Parents, Siblings, Peers and Teachers in Identifying Behavioral Problems:**

How parents, siblings, peers and teachers are helpful in solving child's behavioral problem?

**1. Role of Parents:**

- i. Parents should try to present an ideal character to children. If parents want their children to adopt good habits, it is necessary for them to present an ideal character before them.
- ii. Always treat the child with love and sympathy. Show your emotions with children and discuss.
- iii. Allow children to participate in group games and develop social connection with other children.
- iv. Parents should make them realize the importance of friendship and good friends in their life.
- v. Parents should try to share their emotions with children and discuss problems of children as a friend.

**2. Role of Brother/ Sister:**

- i. Give love and respect to each other.
- ii. Help each other in their work and take interest in their problems.
- iii. Help mother in her household work.
- iv. Elder brother and sister are an example to younger one. They should motivate younger siblings and help parents to train them well.

**3. Role of Age Mates:**

- i. Children learn many good manners from their age-mates. They learn cooperation by playing group games.
- ii. Children motivate each other and share their emotions.
- iii. They learn how to balance and be patient in any relationship, they learn patience to control their anger and learn sense of responsibility.
- iv. Children help each other in achieving their goals and in studies as well.

**4. Role of a teacher:**

A good teacher should have these qualities e.g good command on subject, hardworking, cooperative, humble, polite, responsible etc.

They should know students' problem and discuss with them as a friend.

**7.3.3 Selection of Proper Methods of Handling Behavioral Problems:**

**i. Encouragement:**

Encourage children and motivate them. Give them prizes when required. Children usually adopt bad habits to gain attention. Give attention to them and help them.

**ii. Guidance:**

Guide them with good manners and behaviors, present an ideal character in front of them and help them in their work.

**iii. Avoid too much restriction:**

Don't always impose your decisions on them. Give them some freedom as well. Avoid too much restriction and allow them to learn by their experience.

**iv. Balanced diet:**

Give proper balanced and proper healthy diet to them, too much use of junk food and soft drinks are reasons for their unusual behavior.

For child's proper growth and development, parents, friends and family play most important role.

**v. Avoid unnecessary criticism:**

It creates the feeling of ignorance and anger in children. Don't criticize them unnecessarily. It has negative effects on their personality.

## **CHAPTER 7-BEHAVIORAL PROBLEMS OF CHILDREN**

### **1. Choose and encircle the correct answer from the options given below.**

- i. The children whose brought up are done with care and love and according to the rules/ principles, grow with which emotional experiences?
- (a) positive                      (b) negative                      (c) fearless                      (d) insecurity

- ii. In which habit does the child involve due to the lack of parents love and early leaving of breast feeding?  
(a) jealousy                      (b) thumb sucking              (c) telling a lie                      (d) bed wetting
- iii. The children who face insecurity and societal incompatibility show better skills in children younger than them but even then they look?  
(a) happy                      (b) superior                      (c) tensed                      (d) jealous
- iv. To set the principles for the brought up of children \_\_\_\_\_ is important?  
(a) soft behavior              (b) flexibility                      (c) consistent behavior (d) criticism
- v. Why the warning should be given to children?  
(a) for ignorance                      (b) for attention  
(c) for correction & improvement                      (d) to avoid anger

**2. Write short answers.**

- i. What is the definition of behavior?
- ii. What is meant by behavioral problems?
- iii. What are the reasons of jealousy in children?
- iv. How the habit of fighting develops in children?
- v. Write four causes of behavioral problems.
- vi. What is the role of siblings in behavioral problems?
- vii. What is meant by “to be a role model in front of children”?
- viii. What is the role of age mates in identifying behavioral problems?

**3. Write detailed answers.**

- i. Define behavioral problems. Explain the difference between normal and deviant behavior.
- ii. Write a note on the problems of fear, jealousy and telling a lie.
- iii. Discuss the causes of behavioral problems.
- iv. Write in detail about role of parents in behavioral problems.
- v. Write the importance of friends, classmates and teachers role in behavioral problems.
- vi. Write the methods to reinforce positive behaviors.
- vii. How the negative behaviors can be avoided in children? Write in detail.
- viii. Write the proper methods of handling behavioral problems of children.

**CHAPTER 8- ROLE OF FAMILY AND COMMUNITY IN HUMAN DEVELOPMENT**

**8.1 Parent Child Relationship:**

**8.1.1 Importance of Healthy Parent Child Relationship:**

Parent child relationship is very important. As child development starts from home so childhood observations and experiences influence the future of a child e-g; to develop sense of responsibility in a child, to teach a child discipline and manners, and to develop positive attitude in a child.

There are different levels of child's development. Children develop different expectations from their parents. It is parents' duty to fulfill children needs and expectations. There are following responsibilities of parents;

- i. Do not harm children, do not tease them, do not leave them alone, take care of them and take interest in them.
- ii. Arrange proper education for children.
- iii. Fulfill their economical needs.
- iv. Provide child with moral and bodily health.
- v. Parents should be responsible for child's behavior.
- vi. Maintain close relationship with child.

It is fact that when a child comes in this world, his mind is just like a blank board. Children learn various things from their parents and other members in home e-g; posture of standing and sitting, sleeping hours, speaking styles, manners, eating habits and to respect elders etc.

This is a continuous and permanent process for which rules of punishments and rewards are adopted/ set directly or indirectly. The purpose of teaching such manners is to make them good members of society. That is how children become good members of society and parents also fulfill their responsibilities well.

Parents transfer their traits or qualities to their children including good merits, bad merits, social and economical status etc. No one else can give them unconditional love, honesty, tolerance, solutions to problems that they face. It is important to be responsible to become ideal parents. Parents trust depends upon their age, experience and economics values/ status.

### **8.1.2 Effect of Different Types of Parenting:**

It is an important duty of parents to train their children. They should try to become a role model for their children. It is necessary to give equal attention to the children to train them properly. Appreciate them on their good deeds and stop them from bad habits. Avoid over attention and strictness. Guide them positively. Parents should teach them social understandings and harmony, determination, spirit, consistency, regularity and following up the rules and regulations. Parents bring up their children according to their individual nature. Experts have classified parents into different categories.

- i. Democratic parents
- ii. Authoritarian Parents
- iii. Permissive Parents
- iv. Neglecting Parents

#### **i. Democratic parents**

Training of children is very critical and important stage. Democratic parents train their children in a good manner. Such parents are responsible and sensitive and they do not interfere in the personal matter of the children but they politely lead them to follow the rules and regulations.

Those children who are loved by their parents are more responsible. They think positively in all relations, they are more confident, strong, excited and they perform well in their academic activities.

Democratic parents put responsibilities on their children to strengthen their decision power. Parents democratically deal with their children and take their suggestions to get themselves aware of the thinking



of their children. Such parents only fulfill their desires, needs on the basis of facts and figures. These children become more consistent and have self control to achieve their goals and they also show cooperation. They prove helpful for the parents and society.

#### **ii. Authoritarian Parents**

Such parents are non flexible, strict and critical. They control circumstances through their authoritative power. They train their children through anger and punishment. They talk to them strictly and punish them on every mistake. They show anger and scold them on misbehave and show reactions. Parents over reaction develops negative attitude in their children. Children usually develop lack of confidence and start stammering and they lose trust on themselves.

#### **Flugel Theory:**

“Strict parents make their children rebellious, wild, quarrelsome, cranky and imperious”.

Authoritarian parents deal strictly with their children. They scold them and ruin their personality. Children become stubborn, selfish and moody. Children’s progress and creativity get suppressed and they mostly become mentally ill/ retarded.

#### **iii. Permissive Parents**

Such parents are usually careless. They do not follow any set pattern to train their children. They are not consistent. They allow their children to do whatever they wish to. In some families, children are not stopped from anything and they are allowed to do everything freely or without permission.

#### **Frued Theory:**

Such parents train their children with extra love and care, and with security. Children become self confident, lack of decision power, they start depending on others rather than their ownself. Children depend on parents and elders for very small tasks as well till they reach their age of adulthood. They are weak in studies and extracurricular activities as well.

Beside this they become very shy in building social relationships. In these types of families, children are free to do anything, they are liberal and they do not feel any fear in breaking their values and rules.

#### **iv. Neglecting Parents**

Such parents are emotional, sad and like loneliness. They don’t like to give time and energy to their children. They have no interest in children’s studies. They are usually unaware of their matters. Such types of children are deprived of parents love and care that is why they are not good in social relationship as well.

Parents’ negative behavior is the reason of their social disconnection. It is difficult for them to understand the behavior of other people. Because of lack of trust, they hide themselves in their shell. They fight with their classmates or want to sit alone. Student’s achievement or failure in studies depends on parents training. Because of their family problems, they face difficulties in adjusting themselves in school environment.

### **8.1.3 Effects of Parent Child Relationship on the Development of Child:**

The foundation of child’s personality is laid in the early ages. Family group is that group whose effects are very deep on child’s personality. Because of parents’ psychological nature, children are aware that how parents fulfill their needs and wishes, and parents are responsible in building their character also.

Parents give prizes and encourage their children on their achievement and punish them if they are doing something wrong. Children cannot judge what is right or wrong that is why parents train them with their experiences. Parents train their children with love and care. There are following effects of parent child relationship on the growth and development of children:

**i. Large Number of Family Members:**

In some families, parents cannot give importance to every child. Such children have negative thoughts for parents. They suffer from mental disorder, backwardness and inferiority complex.

**ii. Birth Order:**

The experiences of parents keep on changing with the birth of every new child. First child always gets more attention from family and his/her all wishes are fulfilled. It is because parents consider first child more responsible as compared to younger siblings. He converses confidently because he interacts more time with elders like grandparents, paternal uncles and aunts while younger children spend time more with elder sibling.

**iii. Appearance of Children:**

Parents ignore a child who resembles with any unwanted personality of the family. They do so unintentionally. They do not show happiness on child's birth that a child deserves. On the other hand, a beautiful child gains/ receives more love and care.

**iv. Impact of Gender:**

Parents usually want or wish for a baby boy. It is a common trend of our society. They do not give importance and love to second or third baby girl. Such differences ultimately develop weak personality of a child.

**v. Social Status of Parents:**

Jobless or poor parents usually misbehave with their children. They teach them humbleness, respect and hard work. They develop self-control and habit of waiting for proper time in their children. Children from poor families try to become independent. They usually become victim of social evils in their early ages/ teenage. Parents of middle class family develop high hopes from their children and remain worried about their future and trainings. This makes children tensed and irritable.

**vi. Education of Mothers:**

Educated and working women train their children better as compared to housewives. They develop self confidence and sense of independence in them. They spend less but quality time with their children while housewives seem unsatisfied. Although they spend more time with their kids but work load and continuous stress create irresponsibility and irritation among women. This in turn develops negative behavior in children.

**8.2 Sibling Relationship:**

Relationship of sibling living in a home is equally important. This relationship has positive or negative, long termed impact on child's life. They share different emotions among them. These emotions may include happiness, sadness, jealousy, disappointment, excitement, competition and friendship at the same time. They remain as companions. They spend their early life/ childhood with each other. They develop a unique and close relationship and bond among them.

Less age difference among sibling develops a healthy relationship. They enjoy together, they may tease each other and they quarrel, entertain and giggle together.

They also share and discuss their experiences for example their school results, their friends opinion about persons, likes, dislikes, hobbies, priorities etc. They also welcome each others' advices and opinions.

Elder child takes care of younger ones. Usually young child accepts this care happily. Age difference may create distance between children e-g; if younger child is toddler and elder one is school going or teenager. Elder children especially girls help to bring up their younger siblings. They help their parents happily.

### **8.2.1 Normal Sibling Relationships:**

With the birth of a new child, elder child develops jealousy against a new born young child. Although elder has feeling of love for young children, yet child feels insecure from parents love and attention. This concept is known as 'sibling rivalry'. Children show rivalry and jealousy in many ways e-g; they show childish behavior, cry loud, remain in parents' lap, stammers, use of gestures to show feeling, less control on urine. All these behaviors show that the child is feeling alone and wants to gain attention as a child. Child also shows rivalry by teasing younger child e-g; they put pillow on the face of younger child, throw the child from the bed and they use to say that parents should return the child to the hospital.

When child speaks in anger, shouts, and quarrels, makes swollen faces and uses abusive language while talking, this means that the child is facing some psychological disorder and by doing all these he feels comfort and relaxation. If parents understand child's behavior and feelings then they can easily handle children with humbleness and love.

### **8.2.2 Effects of Sibling Relations on the Development of Personality:**

Siblings have a deep effect on the personality of children especially number, gender and birth etc. According to Erickson, "Interaction with siblings in childhood has no alternative".

The relationship between siblings has many advantages for example; different opinions and competition. They help each other during sports and quarrel; all these experiences develop his personality. There are many expectations from first child because they become intelligent and responsible in young age. First child lose his/ her very importance with the birth of new born baby and it is painful experience. Parents can reduce their tension by guiding them in this phase.

#### **Important information:**

Alfred Adler has declared the emotions of competition and jealousy among siblings compulsory.

#### **Important research:**

According to Bryant and Crockenberg, if the mother has to take care of two small children then she focuses more attention towards new child relatively.

#### **Important information:**

First child has the jealousy that the arrival of newborn child has reduced his expectation. And there is a partnership in parents love whereas young children feel proud of power and privileges of their elder siblings.

### **8.2.3 Role of Parents in Developing Healthy Sibling Relationships:**

When a child starts breaking rule and regulations and doing negative things because of jealousy, they cannot be treated with sympathy and advices only because by this parents cannot stop the feelings of jealousy but they can lower this behavior by their wisdom. There are some ways by which parents and elders can help their children to overcome the problem of jealousy;

**i. Mentally Prepare Them:**

Child should be mentally prepared before the arrival of second child in family by saying that second child will be their friend; he can play with them.

**ii. Assure Them of Love:**

Assure children of love and also assure them that their love will not be divided even after the arrival of second child in family.

**iii. Encourage Them:**

Encourage their good habits and achievements.

**iv. Avoid Competition:**

Identity and personality of every child is different that's why parents should not compare their children.

**v. Accept Them as a Member of Family:**

Take care of new born in making any food item or other different things. Engage elder child too in their work so that they can accept the younger one as their family members.

**vi. Spirit of Sacrifices:**

It is the duty of parents to build the emotions of sacrifice in their children. They should make their children realize that every person of the family has its identity, place and respect.

**vii. Balance in Behavior:**

Parents should balance the responsibilities of children and no privileges should be given to only one child. The elder child should not be preferred over others and the boys should not be given more importance.

**viii. Gap in Birth:**

There should be appropriate gap between the births of children so that the child should get importance and love which is his right.

**8.3 Peer Relationships:****Peer group:**

Peer means people of same status and same age. Peer group is a group in which there are children of same age and same class. Social relation or contact with peers is very important for children.

To get social compatibility it is very important to understand the needs, desires and disciplines of that age. Children learn many things in the company of peers and while playing with them they learn many good things. Their likes, games and educational activities are usually same.

**What is peer group?**

The term peer group is used for every that social relationship which is between children. The word peer means same status, similar or same age. Peer group means a group of children of same age and same class.

**8.3.1 Importance of Peer Relationships:**

Peer relationships have a very deep effect on the personality of child. From pre-school to adolescence, expectations are according to their age and personality. They share their personal and social experiences and learn cooperation.

In pre-schooling and early years of schooling, peer groups help children in developing and maintaining social relationships. Children are bound to share their experiences, games and other hobbies with their age mates.

In middle childhood, children make their friends according to their gender.

In adolescence, peer groups face many different experiences together for example;

1. They experience the need of a true friend. This experience helps them in their future life.
2. They learn gender differences, gather information according to gender for e-g; boys should be self confident and girls should be loving and patient.
3. They learn cooperation when working in a group or society.
4. Behavior of friends teach them love and care and spirit of sacrifice.
5. They try their best to gain importance and respect from people.
6. Children learn self confidence and learn the value of true family relationships.

### **What is the importance of peer?**

Every person likes to spend more time in the company of his peers because there is a harmony in their thoughts. They don't have fear of criticism or objection. They accept each other's advice easily and they have less jealousy and negative thinking among them.

#### **Important information:**

According to Host and Robinstyen, children can play with their peers for a long time and they learn a lot during playing.

### **8.3.2 Negative and Positive Effects of Peer Pressures:**

For child's social development and mental relaxation, a healthy peer relationship plays the most important role. This relationship has both positive and negative effects on the personality of children.

#### **Which factors have positive and negative effects on development of personality?**

The factors of appreciation and testimony, blame, cooperation and conflicts, competition and challenge, strength and ability, and obedience have positive and negative effects on the development of personality.

#### **i. Positive Effects of Peer Pressure:**

1. This pressure creates social maturity in the personality of a child.
2. They learn many good things and hobbies because of some taunts and make them part of their personality.
3. They learn cooperation by playing and interacting with other children.
4. They learn respect and patience.
5. They learn control on their feelings of anger.
6. Peer relationship is not only important for physical development of children but also for their mental development. This relationship improves child's abilities and educational performance.

#### **ii. Negative Effects of Peer Pressure:**

There are some negative effects of peer relationship as well which are as follows;

1. Some children pinpoint other children by taunting and making fun of them. Because of all this children face problems like inferiority complex.
2. In company of friends, children do some bad things against their parents; this will create a distance in parent-child relationship.
3. Sometimes peer pressure affects children in a very negative way that they become stubborn and lazy.

### What is the negative effect of peer relationship?

Relationship with peers has negative aspect also. Some children become victim of oral and physical abuse easily.

#### Development of Peer Relationship

Age	Love & Care, Affection	Friendship	Peer Group
<b>Birth- 2 yrs</b>	1. Like to play alone then gradually they learn developing social relationship	1. Show their relationship by facial expressions	----
<b>2 ½ -6 yrs</b>	1. Some children like to be alone. 2. Increase in their mental development. 3. They learn social development while playing. 4. Give preference to running and playing games.	1. Time pass relationship due to toys and games. 2. Become friends for playing only.	1. There is no friendship only cooperation.
<b>9-11 yrs</b>	1. Develop good peer relationship. 2. Like to play group games; they make rules and regulations for playing any game.	1. Friendship is due to trust and cooperation. 2. Develop good friendship. 3. A conflict develops very quickly in close friends.	1. Prolong friendship due to good relationship.
<b>12-20 yrs</b>	1. Develop good sharing and interaction. 2. Less interest in fighting and jumping games. 3. Children spend most of their time with peers as compared to other relationship.	1. Make friends with same thinking level. 2. They make friends having same behavior and habits. 3. Many good and close friends leave them.	1. Age-mates make a separate group e-g, club, parties etc. 2. Friends with same thinking level expect trustworthy relationship. 3. Develop faithful and trustworthy relationship.

### 8.3.3 Effects of Bullying in the School on Children:

The environment of school plays an important role in building or ruining the personality of a child. New environment, teachers and peers have a good impact on the child but sometimes there are some classmates which bother their class fellows by bullying or abusive language.

‘**Bullying**’ is such a behavior with the child which teases him physically or mentally. Such children can soon be identified for example their body posture and height is less than their peers. Such children are not famous, not liked by peer and are introverts. They usually live alone. They are usually shy due to lack of social development.

Boulton's (1999) research showed that the children who live under pressure are usually sad by heart, cry often and make protective gestures. These bullied children bear the cruelty and harshness quietly and do not defend themselves.

Common practices have shown that the gestures of the body and its positive and negative effects have a great impact on the personality of a child. Different types of complexes can also be developed. Weak children are usually afraid of the things and remain sad. The children who suffer from bullying are usually from such families in which the parents are authoritative and the children are dependent on them for their needs. Such children are not confident and are not self-motivated.

According to the Nansel et al. (2001), 10% of the children in adolescent age are frightened by bullying. Rowdy children expect that all the other children will give them their precious things like money without any resistance.

Bullied children are not willing to go to school and are in a habit of giving excuses for taking off from school. Children who are brought up in family problems also face social rejection.

#### **Humiliation and mocking in bullying:**

Humiliation and mocking is also a type of bullying. If any child stays away from group and shows unsocial behavior then class fellows make fun of him, call him with taunting sentences and tease him physically sometimes.

#### **8.3.4 Way of Tackling Bullying in School:**

In all the schools children are in a habit of misbehaving and annoying other children. This kind of annoying is usually hidden from the teachers. According to psychology, bullied children are self-centered and they become complex because of any of their weakness. They have less tolerance level. They take bullying serious and stay sad. Teachers and parents should try to find a solution if the children complain about social rejection or attitudes of peers. Parents and teachers can find out the solution of these problems by adopting certain methods such as;

1. They can make children socialize with their class fellows and sort out their friends. One sincere friend can prevent the child from being lonely.
2. Parents and teachers should find out some productive activities that can keep the students busy and enable them to learn manners. Children should be encouraged while taking part in co-curricular activities.
3. Children should be taught to work in groups. The abilities present in a child should also be appreciated so that their self-confidence is built.
4. Check and balance on the activities of the students should be improved by the teachers especially during break time so that the environment should not be spoiled.
5. The students should be counseled regularly about bullying and a psychologist should also be consulted if possible.
6. The students not admitting the rules of the school should not be punished strictly but they should be warned for any other further unpleasant happening.
7. Along with all these steps sense of responsibility, hard work and love should also be inculcated among the children.

#### **8.4 Role of a Caretaker:**

The personality of the person who is upbringing the child also has an impact on child's personality so that the parents should choose a caretaker with great care. Many facilities can be chosen for this purpose like daycare center, persons from the family and the part time or full time servants. There are many reasons for a family to choose a caretaker for example;

1. The parents are either doing a job or they are completing their education.
2. One partner is busy with job and the other one is sick.
3. In case of death of one partner or divorce, there is a need of caretaker.
4. By interacting with other children, the process of growth of children is improved.
5. Child needs a caretaker outside the school or in vacation.

This is true that mother can take care their children in a best way as compared to any other caretaker. So, following points should be kept in mind while selecting a caretaker;

1. Try not to take decision in a hurry while selecting caretaker.
2. First test them for few days before permanent selection.
3. For some days mother should present and observe caretaker then take any decision.
4. If you think they are not upto your expectations then expel them as soon as possible because early years of child's life are important for development.
5. In early age, children like to listen stories and these stories have a very important effect on their personality.
6. Make sure that caretaker is not conveying bad thoughts and wrong views to children.

#### **8.4.1 Effects of Family Members, Relatives, Daycare Staff and Teachers as a Caretaker on Children:**

##### **1. Family Members and Relatives as Caretaker and their Impact on Children:**

Advantages of family members/ relatives as a caretaker:

- i. They give love and care to the children and are very close to them because of their blood relationship.
- ii. Children can live in neat and clean environment of home.
- iii. Children can play in secure environment.
- iv. Proper washroom facility is available for children so that they do not become victim of dangerous diseases.
- v. Children can easily recognize their relatives.
- vi. Old age people also think that they are doing something with responsibility.
- vii. Old age people develop close relationship with children.
- viii. Old age people give tips by their experience when children get sick and it helps them a lot in their recovery.

##### **2. Maid as Caretaker and her Impact on Children:**

Parents select maid for their house, advantage of this is that children can grow within their home environment. It is very important to select housemaid very carefully and train them regarding children growth and development. Mother should guide them the responsibilities of children growth. Maid is responsible for cleanliness, food and development of children.

##### **Responsibilities of housemaid**

- i. In daytime, maid is responsible for the food of children; they must have the knowledge about their proper diet e-g milk and milk products. Maid should give them with responsibility.
- ii. They should know about their sleeping time and give them proper sleeping hours.



- iii. There should be a separate playing area for children for their security and safety.
- iv. Help children while taking bath and give them bath as well if they are infants/ toddlers or 2-5yrs old.
- v. Treat children with love and care.
- vi. Observe them while they are playing.
- vii. Amuse them with interesting stories.
- viii. Take care of children while doing other household tasks or try to do the tasks when children are sleeping.

### **3. Daycare Staff as Caretaker and their Impact on Children:**

When mothers are doing jobs and their children are in the age of childhood or less than 5 yrs then the requirement of establishing a daycare center is raised by the social welfare centers. They develop daycare centers and select women as field officers because women can easily understand the responsibilities of taking care of children. So working women can easily leave their children and do their jobs.

Following are some facilities which can be provided in daycare centers;

- i. Milk for children
- ii. Afternoon lunch
- iii. Care and security
- iv. Arrangements of different games and playing area
- v. Montessori education for children
- vi. Good growth and development

Daycare staff is trained in different departments. These centers are in many big cities for example Karachi, Lahore, Rawalpindi, Multan, Faisalabad and in Bhawalpur. In these centers, staff is giving love, security and good growth and development to children.

### **Responsibilities/ Duties of Daycare Staff:**

Daycare staff is well trained. Their responsibilities include taking good care of children, proper diet, care while playing, good training, give proper refreshments and milk, help them in learning stories.

### **Effects of Daycare Staff on the Personality of Children:**

From 7am-3pm children spend their time with daycare staff. Daycare staff has a very deep effect on the personality of children because;

- i. This staff gives them proper place and environment like home and fulfill their requirements.
- ii. Instead of family member, daycare staff fulfills all the responsibilities which should be fulfilled by mother e-g good health, different playing areas and to use free time in a better way.
- iii. Daycare centers give facilities to live in a group. The time children spend with their age mates has a very deep effect on their personality. They also learn what is right and what is wrong.

### **4. Teachers as Caretaker and their Impact on Children:**

Teacher child relationship is very old and strong. Teacher plays the most important role in social development. They observe children needs and requirements and train them with their experience.

### **Responsibilities/ Duties of a Teacher:**

Teacher plays important role in social development of children in following ways;

#### **i. Attention**

To develop good social skills in children it is necessary to understand their skills, needs and requirements and then arrange different activities in such a way that they can engage with teacher and other children.

**ii. Motivation**

Some children like to be alone in their own shell and they don't like to interact with other children. A good teacher divides students in different groups and arranges such activities in which they can interact with other children. In small group they can easily interact with their age mates.

**iii. Encouragement**

Encouragement gives motivation to a child. This is the responsibility of teacher to encourage and support children when they are doing something good.

**iv. Healthy Competition**

Competition can give strength and motivation to children; they learn many things with new and tough competitions. They learn cooperation while working in a group. A healthy competition develops good friendship.

**v. Respect and Dignity**

Teacher should take care of children respect and avoid taunting and snubbing them on small things. Try not to discuss their weak points in front of class mates but discuss with them separately because of this children give respect to their teachers.

**vi. Monitor**

Teacher's monitoring helps students and stops them to fight with other children. If any of the child is very irresponsible or doing odd things then it is the responsibility of a teacher to warn and guide the child.

**vii. Curiosity**

Curiosity is a natural habit in children. They ask many questions from teachers and the teacher should encourage and guide them properly.

**viii. Responsible and Confident**

Teacher should contact parents and instruct them and discuss with them the performance of their children. If children are weak in studies then give them extra time and guide them.

**ix. Freedom of Expression**

Teacher should develop a friendly environment in the class so that children are free to discuss and share their thoughts. If environment is strict then children are afraid of sharing their expressions and views.

**x. Individual Differences**

It is very important to understand the individual personality of children. Every child is different; some children can easily learn new things and others need extra time to understand them. So it is very important to understand the personality of children. For bright future of children, teacher should guide them with good behavior.

**xi. Close Communication**

There should be a very close communication between teacher and student so that teachers are aware of their problems. Try to develop a friendly relationship with children and engage them in such activities in which they can have a good relationship with teacher and class mates.

**xii. Unbiased**

Some children are active and strong, and some are weak. Teacher should try to develop an unbiased relationship. Personal likings and disliking of teacher have a very negative effect on the personality of child. Good teacher guides and trains children according to their skills and abilities, this can develop

trust and a very strong relationship between a teacher and a student. There should be no discrimination and favoritism by the teacher.

#### **8.4.2 Duties and Responsibilities of Caretaker for Elders:**

Old age people are free from their responsibilities, and they are weak physically and mentally as well; heart problems, broken teeth, eyes and ear problems and their immune system is also very weak, that's why in order to maintain their health it is important to give them proper care and diet for their nourishment.

It is the duty of parents to give respect to their parents in front of children because children learn these things from their parents. Train your children in such a way that they can give respect to elders. Grand children care and respect and help old age people a lot in their good health and relaxation. Social welfare centers in Punjab made different old age homes for old age people in which doctors, nurses, housekeepers and staff are present and all facilities are given to them according to their needs.

#### **Duties and Responsibilities of Caretaker for Old Age People/ Elders:**

Elders whether at home or in any daycare center; their care and responsibilities are as follows;

- i. Give them light and semi solid food.
- ii. Value their suggestions while taking any decision.
- iii. Help them while they are sitting on chair, going to washroom and taking bath.
- iv. For their entertainment, read newspapers for them and help them in writing and reading letters.
- v. Help them while taking bath and washing face and hands as well.
- vi. First aid facility should be provided.
- vii. Help them when going out from home for recreation purpose.
- viii. Fulfill all their needs and requirements for example cleanliness and grooming.
- ix. Contact doctor, ambulance service and police in need of emergency.

#### **How do Vincet and Brinkinridge define behaviors of children?**

According to Vincet and Brinkinridge, the behaviors of children are the result of birth characteristics, effects of environment, social experience and education. The intensity and maturity of behaviors depends on the experiences of early life that is why there is a need of making the present behavior better for building the habits of children positive in future.

### **CHAPTER 8-ROLE OF FAMILY AND COMMUNITY IN HUMAN DEVELOPMENT**

#### **1. Choose and encircle the correct answer from the options given below.**

- i. According to Frued, children whose parents train them with extra love and care, and with security become \_\_\_\_\_ psychologically and emotionally?  
(a)self confident      (b) self independent      (c) rebellious      (d) dependent
- ii. According to which expert strict parents make their children rebellious, wild, quarrelsome, cranky and imperious?  
(a)Flugel      (b) Frued      (c) Erikson      (d)Alfred Adler
- iii. The feelings of competition and jealousy among siblings are \_\_\_\_\_?

- (a) Compulsory      (b) unnecessary      (c) pleasant      (d) positive
- iv. What effect do the children get while playing with their peers/ age mates?  
(a) become aggressive      (b) feel psychological stress  
(c) learn more      (d) go away from educational success
- v. How many hours do the children spend under the supervision of teacher?  
(a) 4-5      (b) 6-7      (c) 3-8      (d) 9-10

**2. Write short answers.**

- i. Write the responsibilities of parents related to children?
- ii. Write the names of different types of parenting?
- iii. What are the effects of neglecting parents' on personality of children?
- iv. What is meant by 'Sibling Rivalry'?
- v. Write the benefits of siblings' company?
- vi. What is Peer Group?
- vii. What is the importance of peer relationships?
- viii. Write the definition of bullying in school?
- ix. What is meant by 'humiliation and mocking' in bullying?
- x. What are the facilities of daycare centers?
- xi. Write the responsibilities of caretaker for old people/ elders.

**3. Write detailed answers.**

- i. Write the effects of parent child relationships on the development of child.
- ii. Write the role of parents in developing healthy sibling relationships.
- iii. Write in detail the importance of peer relationships?
- iv. Write the ways of tackling bullying in school.
- v. Write positive and negative effects of peer relationships/peer pressure.
- vi. Write down the responsibilities of maid as caretaker.

Write the importance of the role of teacher in the development of children.