



**CLASS IX**

**HOME SCIENCE**

**CHAPTER 3**

**UNIT VIII**

**GROWTH AND DEVELOPMENT**

**SOLUTIONS**

**TEXTUAL QUESTIONS AND ANSWERS**

**Q1. Who are babies?**

**Ans:** The term baby is used to refer to the very young offspring of human. During first few days of life the baby tries hard to adjust to the new environment solely dependent on its mother. With passing of time the baby becomes more independent and self-reliant and is able to move on its own.

**Q2. Describe the nature of growth in height and weight of babyhood.**

**Ans:** The general pattern of growth in height and weight, outlined by **E.B.Hurlock** are as follows:

**Height:** By the time the baby is four months old, he measures between 23 and 24 inches, at one year the average height between 28 and 30 inches, and at two years approximately 32 to 34 inches tall.

**Weight:** Weight varies widely. It ranges from 2kg – 3.5kg or more at birth. By 2 -4 months the baby weighs 5 - 6 kg. By 4-6 months the baby weighs 6 -8 kg. By 6 -8 months 8.5 – 9.5 kg. By the end of the year the baby weighs approximately 10 kg.



**Q3. Describe the sequence of motor development in the different organs of the body during babyhood.**

**Ans:** Development of control over the muscles follows a general predictable pattern. The approximate age at which muscle control appears in different areas of the body are –

**Head Region:** Control of the head muscles comes early in life. The movement of eyes, smiling, laughing and raising of the head are learnt soon. After four months, a normal child is capable of different eyes movements.

The baby is able to hold his head occasionally erect by 1 month. By 4 months, the baby can raise his head off the shoulder and hold it so for about 3 seconds. By four to six months, most babies can hold their head up.

**Trunk Region:** At the time of birth the infant is not able to turn to sides or from back to the stomach. At 2 months it can turn from side to back, at 4 months from back to side and at 6 months from one side to another. At the age of 20 weeks, the infant can take to a sitting posture. At 9 or 10 months a baby can sit alone without support.

**Leg Region:** Crawling and creeping appear between 8 and 10 months. After 10 months, the infant learns to walk on the knees. The ability to stand up develops by the age of tenth month. After this the infant learns to walk with support. By 18 months a normal child can walk without support.

**Arms and Hand Region:** The arms and hands of the infant are active since birth but there is no co-ordination of movement in the beginning.

Independent working of the thumb which is necessary for the function of hand and fist, begins in the 3<sup>rd</sup> and 4<sup>th</sup> month of life. Around 5 months, the baby can close its fist. By 6 or 7 months the child can pick up different things. By 10 months the baby can put objects in its mouth and can hold his milk bottle and put in its mouth.

The ability of putting on clothes develops at about one year of age.



**Q4. How does the physiological pattern of eating, sleeping and the elimination established during babyhood.**

**Ans:** Babyhood is the time to establish important physiological pattern of eating, sleeping and elimination.

**Eating pattern:** From birth to 4 or 5 months of age, all eating is in the form of sucking and swallowing. Therefore the food must be in liquid form. The habit of chewing and biting develops around 6 months. Disliking of semi-solid and solid food develops from prolonged breastfeeding.

**Sleep pattern:** During the first weeks of babyhood, a baby sleeps almost 8 to 9 hours in the daytime and about 8 hours at night, which is increased to 10 hours at 12 weeks and then remains constant upto the age of 1 year. During the first 3 months, there is a decline in day sleep which is balanced by an increase in night sleep.

**Elimination pattern:** Bowel control begins at six months on the average. Bladder control is established between the ages of 15 to 16 months. Proper control of bladder and dryness during daytime can be expected after the completion of two years.

**Q5. How does emotion of fear develop in children?**

**Ans:** The baby experiences the emotion of fear due to sudden harsh noise, strange persons, objects etc. At this age, they fear animals, dark rooms, high places etc. Any situation which is different from what the baby is accustomed to gives rise to fear.

**Q6. How does the baby show off his anger?**

**Ans:** Typically baby shows off his anger in the form of screaming, kicking, waving the arms and throwing away anything that comes within his reach. During the second year, babies may also jumped up and down or sometimes throw themselves on the floor.



**Q7. Describe the early forms of social behaviour of babyhood.**

**Ans:** Early social experiences play an important role in determining the child's social relationships with others. Six weeks to six months is termed as "critical" in the development of good social behaviour.

The first social smile usually appears at the age of 6 weeks. Between the second and third month of life the baby's ability to distinguish people from inanimate objects develops which enable him to discover the one who supplies his needs. At this age, he shows his contentment if he is with people. All he wants is attention from someone. By the fourth and fifth month the baby starts responding to others, by six months the baby can react to scolding, smiling and anger. By the sixth and seventh month, the baby can distinguished between friends and strangers by smiling to the former and showing fear to the later. It is also the beginning of "the attachment age", the time when babies become strongly attached to their mother. By eight and nine months, the baby attempts to imitate the speech, simple activities and gesture of others. Interest shifts from play materials to playmates during thirteen and eighteen months. By the second year, negativism, in the form of stubborn resistance to requests and demands of adults normally appear. By the end of babyhood however the young baby can co-operate with adults in a number of simple routine activities.

**Q8. How does a baby gain knowledge of things around him?**

**Ans:** The earliest knowledge of baby about things around his/her comes from his/her sensory exploration by looking at, listening to, touching it, smelling and tasting anything they can. Later, it gains more knowledge through handling whatever is within its reach.

**Q9. How does the concept of self-develop in a baby?**

**Ans:** A baby's self-concept begins to develop at birth. It begins with how adults respond to him/her. Parents and caregivers create a positive emotional bond with an infant through warm and caring interactions. The physical self-concept develops first, followed by psychological self-concepts. The baby discovers the meaning about his/her own body by looking at himself/herself in the mirror and handling the different parts of his/her own body. Psychological self-concepts are based mainly on how their parents treat them. Before the end





**Q7. The total life span of man is divided into ..... stages.**

- a) 12                      b) 15                      c) 10                      d) 18

**Ans.** c) 10

**Q8. Prenatal means the period between ..... and birth of the baby.**

- a) Conception    b) Maturation            c) Hospitalisation    d) Marriage

**Ans.** a) Conception

**Q9. The food of a five months old baby should be..... form.**

- a) Soft                      b) Liquid                      c) Semi- solid            d) Semi – liquid

**Ans.** b) Liquid

**Q10. Appropriate height of a one year old baby is between..... inches.**

- a) 28 - 30            b) 26 – 28                      c) 24 – 26                      d) 30 – 32

**Ans.** a) 28 – 30

### VERY SHORT ANSWER QUESTIONS

**Q1. What is the most important development during the early years of life?**

**Ans.** Motor development

**Q2. When does motor development begins in a baby?**

**Ans.** By end of fourth month of pregnancy

**Q3. How does a baby show off his curiosity?**

**Ans.** A baby showed his curiosity by facial movement, opening his mouth and wrinkling his forehead.



**Q4. Name the emotions associated with screaming and crying.**

**Ans.** The emotions associated with -

Screaming – Anger and Crying – Fear.

**Q5. At what age does the baby hold his/her head upright positions?**

**Ans.** By the age of four- six months the baby holds his/her head upright position.

**Q6. At what age does a baby control bowel and bladder movement?**

**Ans.** By two years baby controls bowel movement and by 15 –16 months baby controls bladder movement.

**Q7. How many subdivisions are there in the life span of man?**

**Ans.** Ten subdivisions are there in the life span of man.

**Q8. At what age can a baby walk without support?**

**Ans.** By the age of 18 months, baby can walk without support.

### SHORT ANSWER QUESTIONS

**Q1. Differentiate between growth and development.**

**Ans.** Growth refers to physical aspects of changes i.e. quantitative changes, like changes in size, shape and proportions of the parts of the body

Development - development refers to qualitative changes occurring as a result of maturation and learning.

**Q2. Why does growth pattern differ in different babies?**

**Ans.** Maternal malnutrition, stress and strain and some other unfavourable condition during pregnancy.



**Q3. Name some fears response during infancy.**

**Ans.** Attempt to withdraw from the frightening objects, accompanied by crying and temporary holding of breath or turning his/her head away and hiding the face.

**Q4. Explain the development of sense organs during babyhood.**

**Ans.** The sense organs develop rapidly during babyhood and are capable of functioning with the development of eye muscles by the third month, the baby can see objects clearly. The sense of smell and taste which are well developed at birth continue to improve during babyhood. The sense of hearing also develops rapidly during babyhood. The baby is highly responsive to all skin stimuli because of its thin texture.

### LONG ANSWER QUESTIONS

**Q1. Explain the development of common concepts during babyhood.**

**Ans.** Many of the important concepts needed for adjustment to life are learned during babyhood. The most important concepts that begin to develop during babyhood are as follows-

**a) Concepts of Weight:** A baby perceives a small object as light in weight and large one as heavy. Because of this error in perception, he frequently drops the thing he is examining.

**b) Concepts of Space:** During the second year, babies can reach for object which is within twenty inches, indicating that they are able to estimate distance.

**c) Concepts of Time:** A baby has no idea of the length of time needed for a specific job such as feeding himself. He has no concept of time duration. It is at about the age of two years that the average baby knows and uses time indicating words like today, yesterday, etc.

**d) Concepts of Self:** The physical self- concepts develop first, followed by psychological self- concepts. The baby discovers the meanings about his own body by looking at himself in the mirror and handling the different parts of his own body. Psychological self- concepts are





based mainly on what his parents and other significant peoples think of him. Before the end of babyhood most babies know they are either a boy or a girl.

**e) Social Concepts:** A child can distinguish between familiar and unfamiliar persons at five months of age. He can distinguish angry, frightened, and friendly voices.

**f) Concepts of Beauty:** A baby responds to different colours during babyhood. He/she likes to listen to lullabies. The baby is able to use the term pretty.

**g) Concepts of Comic:** At four months babies enjoy blowing bubbles in their milk and splashing their bath water. At six months they get enjoyment from dropping things and at one year they like to make funny faces. At two years they can laugh at their own funny images.

**Q2. Enumerate the physical proportions during babyhood.**

**Ans.** During babyhood head growth slows down, while trunk and limb growth increases.

**i) Bones** – Bone development is very rapid during the first year and slows down during the second year. The number of bones increases and the soft spongy tissues of the bones gradually harden at different rates in different parts of the body.

**ii) Teeth** – The first teeth to cut are those in the front and the last to appear are the molars. By the end of one year the average baby has four to six milk teeth and by the end of second year sixteen teeth.

**iii) Nervous system** – One fourth of the adult brain weight is attained at birth, half by nine months and three fourths by the end of second year. Weight of cerebellum is responsible for body balance and posture control, triples in weight during the first year.

**iv) Development of sense organs** – The sense organs develop and function during babyhood. He can see an object clearly by the end of the third month. Sense of hearing, smell and taste develops and improves during babyhood. The baby is highly responsive to skin stimuli because of its thin texture.





**iii) Babyhood** – From 2 weeks to 2 years of age. With passing of day, week and month, the individual becomes more independent and self-reliant and is able to move about on his own.

**iv) Early childhood** – From 2 years to 6 years of age. Early childhood is also known as pre-school age, when children go to preschool to learn the rudimentary knowledge of reading, writing and arithmetic. During this time, children learn to make social adjustments to his family members and to those outside the family circle with whom he comes in contact.

**v) Late childhood** – 6 to 12 years of age, the stage of elementary school age, when children go to proper schools to gain the knowledge that are considered essential for successful adjustment to later life. It is also a time when children form the habit of being achievers, underachievers or overachievers. During this time children prepare physically and psychologically for adolescence and become sexually mature.

**vi) Puberty** – 12 to 13 years of age. This is the period when the child's body transformed into an adult body. It is also marked by maturation of sexual organs.

**vii) Adolescence** -13 to 18 years of age. This is the period when the child is growing to maturity. It is also the beginning of adulthood where immense – necessity of adjusting to the demands of society has to be faced.

**viii) Early Adulthood** - Eighteen to forty years of age. This is the period when the individuals have completed their growth and reach the age of maturity for marriage and is capable of procreation.

**ix) Middle age** – Middle age is generally considered to extend from 40 – 60 years of age. The outset is marked by the physical and mental changes. There is usually a decline in physical vigour, accompanied by decline in mental alertness.

**x) Old age** – From 60 years to the end of the life. It is the closing period in the life span. It is a period when people move away from a more desirable period to an uncertain future.

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