

Long Answer Questions

Q. 1. During adolescence, the body of boys and girls undergoes certain changes. Given below are a few of those changes. [NCERT Exemplar]

- a. Broad shoulders
- b. Wider chests
- c. Wider region below waist
- d. Growth of muscles
- e. Development of mammary glands
- f. Growth of facial hair
- g. Acne and pimples on face
- h. Development of sex organs
- i. High-pitched voice
- j. Growth of pubic hair

Categorise these changes into those that occur in boys and those that occur in girls.

Ans.

Body changes during Adolescence	
Boys	Girls
Broad shoulders	Wider region below waist
Wider chests	Development of mammary glands
Growth of muscles	Acne and pimples on face
Growth of facial hair	Development of sex organs
Acne and pimples on face	High-pitched voice
Development of sex organs	Growth of pubic hair
Growth of pubic hair	

Q. 2. Given below are certain food items required for proper nourishment of adolescents. Name the nutrients present in the food items and write their functions. [NCERT Exemplar]

S No.	Food Items	Major Nutrient	Functions
1.	Pulses and nuts		
2.	Oranges and amla		
3.	Sugar, roti		
4.	Oils		
5.	Vegetables		

Ans.

S. No.	Food Items	Major Nutrient	Functions
1.	Pulses and nuts	Proteins	Growth, repair of body cells
2.	Oranges and amla	Iron and Vitamins	Formation of blood keeps the body healthy
3.	Sugar, roti	Carbohydrates	Provide energy
4.	Oils	Fats	Provide energy
5.	Vegetables	Vitamins and Minerals	Keep the body healthy

Q. 3. In human females, each time during maturation and release of egg the inner wall of uterus thickens. Is this thickening permanent? Give reasons. [NCERT Exemplar]

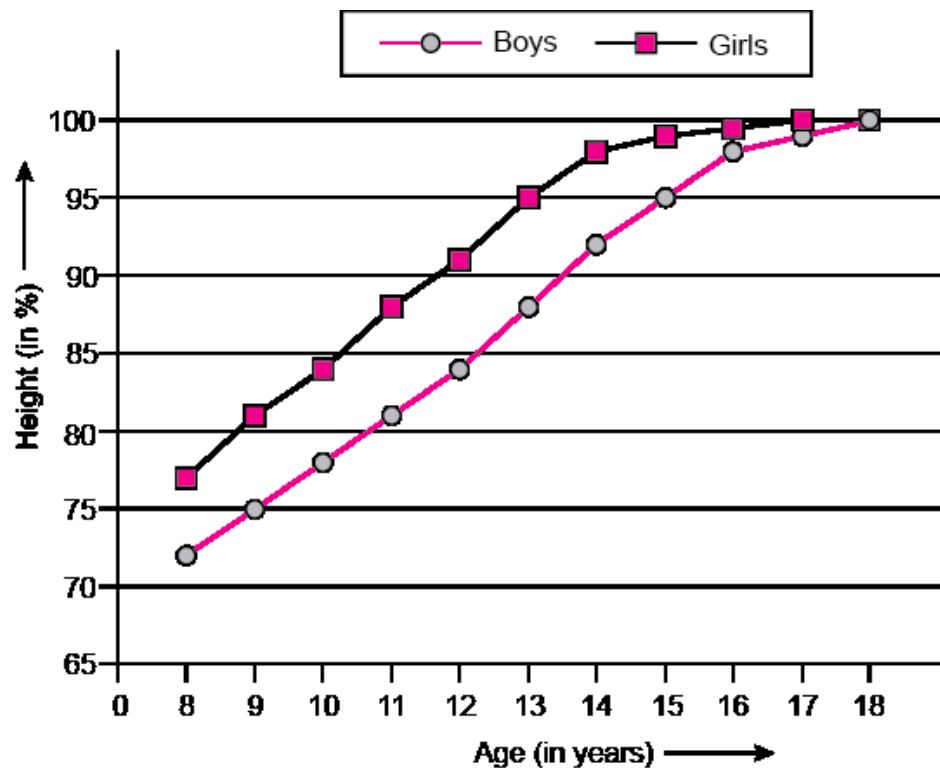
Ans. No, this thickening of the uterine wall is not permanent. If the egg gets fertilised, it starts developing and gets embedded in the uterine wall resulting in pregnancy. During pregnancy no more eggs are released and the thickened lining is discharged only when the baby is born. However, if fertilisation does not occur, the released egg and the thickened lining are shed off resulting in menstruation.

Q. 4. John and Radha were classmates since childhood. When Radha became eleven years old, she developed a little swelling on her neck. She visited the doctor who started medication for her. After a few years, John also developed a slight protrusion on his throat. He got worried and went to the doctor. But, the doctor assured him that it was a normal feature in boys while they are growing up. Can you think of any reasons for the difference in diagnosis? [NCERT Exemplar]

Ans. The swelling on the neck of Radha may have been because of goiter, a condition of the thyroid gland during which the gland produces insufficient quantity of thyroxine. However, the protrusion in John's throat would be Adam's apple, a result of growth of voice box in adolescent boys.

Q. 5. Observe the given chart and graph carefully and answer the questions that follow. [NCERT Exemplar]

Age in Years	% of full height	
	Boys	Girls
8	72%	77%
9	75%	81%
10	78%	84%
11	81%	88%
12	84%	91%
13	88%	95%
14	92%	98%
15	95%	99%
16	98%	99.5%
17	99%	100%
18	100%	100%



(i) Which of the line represents the height of boys?

(ii) Which line represents the height of girls?

(iii) What is the difference between the pattern of increase in the height of boys and girls?

(iv) Is this pattern true for each individual?

Ans. (i) The red line represents the height of boys.

(ii) The blue line represents the height of girls.

(iii) At the onset of puberty, girls grow faster in height than the boys and by the age of 18 years, approximately both reach their maximum height.

(iv) No, the rate of growth in height varies among individuals. Some may grow in height suddenly at puberty and then slow down, while other may grow gradually.

Q. 6. Our government has legalised the age for marriage in boys and girls. Give reasons as to why one should get married after a certain age. [NCERT Exemplar]

Ans. In our country, the legal age of marriage is 18 years for girls and 21 years for boys. This is because teenage mothers are not prepared mentally or physically for motherhood. Early marriage and motherhood causes health problems in both mother and the child. It also curtails employment opportunities for the young woman and may cause mental agony as she is not ready to shoulder responsibilities of motherhood.

Also, the boys before that age may not be mentally matured and financially secure enough to take on the responsibilities of a family.