

CBSE Class–VIII Science

NCERT SOLUTION

Chapter-10

Reaching the age of Adolescence

1. What is the term used for secretions of endocrine glands responsible for changes taking place in the body?

Ans. The term used for secretion of endocrine glands is hormones, which is responsible for various changes taking place in the body.

2. Define adolescence.

Ans. Adolescence is the period of life, when the body undergoes changes, leading to reproductive maturity. It begins around the age of 11 and lasts till 18 or 19 years of age. The period of adolescence may vary from person to person.

3. What is menstruation? Explain.

Ans. Menstruation is the process of the shedding of the uterine lining on a regular monthly basis in woman. During menstruation the uterus wall along with blood vessels break off. This causes blood to come out and a new wall of uterus is formed. Menstruation lasts generally lasts for 4 to 5 days.

4. List changes in the body that take place at puberty.

Ans. The onset of puberty brings about:

- Growth of the reproductive organs which begin to function.
 - Hair growth at various places of the body. Breasts develop in girls and facial hairs appear in boys.
 - Voice of the boys becomes hoarse as voice box enlarges during adolescence.
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5. Prepare a table having two columns depicting names of endocrine glands and

hormones secreted by them.

Ans.

Name of Endocrine Gland	Hormones Secreted
Testis	Testosterone
Ovary	Estrogen
Adrenal	Adrenaline
Thyroid Gland	Thyroxin
Pituitary Gland	FSH
Pancreas	Insulin

6. What are sex hormones? Why are they named so? State their function.

Ans. Sex hormones are the hormones that control the development of secondary sexual characteristics and also regulate the proper functioning of the sex organs. They are named so because they are produced in both males and females by the respective sex organs under the influence of the pituitary gland.

Functions of sex hormones:

- **Testosterone:** This hormone brings about secondary sex characters in boys such as the growth of a beard, the voice becoming hoarse, development of reproductive organs, etc.
 - **Oestrogen:** This hormone is responsible for the development of secondary sexual characters in females such as the enlargement of breasts, development of female reproductive organs, etc.
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7. Choose the correct option.

(a) Adolescents should be careful about what they eat, because

(i) Proper diet develops their brains.

(ii) Proper diet is needed for the rapid growth taking place in their body.

- (iii) Adolescents feel hungry all the time.
 - (iv) Taste buds are well developed in teenagers.
- (b) Reproductive age in women starts when their**
- (i) Menstruation start.
 - (ii) Breast start developing
 - (iii) Body weight increases
 - (iv) Height increases.
- (c) The right meal for adolescents consist of**
- (i) Chips, noodles, coke.
 - (ii) Chapatti, dal, vegetables.
 - (iii) Rice, noodles and burger.
 - (iv) Vegetables cutlets, chips and lemon drink.

Ans. (a) (ii) Proper diet is needed for the rapid growth taking place in their body.

(b) (i) menstruation starts.

(c) (ii) Chapatti, dal, vegetables.

8. Write notes on-

- (a) Adam's apple.**
- (b) Secondary sexual charecters.**
- (c) Sex determination in unborn baby.**

Ans. (a) Adam's apple- At puberty, the voice box or the larynx begins to grow. The growing voice box in boys can be seen a protruding part of the throat called Adam's apple.

(b) Secondary sexual characters- Those changes that take place at puberty in boys and girls are called secondary sexual characters. In includes increase in size of breast in girls and pubic hairs around genital organ in girls. In boys facial hair and cracking of voice are secondary sexual features.

(c) Sex determination in the unborn baby- Human beings have 23 pairs of chromosome. One

pair of male (XY) and one pair of chromosome in female (XX) are called sex chromosome. Male produce two types of gametes half containing X chromosome and half containing Y chromosome. When the sperm containing Y chromosome fuse with egg the sex of baby is male and when X chromosome containing sperm fertilise the egg the sex of baby is female.

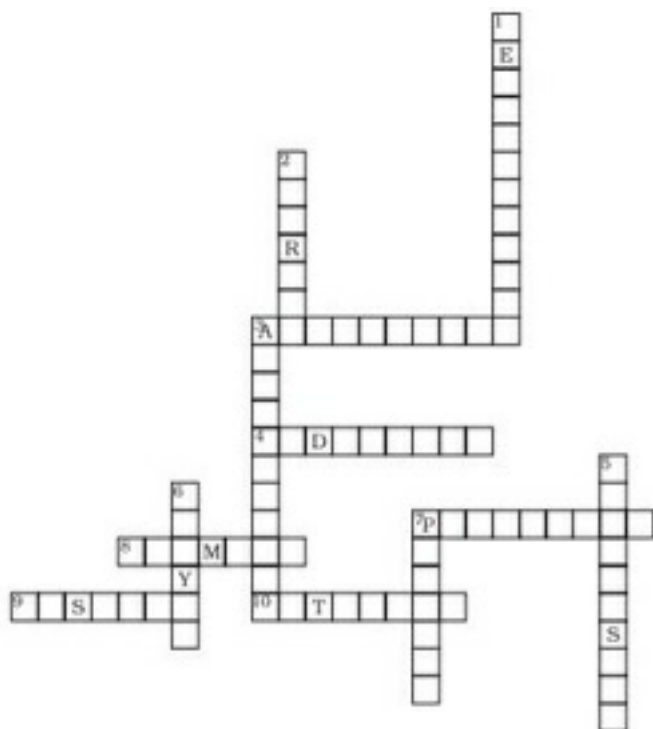
9. Word game: use the clues to work out the words.

Across

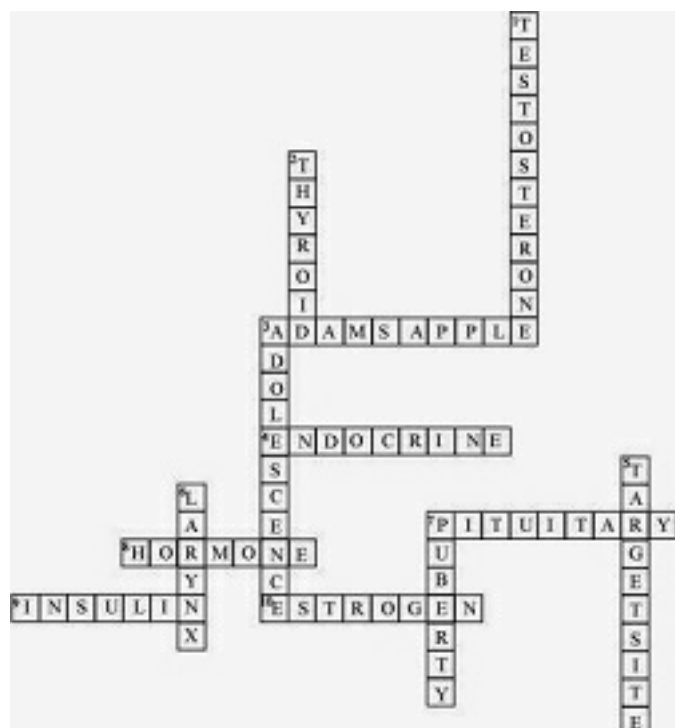
- 3. Protruding voice box in boys**
- 4. Glands without ducts**
- 7. Endocrine gland attached to brain**
- 8. Secretion of endocrine glands**
- 9. Pancreatic hormone**
- 10. Female hormone**

Down

- 1. Male hormone**
- 2. Secretes thyroxin**
- 3. Another term for teenage**
- 5. Hormone reaches here through blood stream**
- 7. Term for changes at adolescence**



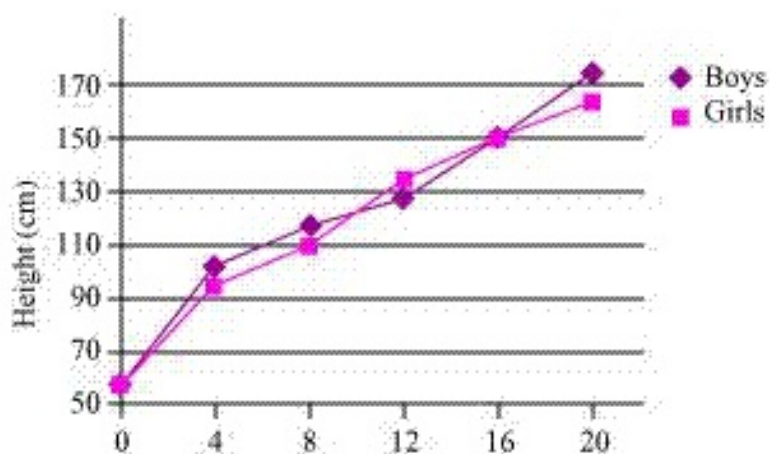
Ans.



10. The table below shows the data on likely height of boys and girls as they grow in age. Draw graphs showing height and age for both boys and girls on the same graph paper. What conclusions can be drawn from these graphs?

Age (Years)	Height (cm)	
	Boys	Girls
0	53	53
4	96	92
8	114	110
12	129	133
16	150	150
20	173	165

Ans.



The graph depicts the relation between the age and height of both boys and girls. During puberty, there is a sudden increase in height of both boys and girls. On the basis of the above graph, it can be observed that during the age of 4-8 years, girls have less height as compared to boys. However, as soon as girls reach 12 to 13 years, their height shows a sudden increase and becomes more than boys. In later years, growth in both sexes becomes stable. Growth during puberty is under the control of hormones.