



INDIAN SCHOOL AL WADI AL KABIR



Class: VIII	DEPARTMENT OF SCIENCE 2024-2025	Date: 12/12/2024
TEXTBOOK- Q & A WITH ANSWERS	CHAPTER: REACHING THE AGE OF ADOLESCENCE	Note: A4 FILE FORMAT
CLASS AND SEC:	NAME OF THE STUDENT:	ROLL NO.

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

Answer:

Hormones

2. Define adolescence.

Answer:

The period of life, when the body undergoes changes, leading to reproductive maturity, is called adolescence. The period of adolescence is normally 11 years to 19 years.

3. What is menstruation? Explain.

Answer:

In females, the ova or eggs begin to mature with the onset of puberty (10 to 12 years of age) one egg gets matured and is released by one of the ovaries once in about 28 to 30 days. During this period, the wall of the uterus becomes thick to receive the fertilised egg. In case it is fertilised, it begins to develop. This results in pregnancy. If fertilisation fails to take place, the ovum or the released egg and the thickened lining of the uterus along with its blood vessels are shed off. This causes bleeding in women. This is called menstruation. It occurs once in 28 to 30 days.

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

Answer:

The changes take place differently in the bodies of boys and girls at puberty. These changes may be listed below:

- **There is a sudden increase in the height of both boys and girls. However, both reach their maximum height at the age of 17 to 18 years.**
- **The voice of boys becomes hoarse and that of girls becomes shrill.**
- **Shoulders become broader and muscles grow more prominently in boys. In girls, the regions below the waist become wider.**
- **Hair starts growing in different parts of boys and girls.**
- **In most teenagers, due to increased secretion of sweat and sebaceous glands, get acne and pimples on their face.**

- **The onset of puberty brings changes in secondary sexual characters in both males and females.**
- **Boys and girls become capable of reproduction.**
- **In girls, menstruation starts.**
- **Different types of hormones start to release in initiating a reproductive function.**

5. Prepare a table having two columns depicting the names of endocrine glands and hormones secreted by them.

Answer:

Endocrine glands	Hormones
1. Pituitary gland	(i) Growth hormones
2. Ovaries	(ii) Estrogen
3. Testes	(iii) Testosterone
4. Thyroid	(iv) Thyroxine
5. Pancreas	(v) Insulin
6. Adrenal glands	(vi) Adrenaline

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

Answer:

The hormones which help and control the formation of secondary sexual characters are called sex hormones. They are named so because they control sexual activities and are secreted by males and females separately.

The functions of sex hormones are given below separately:

Male sex hormone: It is also called testosterone. It is secreted by the testes and causes changes in the secondary sexual character of boys like growth of facial hair like a moustache, beard, etc. It also stimulates spermatogenesis.

Female sex hormone: It is also called estrogen. It is secreted by ovaries and controls the secondary sexual characteristics in females, the appearance of mammary glands, etc. It also maintains pregnancy.

7. Choose the correct option.

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

- (i) Proper diet develops their brains.
- (ii) A 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 starts.
- (ii) breasts start developing.
- (iii) body weight increases.
- (iv) height increases.

(c) The right meal for adolescents consists of:

- (i) chips, noodles, coke.
- (ii) chapati, dal, vegetables.
- (iii) rice, noodles and burger.
- (iv) vegetable cutlets, chips and lemon drink.

Answer:

(a) (ii)

(b) (i)

(c) (ii)

8. Write notes on:

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

Answer:

(a) Adam's apple: During puberty, a change in the voice of boys and girls takes place due to an increase in the size of the voice box or larynx. In boys, the voice box tends to protrude out on the upper part of the neck, below the chin and is often referred to as Adam's apple.

(b) Secondary sexual characters: Those characters that are visible and more apparent and help in distinguishing a male from a female are called secondary sexual characters. For example, in girls, breasts and in boys, facial hair, i.e., moustache and beard.

(c) Sex determination in the unborn baby: The sex of a child, i.e., whether it is a male or a female is determined at the time of fertilisation when male gametes fuse with a female gamete. All human beings have 23 pairs of chromosomes in the nuclei of their cells. Two chromosomes out of these are sex chromosomes. A female has two X chromosomes, while a male has one X and one Y chromosome. The gametes (egg and sperm) have only one set of chromosomes. The unfertilised egg always has one X chromosome.

But sperms are of two kinds—One having an X chromosome, and the other having a Y chromosome. When a sperm containing an X chromosome fertilises the egg, the zygote has two X chromosomes and develops into a female child. If the sperm contributes a Y chromosome to the egg or ovum at fertilisation, the zygote will develop into a male child. It is thus also clear that the sex chromosomes of the father determine the sex of an unborn baby.

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

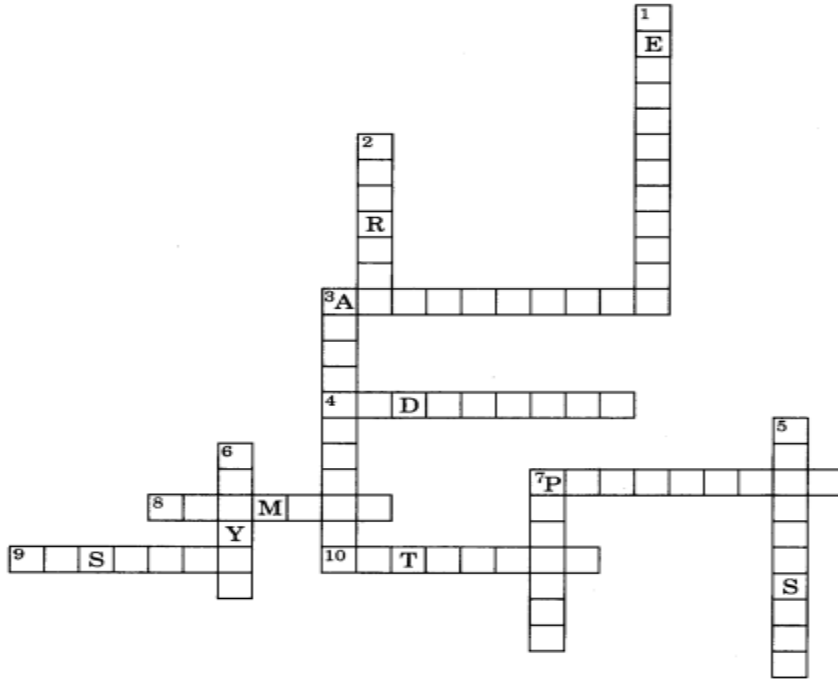
Across:

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

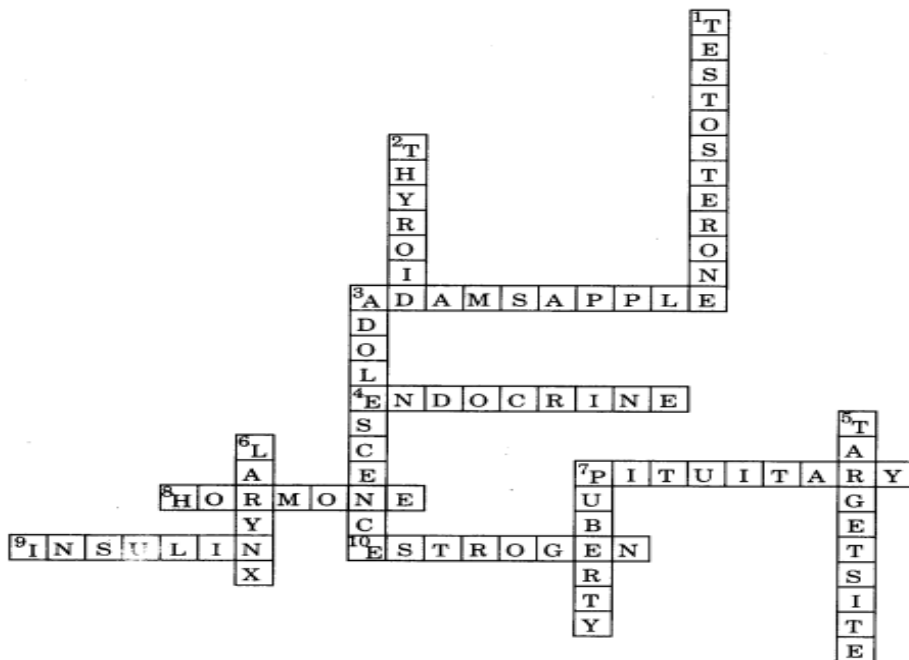
Down:

- 1. Male hormone

2. Secretes thyroxine
3. Another term for teenage
5. Hormone reaches here through the bloodstream
6. Voicebox
7. Term for changes in adolescence



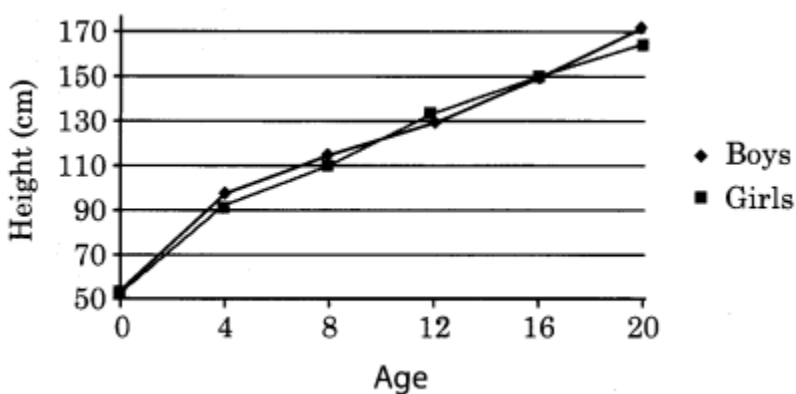
Answer:



10. The table below shows the data on likely heights 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



Answer:

From the above graph, we conclude that initially boys grow faster than girls from 0-8 years, and girls grow faster than boys from 8-16 years. But both reach their maximum height at the age of 20. Here boys show a greater increase in height than girls.

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