Board –CBSE	Class –8th	Topic – Reaching the Age of Adolescence

1. Name the hormones which regulate secondary sexual characteristics in males?

Ans. Secondary sexual characteristics in a male are regulated by testosterone which is a male sex hormone.

2. What is Puberty?

Ans. The age at which human males and females become sexually mature is called puberty.

3. What are endocrine glands? What do they do?

Ans. Endocrine glands pour their secretion (hormones) directly into the bloodstream. They control and co- ordinate the functions of other organs of the body. Hormones are the chemical messenger that is carried by the blood to a certain tissue. Hormones regulate tissue function.

4. What are secondary sexual characters? Mention the male and female secondary sexual characters?

Ans. Secondary sexual characteristics are those physical characteristics that change at the time of puberty and distinguish male from female physically.

Secondary sexual characteristics are seen in boys

a) Deepening of voice

b) Growth of hair on the face, pubic region, and armpit

c) Broadening of shoulder and chest

d) Development of moustache

Secondary sexual characteristics seen in girls

a) Enlargement of breast

b) Growth of hair in pubic region and armpit

c) Widening of pelvic griddle

d) Growth of hair

5. What is the age of puberty in a girl?

Ans. 10 – 12 years

6. Which gland secretes Corticoid hormones?

Ans. Adrenal Glands

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

Ans. Hormones are chemical substances that are secreted by endocrine glands. They are responsible for changes taking place in the body.

8. Define adolescence.

Ans. Adolescence is the time period between the beginning of puberty and adulthood. During this period, the body undergoes several changes alongside 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.

9. What is menstruation? Explain.

Ans. Menstruation is the process of the shedding of the uterine lining on a regular monthly basis. It begins at puberty and is the reproductive cycle of the female body. Every month, the uterus prepares itself to receive a fertilized egg. Therefore, the inner lining of the uterus becomes thick and is supplied with blood to nourish the embryo. If the egg is not fertilized, then the lining of the uterus breaks down and gets released in the form of blood through the vagina. This lasts for about two to eight days. This cycle occurs every month and is known as the menstrual cycle.

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

Ans.

Endocrine gland	**Hormones**
Testis	Testosterone
Ovary	Oestrogen
Thyroid	Thyroxin
Adrenal	Adrenalin
Pancreas	Insulin
Pituitary	Growth hormone

11. Write notes on –

(a) Adam's apple.

(b) Sex determination in the unborn baby.

Ans. (a) Adam's apple: In human males, the larynx grows larger during puberty and can be seen as a protruding part of the throat. This protrusion is known as Adam's apple.

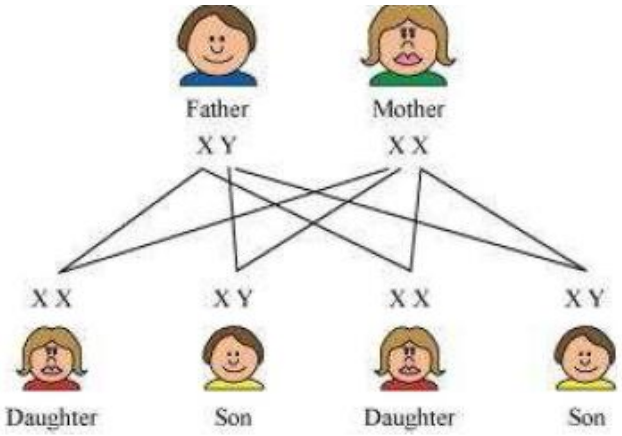
(b) Sex determination in an unborn baby: The sex of a baby is determined by the type of male gamete that fuses with the female gamete.

All human beings have 23 pairs of chromosomes in their nuclei. Out of these 23 pairs, the last pair is known as the sex chromosome.

Human males have 23 pairs of chromosomes including XY sex chromosomes.

Therefore, the male gamete has 22 chromosomes and either an X or Y sex chromosome.

Male gametes can be of two types: 22+X or 22+Y Females have 23 pairs of chromosomes including XX sex chromosomes. Therefore, their gametes can only have 22 chromosomes and one X sex chromosome. Type of female gametes: 22+X.



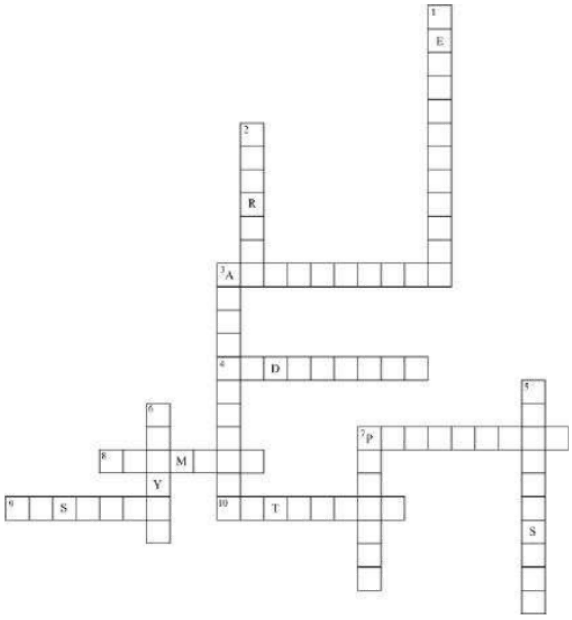
12. Word game: Use the clues to work out the words.

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 thyroxin
3. Another term for teenage
5. Hormone reaches here through the bloodstream
6. Voicebox
7. Term for changes at adolescence



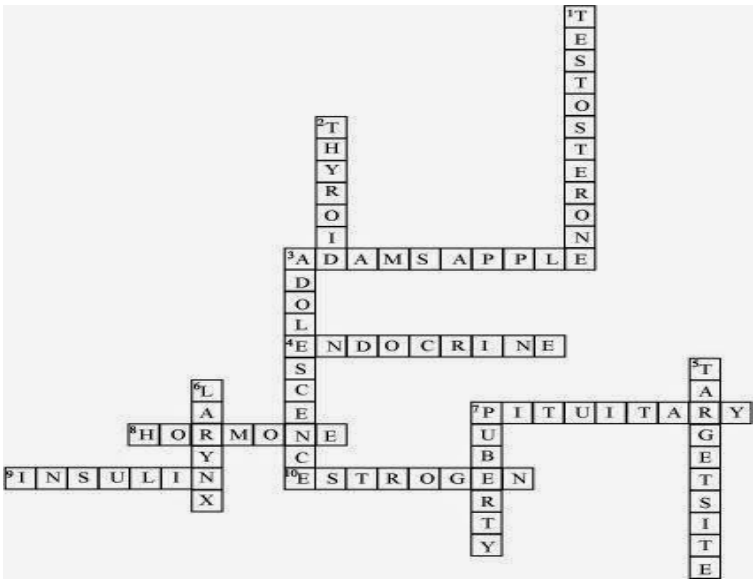
Ans:

Across

3. ADAM'S APPLE
4. ENDOCRINE
7. PITUITARY
8. HORMONE
9. INSULIN
10. ESTROGEN

Down

1. TESTOSTERONE
2. THYROID
3. ADOLESCENCE
5. TARGET SITE
6. LARYNX
7. PUBERTY



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

Ans. Changes at puberty:

(i) Sudden increase in height and weight.

(ii) Broadening of shoulders and widening of the chest in boys. In girls, the region below the waist becomes wider.

(iii) In boys, under the influence of hormones, the larynx becomes prominent, the vocal cords become longer and thicker. These changes cause the voice to become hoarse.

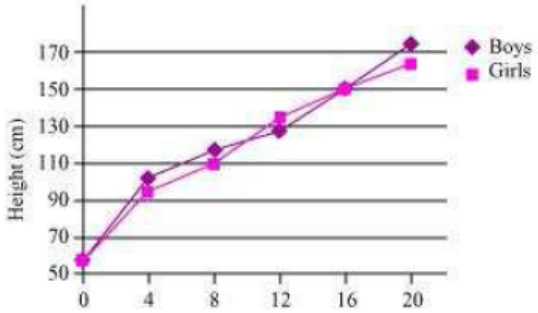
(iv) Appearance of hair in areas such as underarms, face, hands, and legs.

(v) Appearance of acne as a result of excessive secretion of oil from the skin.

(iv) Testis grows and starts producing sperms in males, whereas in females, the ovary enlarges and starts producing matured eggs.

14. The table below shows the data on the 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



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. Based on 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- 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.

15. What is the relation between adolescence and puberty?

Ans. Adolescence is the period of life when a body undergoes changes leading to reproductive maturity. These changes mark the onset of puberty. Puberty is defined as the phase where a child's physical and sexual characteristics start to mature.

16. Define the following:

(a) Adolescence

(b) Puberty

Ans. (a) Adolescence: Human beings become capable of reproduction after puberty sets in. The period of life when the body undergoes changes, leading to reproductive maturity, is called adolescence. Between the age of 11 years and 19 years, children are called adolescents.

(b) Puberty: Puberty is the process of physical changes by which a child's body matures into an adult body and it becomes capable of sexual reproduction to enable fertilization. The human body undergoes several changes during adolescence; these changes mark the onset of puberty

17. What are the effects of increased activity of sweat and sebaceous glands?

Ans. The increased secretion of sweat and sebaceous gland in the skin causes acne and pimples on the face of young people.

18. What is the cause of goitre in human beings?

Ans. The under secretion of thyroxine hormone by the thyroid gland causes swelling of the thyroid gland which causes swelling of the neck or larynx which is called as goitre.

19. Why adolescence needs to have a balanced diet?

Ans. Adolescence is the phase of growth and development of different body parts thus it requires complete healthy food that is a balanced diet.

20. Explain the role of hormones in completing the life cycle of frogs and insects.

Ans. The life cycle of insects involves four different stages namely, egg, larva, pupa, and adult. The change from larva to adult is called metamorphosis, in insects' metamorphosis is controlled by insects' hormones in the same way in frog tadpole became a frog under the action of thyroxine hormone produced by the thyroid.