

Reaching the Age Of Adolescence

Check point 1

Q. 1. The end of puberty is marked by a noticeable change. What is it?

Answer: The most discernible change in the puberty is the sudden increase in height.

Q. 2. State the most prominent change during puberty.

Answer: The most prominent change during puberty is that boys and girls become capable of reproduction.

Q. 3. Mention a reason for the hoarseness of voice in boys.

Answer: The hoarseness of voice in boys is due to the growth of voice box or larynx which can be seen as a protruding part of throat called Adam's apple.



Q. 4. Is it correct to worry about the bodily changes that occur during adolescence?

Answer: One should not worry about the bodily changes that occur during adolescence since it is a process which makes an individual fit for continuing life.

Check point 2

Q. 1. Mention a secondary sex character that distinguishes a boy and a girl.

Answer: Secondary sexual characteristics are those which distinguishes sexually mature male from female. These are controlled by hormones. A secondary sex character that distinguishes a boy and a girl is the development of breast in females.

Q. 2. Hormones maintain puberty. Give reason.

Answer: The changes that take place during puberty are principally controlled by hormones. Hormones are the chemical substances secreted from endocrine glands. Testosterone or male hormone is secreted by testes at the onset of puberty which principally regulates secondary sexual characteristics. Such female hormone is called estrogen.

Q. 3. The sex of a child is determined by a particular factor. What is it?

Answer: The sex of the child is determined by thread-like structures which carry genetic material known as chromosomes. These are present inside nucleus.

Q. 4. Is it correct to say that reproductive life of woman ends at menopause?

Answer: Yes, it is correct to say that reproductive life of woman ends at menopause since they do not bleed anymore. It generally occurs at the age of 45-50.

Check point 3

Q. 1. Name the master gland of body.

Answer: Pituitary gland is the master gland of our body since it controls the secretion of other hormones.

Q. 2. A person lacks iodine in this diet. Which disorder he likely to suffer from?

Answer: Deficiency of iodine leads to goitre (a disease related to thyroid gland)

Q. 3. Is the transformation from egg to adults in silkworm controlled by hormones?

Answer: Yes, the transformation from egg to adults in silkworm controlled by hormones because growth is under the control of hormonal responses.

Check point 4

Q. 1. Health is not just the absence of diseases, it is much more. Comment.

Answer: Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Q. 2. Name some protective foods.

Answer: Foods that contain proper amounts of vitamins, minerals, and high-quality proteins which protect against development of a deficiency disease are called protective food.

For example: leafy or yellow vegetables, citrus fruits, meat, milk, eggs

Q. 3. It is advised to include physical exercise in daily routine. Give reason.

Answer: It is advised to include physical exercise in daily routine. It is so because it keeps our body physically fit and strong thus keeping us free from diseases.

Q. 4. Discuss some harmful effects of taking drugs.

Answer: Drugs can effect

- Neuro-muscular system
- Speech
- Cognitive skills
- Limbs impairment etc.

Chapter Test

Q. 1. Is looking after physical health more important at adolescent age? Give your opinion.

Answer: In my opinion, looking after physical health more important at adolescent age since all of a sudden body undergoes various physical, chemical and emotional changes which might upset the system of the body. So to remain healthy in adolescent age one must take important care.

Q. 2. Name the time period of one's life when the brain has the greatest capacity for learning.

Answer: The time period of one's life when the brain has the greatest capacity for learning is adolescence since individuals tend to spend most of their time in thinking.

Q. 3. State the puberty age in human females.

Answer: The puberty age in human females is 11 – 18.

Q. 4. How many pairs in human chromosomes are known as sex chromosomes?

Answer: Humans have a total of 23 pairs of chromosomes. Out of them, one pair of chromosome is called sex chromosome.

Q. 5. How is the sex of the baby determined?

Answer: The sex of the unborn child is determined whether the zygote has XX or XY chromosome.

Q. 6. Write a name of disorder caused by thyroid.

Answer: The disorder caused by thyroid is goitre.

Q. 7. Which hormone maintains the correct salt balance in the blood?

Answer: Aldosterone hormone maintains the correct salt balance in the blood which is secreted from adrenal gland.

Q. 8. By which term, stoppage of menstruation is described?

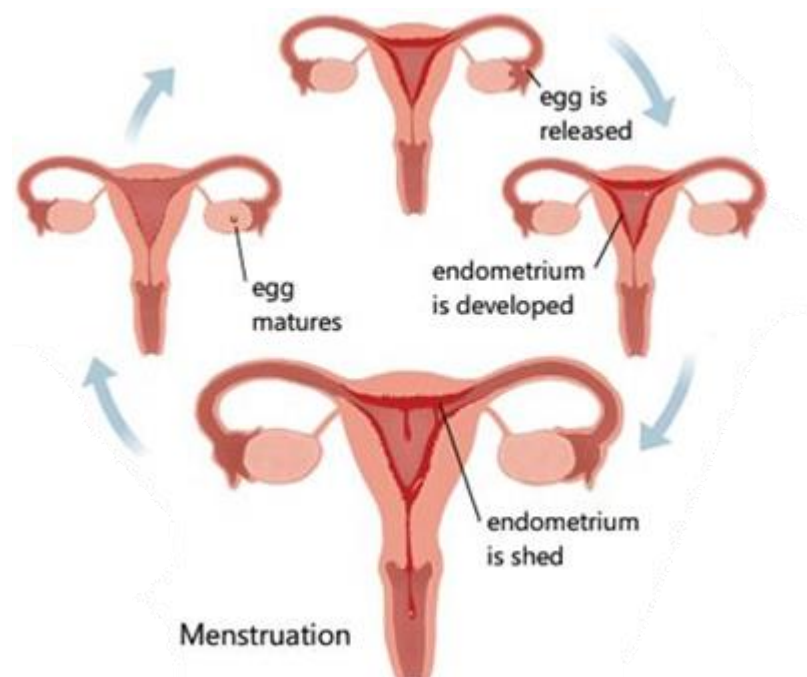
Answer: Stoppage of mensuration is generally termed as menopause.

Q. 9. In which age, maximum increase in height takes places?

Answer: Puberty i.e. age from 11 – 18 witnesses the maximum increase in height.

Q. 10. Define menstruation. Explain the menstrual cycle.

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



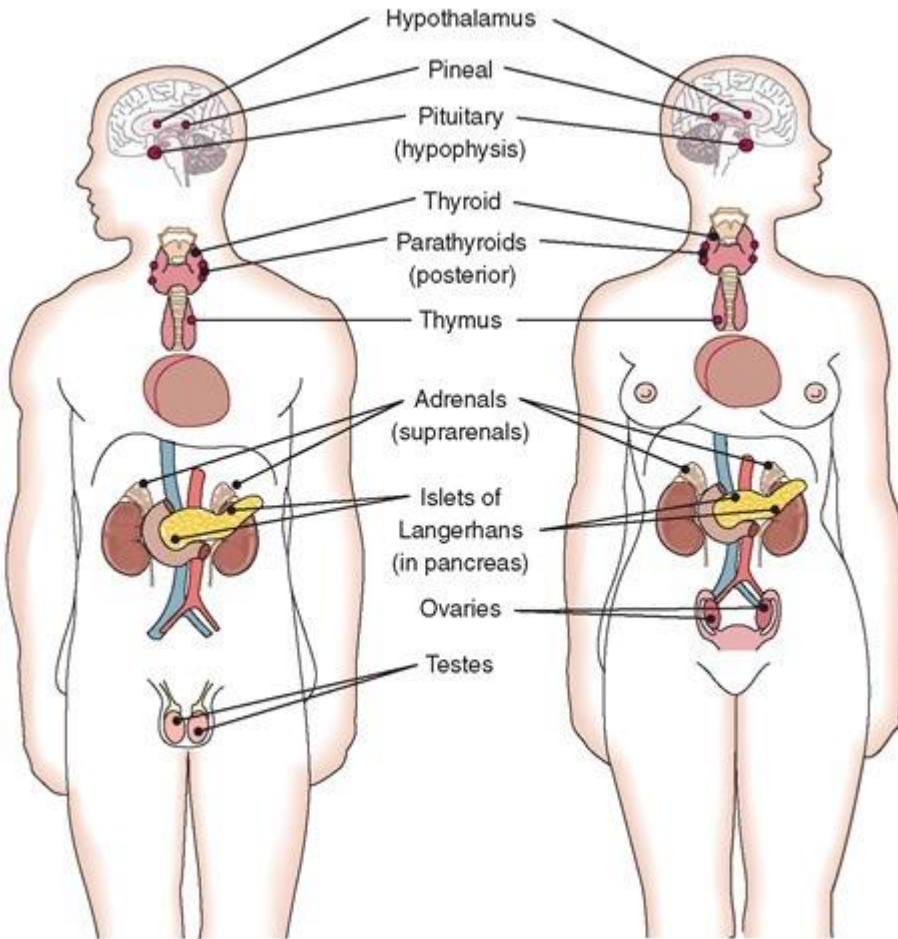
Menstrual cycle

Q. 11. Give the location of the following glands in human body.

- (a) Pituitary
- (b) Thyroid
- (c) Adrenals

Answer:

Glands	Location
Pituitary	Behind nose underside brain
Thyroid	Front of neck below Adam's apple
Adrenals	Above kidney



Q. 12. Iron is needed by our body? Give reason also, name some of the iron-rich foods.

Answer: Haemoglobin is the red coloured pigment present in blood. Iron is an important component of haemoglobin which carries oxygen from lungs to different body parts. Iron-rich foods are lentils, beans, green leafy vegetables, dried fruits etc.

Q. 13. Regular meal is required, it should never be replaced by snacks. Why?

Answer: Snacks although very tasty but should never be replaced with regular meal since the regular meals carry all the necessary minerals and nutrients needed by the body for growth and development. Snacks lack all these necessary nutrients thus interfere with growth of body.

Q. 14. Why do many people get acne and pimples on face?

Answer: Many people get acne and pimples on face due to hormonal changes that occur during puberty. Since the body begins to mature thus sebaceous glands start to produce more sebum, which results in acne and pimples.

Q. 15. What will you include in your balanced diet?

Answer: I will include milk, green leafy vegetables, eggs and all necessary vitamins and minerals etc.



My balanced diet

Q. 16. State the various ways in which early marriage and motherhood is harmful to the girls.

Answer: Early marriage and motherhood are harmful to the girls.

- It can build an emotional pressure and depression on the girl.
- It can lead to misbalance in the health of the girl.
- Various social aspects can be of concern.
- It can disturb their physical and mental health too.
- This condition might lead to some suicides too.

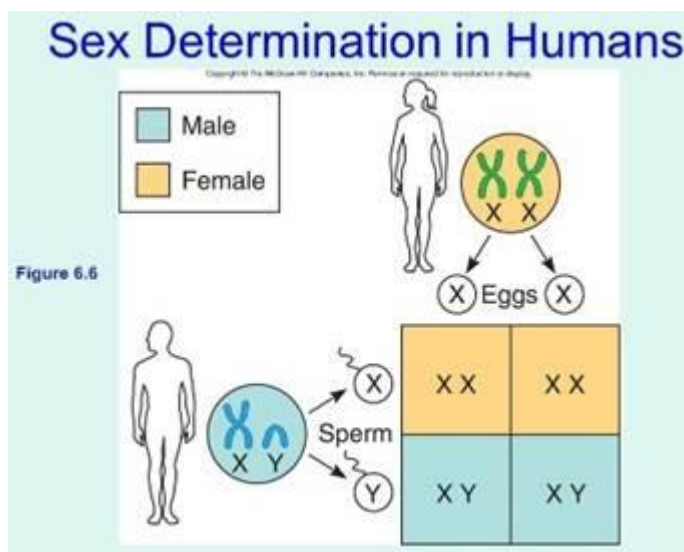
Q. 17. Explain primary and secondary sexual characteristics in humans with examples.

Answer: The traits that separate male from females are called primary and secondary sexual characteristics. Primary sexual characteristics are those which are present by birth and are determined by chromosomes whereas secondary sexual characteristics are those which distinguishes sexually mature male from female.

Primary sexual characteristics	Secondary sexual characteristics
Penis and scrotum growth.	Facial hairs
Ovary, uterus, vagina, clitoris and labia growth	Enlarged breasts and hips
	Hair and sweat gland changes.

Q. 18. The sex of the baby depends on the sex chromosome of the sperm. Justify.

Answer: A male has one X and one Y chromosomes which means half the male gametes i.e. sperms have X and the other half will have Y chromosome, whereas in females both the chromosomes are X thus all the females gametes will have one X chromosome. In humans, the sex of the child depends on what happens at fertilization. If Y chromosome is inherited by the offspring then it will surely be a male because the child will have XY combination of sex chromosomes.



Q. 19. What are the functions of thyroxine and adrenaline?

Answer: Thyroxine is produced by thyroid gland. It plays main role in regulating BMR, heart rate, muscle control, bone development and digestive functions.

Adrenaline helps the body to adjust to stress when one is very angry, embarrassed or worried. It is secreted by adrenal gland.

Q. 20. What changes take place during adolescence? Explain.

Answer: •A significant increase in height is observed.

•Voice change in boys: The hoarseness of voice in boys is due to the growth of voice box or larynx which can be seen as a protruding part of throat called Adam's apple.

•Body shape of both girls and boys change. Girls develop breasts and hips become enlarged.

•Appearance of pubic hairs.