

## Chapter- 5.

## ENDOCRINE SYSTEM AND ADOLESCENCE

**Section A (One-mark questions)****MCQ**

Question 1) The chemical produced by endocrine glands are called

- (a) hormones
- (b) neurons
- (c) sodium
- (d) vitamins

Question 2) All glands together form \_\_\_\_\_ system.

- (a) digestive system
- (b) circulatory system
- (c) excretory system
- (d) endocrine system

Question 3) The endocrine system works in coordination with \_\_\_\_\_ system

- (a) circulatory system
- (b) Nervous system
- (c) respiratory system
- (d) digestive system

Question 4) Endocrine gland secretes the hormones directly in the \_\_\_\_\_

- (a) body
- (b) organ
- (c) blood
- (d) lymph

Question 5) \_\_\_\_\_ are also called ductless glands

- (a) endocrine gland
- (b) exocrine gland
- (c) both a and b
- (d) none of these

Question 6) \_\_\_\_\_ is an example of endocrine gland

- (a) thyroid
- (b) Parathyroid
- (c) Pituitary gland
- (d) all

Question 7) \_\_\_\_\_ is an example of exocrine gland

- (a) salivary gland

(b) sweat gland

(c) both a and b

(d) pancreas

Question 8) exocrine glands possess \_\_\_\_\_ for discharging their secretions to the body surface

(a) lumen

(b) valves

(c) ducts

(d) all

Question 9) Sebaceous glands located in the

(a) lungs

(b) skin

(c) buccal cavity

(d) stomach

Question 10) The branch of biology concerned with the study of structure and functions of endocrine gland is called

(a) ecology

(b) endocrinology

(c) entomology

(d) physiology

Question 11) \_\_\_\_\_ is the father of endocrinology

(a) Earnt Hackel

(b) Bayliss

(c) Starling

(d) Thomas Addison

Question 12) The organs that respond to hormones are called

(a) receptor organ

(b) target organ

(c) sensory organ

(d)all

Question 13) There are \_\_\_\_\_ ductless glands which form the endocrine system.

(a) 6

(b) 7

(c) 8

(d) 9

Question 14) Thyroid gland secretes hormone known as

(a) oxytocin

(b) Adrenaline

(c) Thyroxine

(d) Insulin

Question 15) Thyroxine regulates the rate of

- (a) metabolism
- (b) growth
- (c) both a and b
- (d) blood pressure

Question 16) If thyroid gland is underactive it results in \_\_\_\_\_

- (a) hypothyroidism
- (b) hyperthyroidism
- (c) dwarfism
- (d) gigantism

Question 17) \_\_\_\_\_ gland hangs from the base of midbrain

- (a) Thyroid gland
- (b) Adrenal gland
- (c) Pituitary gland
- (d) Pancreas

Question 18) \_\_\_\_\_ gland is also called master gland

- (a) Pancreas
- (b) Pituitary gland
- (c) Thyroid gland
- (d) Adrenal gland

Question 19) \_\_\_\_\_ gland controls the functioning of all other glands

- (a) Pancreas
- (b) Adrenal gland
- (c) Pituitary gland
- (d) Thyroid gland

Question 20) The anterior lobe of pituitary gland produces

- (a) oxytocin
- (b) growth hormone
- (c) Thyroxine
- (d) Adrenaline

Question 21) The posterior lobe of pituitary gland produces \_\_\_\_\_

- (a) oxytocin
- (b) growth hormone
- (c) Thyroxine
- (d) adrenaline

Question 22) The deficiency of growth hormone leads to (a) dwarfism

- (b) gigantism
- (c) acromegaly

(d) goitre

Question 23) Over activity of growth hormone leads to

(a) dwarfism

(b) goitre

(c) gigantism

(d) diabetes

Question 24) Adrenal gland is a cap like structure located on each \_\_\_\_\_

(a) Lungs

(b) Kidney

(c) liver

(d) pancreas

Question 25) \_\_\_\_\_ hormone regulates the blood pressure.

(a) Oxytocin

(b) Thyroxine

(c) Adrenaline

(d) Insulin

**True or False**

**State whether the given statements are true or false.**

1. The age of adolescence is 15 to 20 years.
2. The female puberty starts at the age of 12 to 14 years.
3. Boys have enlarged and well-developed Adam's apple.
4. Insulin is secreted by pituitary gland.
5. The chemical substances secreted by endocrine glands are called hormones.
6. Oestrogen is female hormone.
7. Testosterone is male hormone.
8. There are 23 pairs of chromosomes in the nuclei of human cell.
9. Menstruation stops in men permanently around the age of 45 to 50 years.
10. The oestrogen hormone develops deeper voice in males at puberty.
11. The sex of an unborn child is determined after a foetus is formed.
12. Initially girls grow faster than boys.
13. Thyroxine hormone is released by thyroid gland.
14. Diabetes is caused due to the deficiency of adrenaline hormone.
15. Menstrual cycle in women is controlled by enzyme.
16. Growth hormones are secreted by pituitary glands.
17. Metamorphosis in insects is controlled by growth hormone.
18. Menstruation occurs once in about 28 to 30 days.
19. There are 3 sex chromosomes present in the nuclei of human being.
20. A male has two X chromosomes.
21. The gametes have only one set of chromosomes.
22. The unfertilised egg has two X chromosomes.
23. At puberty, the voice box or the larynx begins to grow.
24. When the zygote has one X and one Y chromosome, a male child is developed.
25. Menopause is the stage when menstruation starts.

**Fill in the blanks with suitable word/s.**

1. \_\_\_\_\_ means to grow into maturity.
2. Children gain height during \_\_\_\_\_.
3. The boys and girls passing through the adolescence period are called \_\_\_\_\_ or \_\_\_\_\_.
4. During puberty, a change in voice takes place due to the increase in the size of \_\_\_\_\_ or \_\_\_\_\_.
5. The stage when the menstrual cycle stops is called \_\_\_\_\_.
6. The \_\_\_\_\_ gland helps in controlling the production of both testosterone and estrogen hormones.
7. Diabetes is caused due to the deficiency of \_\_\_\_\_ in the body.
8. \_\_\_\_\_ is caused due to deficiency of thyroxine hormone.
9. Endocrine glands are also called \_\_\_\_\_ glands.
10. \_\_\_\_\_ secretes male sex hormones.
11. \_\_\_\_\_ secretes female sex hormones.
12. Sex of the unborn child depends on whether the \_\_\_\_\_ has \_\_\_\_\_ or \_\_\_\_\_ chromosomes.
13. Metamorphosis in insects is controlled by \_\_\_\_\_ hormone.
14. Metamorphosis in frog is controlled by \_\_\_\_\_ hormone.
15. If the water in which tadpoles are growing does not contain sufficient \_\_\_\_\_, the tadpoles cannot become adults.
16. In females, the uterine wall thickens to receive the \_\_\_\_\_.
17. Endocrine glands release hormones directly into the \_\_\_\_\_ for transportation to the \_\_\_\_\_.
18. \_\_\_\_\_ helps the body to adjust and fight the stress.
19. The development of a caterpillar to an adult butterfly is termed as \_\_\_\_\_.
20. The first menstrual flow begins at \_\_\_\_\_ and is termed as \_\_\_\_\_.

**Short question**

Question 1.

What is Adam's apple?

Question 2.

Name the hormone in female that is produced by ovaries and helps in development of mammary glands.

Question 3.

Whose height grow faster initially—boys or girls?

Question 4.

Name a gland which transports secretions through ducts.

Question 5.

What is puberty?

Question 6.

What are hormones?

Question 7.

How long is a woman's reproductive life lasts?

Question 8.

Name the female hormone.

Question 9.

Which gland is called master gland?

Question 10.

What is a balanced diet?

Question 11.

What is menstruation?

Question 12.

What is menarche?

Question 13.

What is menopause?

Question 14.

What causes goitre?

Question 15.

Which gland secretes thyroxine?

Question 16.

What are chromosomes?

Question 17.

How many chromosomes are present in human cell?

Question 18.

How many sex chromosomes are there in human cell?

Question 19.

Which hormone is necessary for normal growth of a person?

Question 20.

Which gland secretes insulin?

Question 21.  
What causes diabetes?

Question 22.  
Name the chromosome present in a female.

Question 23.  
Name the chromosome present in a male.

Question 24.  
Which chromosome does the unfertilised egg contain?

Question 25.  
Which hormone balances the proportion of salts in the blood?

Question 26.  
What decides the sex of an unborn child?

Question 27.  
Name the glands other than the pituitary gland.

Question 28.  
When does the puberty ends?

Question 29.  
Do the boys and girls undergo same physical changes at puberty?

Question 30.  
Why do we need to have a balanced diet?

**Section B (Two marks questions)**

Question 1.  
What is meant by adolescence?

Question 2.  
What is puberty?

Question 3.  
What is vital change which marks puberty in boys and girls?

Question 4.  
Why do boys have a hoarse voice at puberty?

Question 5.

How does the body shape change at puberty?

Question 6.

Why is adolescence also called teenage?

Question 7.

Why do many young people have acne and pimples during adolescence?

Question 8.

Why are endocrine glands also called ductless glands?

Question 9.

What are secondary sexual characters?

Question 10.

Explain the development of sex organs in male and female.

Question 11.

Why do changes occur in human body at puberty?

Question 12.

What is a pituitary gland?

Question 13.

How do hormones work in human body?

Question 14.

What are sex hormones? How do they work in the human body?

Question 15.

What is menstruation?

Question 16.

What are the changes in female at the onset of puberty?

Question 17.

Explain the terms menarche and menopause.

Question 18.

What happens when the egg is fertilised?

Question 19.

What are the changes in males at puberty?



Question 20.

What do you mean by reproductive health?

Question 21.

What is the role of hormones in completing the life history of insects and frogs?

Question 22

Which hormone is released by pancreas? What is its function?

### **Section C (Three marks questions)**

Question 1.

One day Seema's uncle visited her place. Seema prepared dinner for him. When she was about to put rock salt on the salad, her uncle interrupted her and asked to put iodised salt instead of rock salt. He also advised her to prefer iodised salt instead of rock salt. Why do you think Seema's uncle advised her to have iodised salt instead of rock salt?

Question 2.

It is said that height of a child depends upon the genes inherited from the parents. Are there factors other than genes that causes variation in height?

Question 3.

Is a woman responsible for the birth of a girl child? Explain.

Question 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 diagnoses?

Question 5.

Why we should not take medicines or drugs unless prescribed by a doctor?

Question 6.

Salma had a very soft and smooth skin during her childhood. As she entered adolescence, she developed pimples on her face, her body became taller compared to her face. She got worried of all of the sudden changes. Her mother explained that all these changes are normal and advised her to wash her face at regular intervals.

- Why Salma's mother advised Salma to wash her face at regular intervals?
- What is the reason for appearance of pimples on her face?
- Why Salma experienced disproportionate growth of the body?
- What values do we get from this?

Question 7.

Name the hormones secreted by pancreas. Give function of each secretion.

Question 8.

A mother is angry at her child for misbehaving. The child is also afraid of scolding. Which hormones would be released in both their bodies? What will be the effect of the hormone?

Question 9.

Name the endocrine gland and the hormone which

1. maintain calcium in the blood.
2. regulate calcium in the body.
3. regulate menstrual cycle.

Question 10.

Give one similarity and one difference in the secondary sex characters developed in boys and girl.

Question 11.

What is the function of Follicle Stimulating Hormone (FSH) from pituitary?

Question 12.

Why should adolescents avoid sexual contact?

### **Section D (Five marks questions)**

Question 1.

What changes occur in human at puberty?

Question 2.

Explain the reproductive phase of life in humans.

Question 3.

Mention different types of glands, their functions and hormones secreted by them.

Question 4.

Explain sex determination in human.

Question 5.

Explain the term reproductive health. What should we do to maintain reproductive health?

Question 6.

Give the similar changes taking place in both boys and girls during adolescence.

Question 7.

Name the six endocrine glands. Where is each gland located? should the adolescents take care of their health?

Question 8.

List changes in the body that take place at puberty