

CLASS VIII
SUBJECT - BIOLOGY
TOPIC - ENDOCRINE SYSTEM

SYNOPSIS

- There are two types of glands: endocrine and exocrine.
- An endocrine gland does not have a duct therefore called as ductless gland.
- Endocrine gland pours its secretion directly into the blood stream for sending it to the target cells.
- Hormones control, coordinate and integrate the functioning of various organs of the body and hence called as chemical messenger.
- Endocrine glands are hypothalamus, pituitary, pineal, thyroids, parathyroids, adrenals, pancreas and gonads.
- Hypo and hyper secretion of growth hormone causes three types of disorders: dwarfism, gigantism, acromegaly.
- Thyroid gland produces thyroxine which is iodine containing hormone.
- Hypothyroidism produces three types of disorders: cretinism, myxoedema and goitre.
- Hyperthyroidism give rise to exophthalmia.
- Pancreas is a heterocrine or mixed gland.
- The endocrine part of pancreas is called as Islets of Langerhans which secrete insulin and glucagon.
- Insulin and glucagon maintain sugar balance of the body.
- Diabetes mellitus is a disorder produced by hyposecretion of insulin.
- Adrenal glands are a pair of flat, conical glands which is present on the upper end of kidneys.
- Adrenal medulla produces two hormones: adrenaline and noradrenaline.
- Adrenaline is called as emergency hormone.

WORKSHEET

Qs 1. Give the technical term for the following:

- a. Oversecretion of growth hormone in adult.
- b. Excess of glucose in blood.
- c. A condition due to hypo secretion of thyroxine in an adult.
- d. Regulate the amount of water excreted in urine.
- e. An organ which is both endocrine and exocrine in nature.

Qs 2. Complete the following table:

Name of the gland	Substance produced	One important function
Islets of Langerhans	1..	2.
3.	Adrenaline	4.
5.	Thyroxine	6.
Alpha cells of Pancreas	7.	8.
9	10	Regulate calcium and phosphorus balance in the body

Qs 3. Choose the odd one in each set and write the category to which the remaining three belong.

- ACTH, TSH, ADH, FSH
- TSH, NADP, ACTH, NADP
- Dwarfism, Goitre, Cataract, Acromegaly

Qs 4. Name the glands responsible for the following diseases :

- Cretinism
- Diabetes mellitus
- Goitre
- Myxoedema
- Gigantism
- Too much urination

Qs 5. Name the hormones secreted by the following glands :

- Adrenal ---
- Pancreas ---
- Ovary ---
- Thyroid ---
- Parathyroids ---

Exercises from the book :

A, D, E, F and G.