

# **CLASS X/ BIOLOGY**

## **CONTROL AND COORDINATION**

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### **CHEMICAL COORDINATION IN ANIMALS**

The endocrine system brings about chemical coordination by complex organic compounds called hormones.

Hormones are defined as chemical messengers that are released to the blood stream and have a specific effect of body function on other structures within the body. Stimulus is known as negative stimulus.

#### **CHARACTERISTICS OF HORMONES:**

1. Hormones are secreted in small amount by the endocrine glands.
2. Hormones are secreted directly in the blood and no special ducts are involved. Hence they are known as ductless glands.
3. Hormones affect only particular tissues called target tissues.
4. Hormones coordinate activities of the body and its growth.

# TYPES OF GLANDS

There are two types of glands in the body –

1. Endocrine Glands
2. Exocrine Glands

## FUNCTION OF ENDOCRINE HORMONES

- i) **Regulation** – Hormones control the internal environment of the body by regulating the secretion and excretion of various chemicals in the blood

**ii) Response** – Hormones help the body to respond to changes in the environment and cope with physical and psychological stress.

**iii) Reproduction** – Hormones control the female reproductive cycle and other reproductive processes essential to conception and birth. It also controls the development of sex cells, reproductive organs and secondary sexual characteristics in both sexes.

**iv) Growth and development** – Hormones are essential for proper growth and development of a body from foetus to adulthood.