Chapter 5 – Quick Revision Sheet

Life Processes

Animal Nervous System

Definition:

The **animal nervous system** is a network of neurons that receives stimuli, processes information and sends signals to different body parts.

Main parts

- Brain – control centre
- Spinal cord – connects brain to body
- Nerves – carry impulses

Neuron: Basic unit that transmits nerve impulses.

Reflex Action

Definition:

A reflex action is a quick and automatic response to a stimulus without conscious thinking.

Examples:

- Pulling hand from hot object
- Blinking of eyes

Reflex arc:

Stimulus → sensory neuron → spinal cord → motor neuron → effector.

Human Brain

Definition:

The **brain** is the main coordinating centre that controls body activities.

Parts

Forebrain

- Thinking, memory
- Controls voluntary actions

Midbrain

- Controls reflexes of vision and hearing

Hindbrain

- Cerebellum – balance & coordination
- Medulla – heartbeat, breathing

Plant Hormones

Plant hormones are **chemical substances that control growth and development in plants.**

Hormone	Function
Auxins	Promote cell elongation and help in phototropism
Gibberellins	Promote stem growth
Cytokinins	Promote cell division
Abscisic Acid	Inhibits growth and causes dormancy

Animal Hormones

Hormones are **chemical messengers secreted by endocrine glands that travel through blood to control body functions.**

Gland	Hormone	Function
Pituitary	Growth Hormone	Controls growth and regulates other glands
Thyroid	Thyroxine	Regulates metabolism and development
Pancreas	Insulin	Controls blood sugar level
Adrenal	Adrenaline	Prepares body for emergency (fight or flight)
Testes	Testosterone	Male reproductive development
Ovaries	Oestrogen	Female reproductive development

Synapse

A **synapse** is the tiny gap between two neurons where nerve impulses are transmitted using chemicals called neurotransmitters.

Receptors

Receptors are specialized sensory cells that detect stimuli from the environment.

Examples:

- Gustatory receptors – taste
- Olfactory receptors – smell