

parts of brain

PARTS OF BRAIN	SUB DIVISIONS	THEIR FUNCTION
Fore brain	(i)cerebrum (ii) lobes (iii) three areas a) sensory area b) motor area c) association area	main thinking and largest part of the brain (a) sensory area : receive impulses from the sense organs via receptors (b) motor area : send impulses to various organs or muscles and control voluntary movements (c) association area : Register impressions and respond by interpreting past experiences (iii)each cerebral hemisphere is divided into a) occipital lobe visual reception b) temporal lobe auditory reception c) parietal lobe : touch, smell, temperature, and conscious association d) frontal lobe : muscular activities
Mid brain		connects forebrain and hind brain. controls reflex involving eyes and ears
hind brain	(i) <i>cerebellum</i> (ii) Pons (iii) Medulla oblongata	(i)cerebellum: controls and coordinates muscular movements, maintaining body posture and equilibrium (ii) pons: acts as a bridge. relays information between cerebrum and cerebellum (iii) medulla :controls involuntary actions

tropism

TROPISM	IN RESPONSE TO	THE FUNCTION	POSITIVE RESPONSE	NEGATIVE RESPONSE
phototropism	light	Ensures plant gets as much as light as possible. stem tip grows in the direction of light.	growth towards light i.e growth of stem	growth away from light i.e is roots
geotropism	gravity	Response of organism to gravity.	growth towards gravitational pull i.e growth of roots	growth away from the gravitational pull i.e growth of shoots
chemotropism	chemicals	response to chemicals e.g pollen tube grows towards a chemical produced by the ovule during fertilisation	pollen tubes growth towards ovule	stem shows negative chemotropism



tropism (cont)

hydrotropism	moisture	growth of roots towards damper areas of soil towards water in soil	growth towards water i.e roots	growth away from moisture i.e stem
thigmotropism	touch	response to touch or solid surface	response towards touch i.e tendrils and other climbing part's growth	response away from touch i.e growth of roots underneath the soil. when rock hit is it grows away from the rock

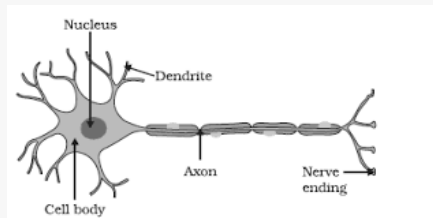
plant hormones

PLANT HORMONES	FUNCTION	SITE	IT'S OPPOSITE
Auxin	-promotes cell elongation in shoots	produced in shoots	cytokinin
cytokinin	-promotes cell division	mainly present in seeds and fruits	auxin
gibberellins	-help in growth of vegetative (like stem...) growth	present in young leaves etc	abscisic acid
abscisic acid	-inhibits growth and induces wilting of leaves	throughout the plant	gibberellins
ethylene	-helps in ripening of fruits	throughout the plant	

endocrine glands

GLAND	SECRETION	HORMONE FUNCTION
Pituitary gland	growth hormone	regulates growth
Hypothalamus	releasing hormone	regulates the secretion of hormones by pituitary gland
Thyroid	thyroxine	regulates metabolism for body growth {controls metabolic rates of carbohydrates, fats and proteins }
Adrenal	adrenaline	increase heart beat rate, blood pressure
Pancreas	(i) insulin (ii) glucagon	(i)decrease blood glucose (ii) increase blood sugar level
Ovary	(i)estrogen (ii) progesterone	development of female sex organs , regulates menstrual cycle etc
Testis	testosterone	regulates the male secondary sexual characteristics
Thymus	thymosin	produces immunity
Parathyroid	(i)calcitonin (II) parathormone	(i)lowers blood calcium level (ii) increases blood calcium level and decreases blood phosphate level
Pineal	melatonin	stimulates muscle contraction

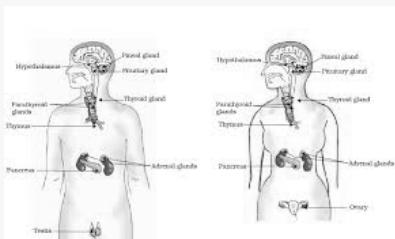
neuron



the junction between neurons is called **synapse**

the information is acquired at the end of the dendritic tip of a nerve cell, setting off a chemical reaction that creates an electrical impulse. this impulse travels from the dendrite to the cell body and then along the axon to its end. at the end of the axon, the electrical impulse sets off the release of some chemicals which travel across the synapse. and starts similar electrical impulses in next cell

endocrine glands



reflex arc

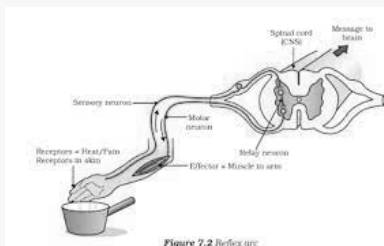
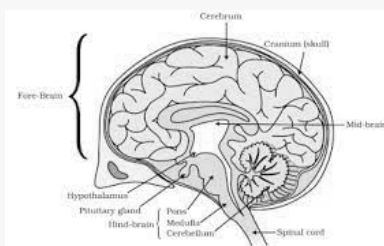


Figure 7.2 Reflex arc

Reflex arc: the nerve path involved in a reflex action for quick response is a reflex arc

brain



cerebrospinal fluid and cranium protect the brain. it is covered with three membranes. the space between the membrane is called **meninges**