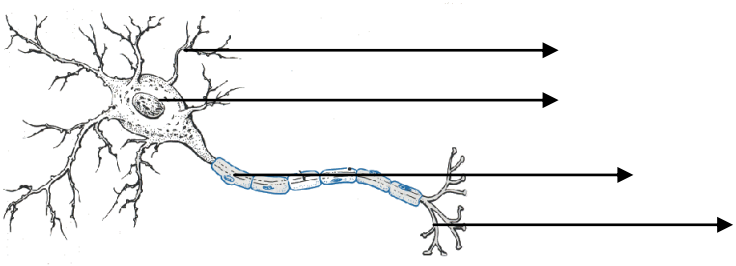
OUR OWN HIGH SCHOOL, AL WARQA'A
CONTROL AND COORDINATION
WORKSHEET
CLASS 10

I. Name the following:

(1) Origin of reflex action
(2) Receptor located in the tongue to detect taste
(3) Receptor located in the nostrils to detect smell
(4) This neuron transmits information from the receptor towards the CNS
(5) This neuron transmits impulses from CNS to an effector.
(6) Spontaneous involuntary responses controlled by spinal cord which is a path followed by an impulse in a reflex action.
(7) Largest part of the brain

II. Identify the different parts of a neuron



(1) It is a part of the neuron where information is acquired…….
(2) It is through this information travels in the form of electrical impulse……
(3) This is the place where electrical impulse is converted into chemical signal for onward transmission to the next neuron…….

III. Mention the limitation of the use of electrical impulses. How do the multicellular forms cope with it?

(1)

(2)

IV. Name the stimuli and the type of tropism in the following

Description	Stimuli	Tropism
Shoot system in plants moving towards light		
Roots grow in search of water.		
Growth of pollen tube towards ovules.		
Movement of roots towards gravity.		
Movement of leaves in mimosa when touched.		

Plant Hormones	Function
Auxins	
Gibberellins	
Cytokinins	
Abscisic Acid	

Animal Hormone	Endocrine gland	Function
Thyroxin		Regulates carbohydrate protein and fat metabolism – best balance for growth.
Growth hormone		Growth and development of the body.
Insulin		Controls sugar level in the blood stream.
Adrenaline		Acts on the heart, skeletal muscles, etc. to cope with stressful condition

Hormone	Deficiency disease
Thyroxin	
Insulin	
Growth hormone	

NOTES:

Significance of reflex action

- Enable the body to give quick response to harmful stimuli so that chances of the damage to the body is minimized or decreased.(survival value)
- Prevents over work to brain prevents its fatigue

Comparison of animal and plant hormones

Characteristics	Animal Hormones	Plant Hormones
Site of Production	Specific endocrine glands	In actively metabolizing tissues
Target Tissue	Each hormone acts on a specific target tissue	Acts on a variety of tissues
Number of hormones	Many	Relatively few
Primary function	Affects homeostasis regulatory in action. Effects are reversible	Affects growth and development. Effects are permanent.

Hormonal Communication	Nervous communication
The message in endocrine system takes form of a chemical substance conveyed through blood stream.	In nervous system, the message is transmitted along a nerve fibre.
Hormonal response are slow	Nervous response more rapid. (impulses are transmitted with high speed along nerves)
Hormones are carried to every part of the body via blood stream.	Nervous impulses are transmitted by particular neurons to specific destinations.
Hormonal responses are often widespread.	Nervous responses are very localized.
Hormonal responses frequently continue for a long period of time	Nervous responses are short- lived.
