

## Final Exam Topics

### THE BRAIN AND THE BEHAVIOUR- Chapter 4

<b>Absolute refractory period</b> The brief time interval following an action potential when a neuron is incapable of being stimulated to fire another impulse.	<b>Autonomic nervous system</b> The branch of the peripheral nervous system that activates the body's muscles (e.g. heart) and internal organs.
<b>Acetylcholine (ACh)</b> An excitatory neurotransmitter that operates at synapses with muscles and is also the transmitter in some neural networks involved in memory.	<b>Axon</b> An extension from one side of the neuron cell body that conducts nerve impulses to other neurons, muscles or glands.
<b>Action potential</b> A nerve impulse resulting from the depolarisation of an axons cell membrane.	<b>Brain stem</b> The portion of the brain formed by the swelling of the spinal cord as it enters the skull; its structures regulate basic survival functions of the body, such as heart rate and respiration.
<b>Adrenal glands</b> Endocrine glands that release stress hormones, including catecholamine's and corticosteroids.	<b>Broca's area</b> A region of the left frontal lobe involved in speech production.
<b>Agonist</b> A drug that increases or mimics the Activity of a neurotransmitter.	<b>Central nervous system</b> The portion of the nervous system that includes the brain and the spinal cord.
<b>All-or-none law</b> States that an action potential is not proportional to the intensity of stimulation; either a neuron fires with maximum intensity or it does not fire (compare with graded potential).	<b>Cerebellum</b> A convoluted hindbrain structure involved in motor coordination and some aspects of learning and memory.
<b>Amygdala</b> A limbic system structure that helps organise emotional response patterns.	<b>Cerebral cortex</b> The gray, convoluted outer covering of the brain that is the seat of higher-order sensory, motor, perceptual and mental processes.
<b>Antagonist</b> A drug that inhibits or decreases the action of a neurotransmitter.	<b>Cerebrum</b> The most advanced portion of the brain, containing the cerebral cortex and underlying structures.

<b>Aphasia</b> The partial or total loss of ability to understand speech (receptive aphasia) or to produce it (productive aphasia).	<b>Computerised axial tomography (CT or CAT) scan</b> A method of scanning the brain with narrow beams of X rays that are then analysed and combined by a computer to provide pictures of brain structures from many different angles.
<b>Association cortex</b> The areas of the cerebral cortex that do not have sensory or motor functions but are involved in the integration of neural activity that underlies perception, language and other higher-order mental processes.	<b>Corpus callosum</b> A broad band of white, myelinated fibres that connects the left and right cerebral hemispheres and allows the two hemispheres to communicate with one another.
<b>Dendrites</b> Small branching fibres that extend from the soma of a neuron and receive messages from adjacent neurons.	<b>Hypothalamus</b> A forebrain structure located below the thalamus and above the pituitary glands that controls autonomic and hormonal processes and plays a major role in many aspects of motivation and emotional behaviour.
<b>Electroencephalograph (EEG)</b> A device used to record the simultaneous activity of many thousands of neurons through electrodes attached to the scalp.	<b>Interneurons</b> Neurons that are neither sensory nor motor neurons but that perform associative or integrative functions within the nervous system.
<b>Endocrine system</b> The body's system of glands that secrete hormones into the bloodstream and thereby affect many bodily functions.	<b>Lateralisation</b> The degree of localisation of a function in either the right or the left cerebral hemisphere.
<b>Forebrain</b> Brain structures above the midbrain, including the thalamus, hypothalamus, limbic system and the cerebral hemispheres; involved in higher-order sensory, motor and cognitive functions.	<b>Limbic system</b> A group of subcortical structures, including the hippocampus and amygdala, that are involved in organising many goal-directed and emotional behaviours.