

Definitions and Concepts for AQA Psychology A-level

Topic 6: Biopsychology

Definitions in bold are for A2 only

Adrenaline: A hormone involved in a number of responses, namely the flight or fight response.

Autonomic nervous system: The nervous system responsible for automatic responses, such as sympathetic or parasympathetic responses.

Broca's area: An area in the left hemisphere that is dedicated to speech production i.e. the motor component.

Central nervous system: The nervous system made up of the brain and spinal cord.

Circadian rhythms: (Circa = approximately, dian = a day) Biological processes which cycle in about 24 hours. For example, the sleep-wake cycle.

EEG: Electroencephalogram (electro = electrical activity, encephalo = brain, gram = measuring). An imaging technique to record electrical activity in the brain.

Endogenous pacemakers: Internal “clocks” that regulate biological rhythms, e.g. the suprachiasmatic nucleus.

ERP: Event-related potential - an imaging technique similar to an EEC, except baseline activity is filtered, so electrical activity in response to a stimulus can be recorded.

Excitation: A signal sent to the next nerve making it more likely to fire.

Exogenous zeitgebers: External cues that influence biological rhythms. For example, daylight influences the sleep-wake cycle.

Fight-or-flight response: The sympathetic responses that increase activity to areas designed to help you escape or prepare for a fight e.g. increased blood flow to muscles, reduced blood flow to the gut.

fMRI: Functional magnetic resonance imaging - an imaging technique that monitors blood flow in the brain. It allows insight into which areas of the brain are used for particular activities.

Glands: An organ that synthesises and releases substances (e.g. hormones) for specific

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purposes.

Hormones: Chemical messengers that travel through the bloodstream to regulate certain processes in the body.

Infradian rhythms: (Infra = below, dian = a day) Biological rhythms that occur less often than once a day, meaning, they cycle in periods a lot longer than 24 hours. For example, the menstrual cycle.

Inhibition: A signal sent to the next nerve making it less likely to fire.

Lateralisation (hemispheric) of function: The concept that different hemispheres in the brain have differing functions. For example, the language functions are typically lateralised to the left hemisphere of the brain.

Localisation of function: The concept of functions in the brain being specific to certain areas. For example, Broca's area is specific to language production.

Motor neurones: A type of neuron that activates an effector organ (muscles, glands, organs).

Peripheral nervous system: The nervous system that exists outside the central nervous system, in the periphery; your arms, legs etc.

Plasticity: Specifically brain plasticity; the ability of the brain to adapt to situations, and change its structure - even to potentially regain previously lost function.

Relay neurones: A neuron found in the CNS which allows communication between sensory and motor neurones.

Sensory neurones: A neuron that transmits sensory information from the environment to an interneuron after converting it to electrical activity.

Somatic nervous system: The nervous system in control of conscious, voluntary movements of the periphery.

Suprachiasmatic nucleus: Two small, paired nuclei in the brain that are responsible for controlling many circadian rhythms in the human body. For example, they regulate the sleep-wake cycle.

Ultradian rhythms: (Ultra = above, dian = a day) Biological rhythms that occur more often than 24 hours, meaning they cycle in periods shorter than 24 hours. For example the sleep cycle, occurring every 90 minutes.

Wernicke's area: An area in the left hemisphere that is dedicated to speech comprehension.

