Psychology Midterm review

Please study your notes as parts of the following will be on the test.

Unit #1- What is Psychology?

* What is Psychology? (definition)
* Overt behavior and covert behavior
* Primary goals of psychology
* Structuralism
* Functionalism
* Psychoanalysis
* Behaviorism
* Gestalt psychology
* Humanistic psychology
* Positive psychology

Unit #2- The Brain:

* Nervous system:
* Endocrine System:
* Autonomic Nervous System
* Hormones:
* Neuron:
* Neurotransmitters:
* Somatic Nervous system:
* Frontal Lobe- associated with reasoning, planning, parts of speech, movement, emotions, and problem solving (right- (Creative) and left hemispheres-(Logical))
* Parietal Lobe- associated with movement, orientation, recognition, perception of stimuli
* Occipital Lobe- associated with visual processing
* Temporal Lobe- associated with perception and recognition of auditory stimuli, memory, and speech
* *Motor Cortex-* This helps the brain monitor and control movement throughout the body. It is located in the top, middle portion of the brain.
* Sensory Cortex*-* The sensory cortex, located in the front portion of the parietal lobe, receives information relayed from the spinal cord regarding the position of various body parts and how they are moving. This middle area of the brain can also be used to relay information from the sense of touch, including pain or pressure which is affecting different portions of the body.
* The Thalamus: is located in the center of the brain. It helps to control the attention span, sensing pain and monitors input that moves in and out of the brain to keep track of the sensations the body is feelings.
* The cerebellum controls essential body functions such as balance, posture and coordination, allowing humans to move properly and maintain their structure.
* Temporal Lobe:The temporal lobe controls visual and auditory memories. It includes areas that help manage some speech and hearing capabilities, behavioral elements, and language. It is located in the cerebral hemisphere.
* Medulla:The medulla or medulla oblongata is an essential portion of the brain stem which maintains vital body functions such as the heart rate and breathing.
* The limbic system contains glands which help relay emotions. Many hormonal responses that the body generates are initiated in this area.

Unit 3: Sensation and perception

* Sensation
* Perception
* Absolute threshold
* Signal detection theory
* Signal adaptation theory
* Selective attention
* The length of the light wave determines the light’s colour or **Hue.**
* The amplitude or height of the wave determines brightness
* Pitch: the sound’s highness or lowness
* Pitch is expressed as hertz, the number of sound waves that reach the ear per second.
* The height or amplitude of the sound wave determines loudness, which is measured in Decibels (dB)
* Kinesthetic sense: The system sensing the position and movement of the individual body
* Vestibular sense: The system for sensing body orientation and balance, which is located in the semicircular canals of the inner ear.

Unit 4: Sleep

1. Circadian Rhythms: Are biological rhythms that occur approximately once every 24 hours. Example- sleep-wake cycle

2. Ultradian Rhythms: Are biological rhythms that occur more than once a day. Example – the way we cycle through various stages of sleep each night.

3. Infradian Rhythms: Are biological rhythms that occur once a month or once a season. Example- women’s monthly menstrual cycle, a bear’s winter hibernation.

How does sleep deprivation affect us?

• decreases levels of hormones necessary for our immune system to function properly – sleep deprivation also increases levels of the stress hormone cortisol, which has been linked to the damage of brain cells responsible for learning and memory.

So that helps us to understand how we go to sleep but that still leaves the question of why we need to go to sleep….

• It seems that we need sleep because of preservation and restoration.

* Preservation: What would happen if you got up in the middle of the night, didn’t turn the lights on and went to the kitchen for a snack? You would probably bang into things and hurt yourself! Our ancestors who slept in caves and forests would have experienced danger if they were moving, hunting, or just living at night. So, perhaps sleep started to protect us.
* Restoration: sleep allows us to recuperate from daily wear and tear. Rebuilding and reorganization can occur in our brain.
* Sigmund Freud contributed the earliest dream theory. He said that dreams were the key to understanding inner conflict. Dreams represented wish fulfillment and could always be traced back to pleasure moments.
* Modern Theories of Dreaming

Information Processing: Dreams help us sift through the days experiences and tie up loose ends. Almost like when your computer synchronizes and updates when you shut it down.

Physiological Function: Neural activity during REM sleep provides periodic stimulation for our brains.

Activation Synthesis: The brain attempts to interpret random neural activity during sleep, and this is what creates the dream.

Cognitive Development: Some say that dreams are a part of a maturation process of the brain. Others say that dreams reflect what we have learned and know. (in other words, if you don’t know something, you won’t dream about it.)

* Sleep disorders

1. Insomnia
2. Sleep Apnea
3. Narcolepsy
4. Somnambulism
5. Night terrors
6. Bruxism
7. Enuresis
8. Myoclonus

Notes on Operant and classical conditioning