

Q/A Psych Review

1. Describe the process of neural conduction within a cell.
 - a. **Axon** sends a signal to the axon terminal
 - b. **Axon terminal** contains buds which releases neurotransmitters
 - c. **Neurotransmitters** communicate from neuron to neuron through the synapse
 - d. **Synapse** transmits the signal to other neurons
 - e. **Dendrites** receive the signal
 - ***myelin sheath** protects the message from losing any information*
2. How do messages get transmitted from one cell to another?
 - a. **Dendrites** bring information to the cell body
 - b. **Axons** take information away from the cell body
 - c. Information from one neuron flows to another neuron across a **synapse**
 - d. The synapse contains a small gap separating neurons
3. What are the functions of the major parts of the cerebral cortex and the limbic system?
 - a. **cerebral cortex** - the outermost part of the brain, responsible for analyzing sensory processing and complex brain functions including reasoning and language
 - b. **forebrain** - forward part of the brain that allows advanced intellectual abilities, most highly developed part of the brain
 - c. **cerebral hemispheres** - two halves of the cerebral cortex, each of which serve distinct yet highly integrated functions
 - d. **corpus callosum** - large band of fibers connecting the two cerebral hemispheres
 - e. **limbic system** - emotional center of the brain that plays a role in smell, motivation
 - f. **thalamus** - gateway from the sense of organs to the primary sensory cortex
 - g. **hypothalamus** - part of the brain responsible for maintaining a constant internal state
 - h. **amygdala** - plays a key role in fear, excitement and arousal
 - i. **hippocampus** - plays a role in spatial memory
4. What is neural plasticity? What does it tell us about the brain? What does it tell us about the effects of nature and nurture?
 - a. **neural plasticity** - ability of the nervous system to change
 - this tells us that our brains change as we learn, which is critical for learning.
 - also tells us that our brain can change throughout our entire life, not just when it is developing
5. Are some people left-brained and others right-brained? What is the evidence for right-brain and left-brained thinking?
 - a. **Brain Lateralization**

6. What is epigenetics? What does the study of epigenetics tell us about the effects of nature and nurture?
 - a. **epigenetics** - how certain genes may be switched on or off due to certain experiences we have in our life

7. What is heritability, how is it measured, and what does it tell us about the role of nature and nurture?
 - a. **heritability** - percentage of the variability in a trait across individuals that is due to genes
 - b. measured by estimating the relative contributions of genetic and non-genetic differences to the total phenotypic variation in a population.

8. Describe classical and instrumental conditioning and give two or three examples of each.
 - a. **classical** - form of learning in which animals come to respond to a previously neutral stimulus that had been paired with another stimulus that elicits an automatic response
 - ex. dog salivating because of a piece of meat
 - b. **instrumental** - learning controlled by the consequences of the organism's behavior
 - ex. dropping a dollar into a soda machine, asking out an appealing classmate

9. How are classical conditioning and operant conditioning similar and different?
 - a. **similar** - learning techniques
 - b. **differences**

Classical

- the response is elicited
- the reward is independent
- the response depends on the autonomic nervous system
- focuses on involuntary, autonomic behaviors

Operant

- the response is emitted
- the reward is dependent
- the response depends on the skeletal muscles
- focuses on strengthening or weakening voluntary behaviors

10. What are the effects on behavior of reinforcement and punishment?
 - a. Reinforcement *increases* target behavior
 - b. Punishment *decreases* target behavior

11. What is the principle of partial reinforcement? Why does behavior on a partial reinforcement schedule more difficult or slower to extinguish than behaviors that are reinforced continuously?
 - a. **Partial Reinforcement** - if reinforcement is given irregularly on only part of the trials, conditioning will occur at a slower rate than with 100% reinforcement (reinforced continuously)
 - ultimate performance is lower in classical conditioning and higher in

instrumental conditioning

12. Cross-sectional and longitudinal studies are two methods developmental psychologists use to study development. Which method provides faster answers about how behaviors change over time? Which is cheaper to conduct? Which do you think tells us more about how people change over time? Why?
- Cross-sectional because it does not occur within the life span of one person, but rather multiple people of different ages
 - Cross-sectional
 - Longitudinal because it stays with the same person throughout the course of their life
13. What are motor behaviors? What are some of the major motor behavior milestones? What determines the order in which motor behaviors develop? What are some of the factors that influence the rate at which motor behaviors unfold?
- Motor Behavior** - the study of how motor skills are learned, controlled and developed to assist people as they practice and experience physical activity
 - Sucking, grasping, sitting, crawling, walking, running
 - Age
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14. Describe the major stages of cognitive development according to Piaget. How is “thinking” different in each of Piaget’s stages of cognitive development? Give an example of behavior in each of Piaget’s stages.
- Sensorimotor** (birth – 2 years)
 - lack object permanence; out of sight, out of mind
ex. peek-a-boo
 - Preoperations** (2 years – 7 years)
 - mental representation from experience
 - lack knowledge
ex. pretend play/ imagination
 - Concrete Operations** (7 years – 11 years)
 - develop logic in thoughts and actions
ex. know right from wrong
 - Formal Operations** (11 years – adulthood)
 - develop hypothetical reasoning
ex. think about what might happen in a situation
15. What do you think is the major factor that accounts for why children become attached to a particular person? What factor may not be as important as some people might think?
- Imprinting – the impact a caregiver gives on a child due to nourishment and touch
 - Food