Exam 1 Study Guide Revised 4/11/14

Disclaimer: This is intended as a study aid. It is not a complete description of everything discussed in class, nor an exhaustive list of information that might be tested on an exam. This is not intended to be a substitute for class attendance.

LECTURE OUTLINES

What is psychology?

I. Goals of psychology
    to observe, explain, predict behavior

II. Areas within psychology
  A. basic research
    1. biopsychology
    2. developmental psych
    3. social psych
    4. cognitive psych
    5. personality psych
  B. applied psychology
    1. clinical and counseling
    2. industrial/organizational

Psychology as a science

I. Scientific Method
  A. Core concepts
      Theory, hypothesis, observation
II. Types of Observations
  A. Experimental
    1. Types of variables
      a. independent and dependent variables
      b. confounding variables, and how to control them
        1. confounding placebo effect
        2. confounding subject variables
        3. how to "control" this confounding variables
    2. Examples of experiments that were discussed in class and illustrated in a film
      a. Pellagra example
      b. Drugs and depression examples
      c. "When will people help" example
    3. Benefits of the experimental method
      a. allows prediction and conclusions about cause and effect
  B. Non-experimental method of observation
      a. correlation –
        1.allows predictions but does not permit claims about cause-and-effect

Behavioral Neuroscience

I. Basic divisions of the nervous system
  A. CNS - PNS
  B. somatic - autonomic
  C. sympathetic - parasympathetic
II. Microscopic view of the brain -- neurons
  A. structure and function of neurons
    1. dendrites -- collect information
    2. cell body -- integrates info, makes decision, sends signal to other neurons
    3. axon -- transmits signal to other neurons
  B. How a neuron processes information
    1. electrical mechanism (flow of charged ions)
    2. concepts of resting potential, threshold potential, excitatory and inhibitory signals, action potential, low of sodium and chloride ions through the neuron membrane
  C. How a neuron communicates with other neurons: the synapse
    1. elements of a synapse (presynaptic neuron, postsynaptic neuron, synaptic gap)
    2. presynaptic events
    3. postsynaptic events
    4. examples of neurotransmitters
III. Macroscopic view of the brain
  A. location and function of brain structures (e.g., medulla, cerebellum, colliculi, etc)
  B. cerebral cortex
    1. major fissures, lobes
    2. functional divisions of cortex (sensory, motor, association)
    3. hemispheric lateralization of function; split-brain patients; corpus collosum
    4. Brain plasticity (exemplified by hydrocephalus, fetal alcohol syndrome
    5. neural prostheses (as shown in the video that is available on the website)

Developmental Psychology

I. How competent is the newborn?
  A. types of behaviors a newborn is capable of
II. Cognitive Development
  A. Piaget's theory
    1. assumptions
    2. basic concepts
      a. fundamental hypotheses and relevant evidence
      b. stages development
      c. criticisms/limitations/revisions
III. Social Development
  A. Infant-caregiver attachments
    1. Why do infants become attached to caregivers?
    2.What determines the quality of attachment?
    3. What long-term effects does quality of attachment have?

IV. Aging (***if we have time to cover these topics***)

A. How bad is old age?

B. Alzheimer's disease