EXAM 3 Study Guide
NOTE: Chapters 5, 6, 7 will be on the exam.

YOU KNOW YOU ARE READY FOR THE TEST IF YOU ARE ABLE TO...

- Define learning.
- Explain what classical conditioning is, how it works, and how it was discovered.
- Describe the mechanisms of operant conditioning, its application in the real world, and the researchers who contributed to our understanding of the process.
- Define observational learning and describe Bandura's classic experiments in the area of observational learning.
- Introduce the study of memory including the basic processes of encoding, storage, and retrieval.
- Discuss the four key characteristics of Encoding, such as attention, levels of processing, elaboration and mental imagery.
- Discuss the Atkinson-Shiffrin box model of memory storage in detail including the concepts of sensory, short-term, and long-term memory.
- Identify the basic mechanisms and limitations in the retrieval of information including the serial position effects.
- Describe Ebbinghaus's work on forgetting and proposed explanations for forgetting.
- Identify the basic types of amnesias and the effects of hippocampal damage.
- Introduce the concept of cognition, as it relates to mental images, concepts and problem solving.
- Describe intelligence and creative thinking.
- Discuss the measurement of intelligence including the Stanford-Binet and Wechsler intelligence tests, test construction issues, and the determination of developmental delay.
- Describe several prominent theories of intelligence.

Review Outline: This is an OUTLINE!! You need to fill in the details from your notes in class.

Chapter 5 – Learning

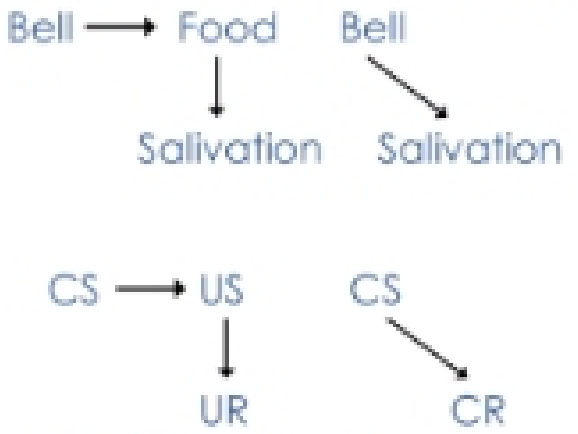
Learning – relatively permanent change in behavior or mental process resulting from practice or experience

- Change in behavior and ability to change back
- Relatively permanent
- Neutrally mediated
- NOT plasticity & NOT maturation

Classical (Pavlovian) Conditioning: "associations between *two stimuli*"

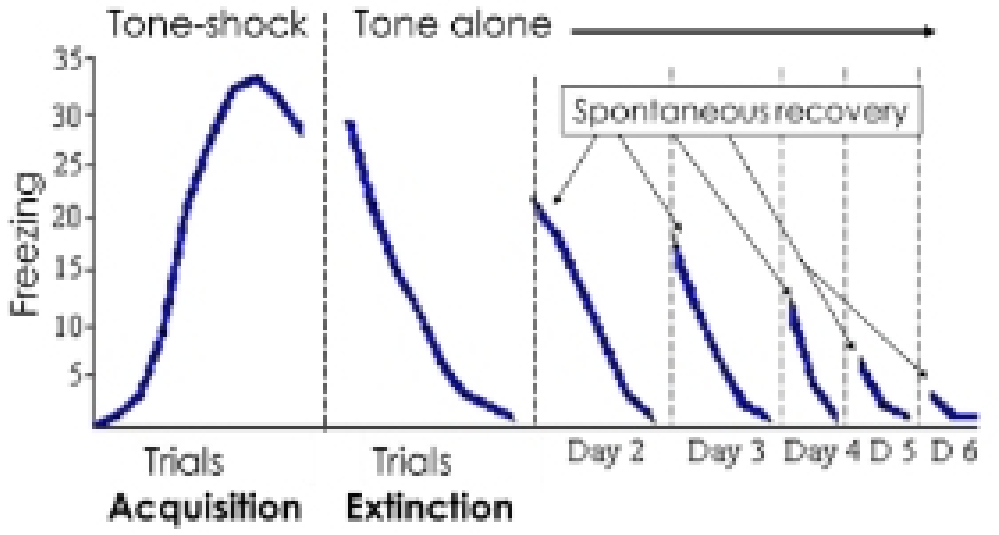
- Learning to associate two stimuli together: preexisting S-R relationships to new stimuli
- Fundamental building block of learning
- First demonstrated by Ivan Pavlov
- shown by virtually all animals
  - Used dogs – measured salivation

- Bell paired with food causes salivation
- Dogs learn to salivate to the Bell
- Bell – Conditioned stimulus
- Food – unconditioned stimulus
- Salivation to food – unconditioned response
- Salivation to bell – conditioned response



4 Things in Pavlov's experiment
- **Conditioned Stimulus:** stimulus that starts out neutral
- **Unconditioned Stimulus**: meaningful stimulus
- **Unconditioned Response**: innate response to meaningful stimulus
- **Conditioned Response:** learned response to previously neutral stimulus

Properties of Classical Conditioning: a learning process in which two stimuli become associated & cause a change in behavior



Acquisition: period of time when the stimulus comes to evoke the conditioned response

Extinction: gradual weakening of a conditioned response that results in the behavior

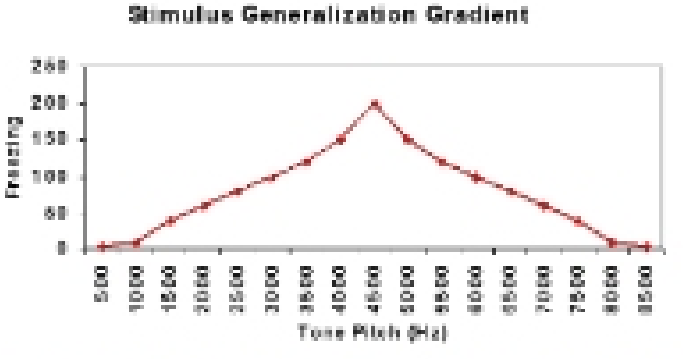
decreasing or disappearing

- in classical conditioning this happens when a conditioned stimulus is no longer paired with an unconditioned stimulus

Spontaneous Recovery: reappearance of the conditioned response after a rest period or period of lessened response. If the conditioned stimulus & unconditioned stimulus are no longer associated, extinction will occur very rapidly after a spontaneous recovery

Stimulus generalization: stimuli that are similar to the CS (conditioned stimulus) will also elicit conditioned response to some degree

Stimulus generalization gradient



Classical conditioning in real-life situations

Conditioned Fear: acquisition of fear to new stimuli

Acquisition of Phobias: formed when a person makes an association between

a stimulus & a predetermined outcome or negative/particular feeling/reaction.

- exposure to the stimulus can evoke feeling or fear & dread as the person worries that they are in danger

Extinguishing phobias – systematic desensitization, flooding

- **systematic desensitization**: removes fear responses to phobia by forming a hierarchy of fear, involving the conditioned stimulus – ranked least fearful to most fearful & also uses relaxation techniques
- **flooding**: faster & less efficient / more traumatic method
  - demonstrating irrationality of the fear – person faces phobia at worst under controlled conditions & uses realization techniques to replace fear with relaxations

Conditioned Taste Aversion and Taste Acquisition

Taste Aversion: ex. jose cuervo + puking = not wanting to drink alcohol

- we are biologically prepared to make certain types of associations quickly & permanently
- learn to dislike particular taste when it has caused illness in the past
- ex. curry taste = illness; curry = XavoidX

Taste Acquisition: ex. coffee is gross but you like the way it makes you feel so you drink it

Operant (Instrumental) Conditioning: "associations between a *response* & its *consequences*"

Edward Thorndike

- scientist that first demonstrated the power of changing behavior by manipulating the consequences of that behavior
- he called it instrumental learning in the beginning
- Pavlov used dogs, Thorndike used cats

Cats in puzzle boxes – Trial and Error learning

- put cat in the box & it won't like it but they always tend to get it boxes by themselves
- put cat inside box & can't get out then puts tuna right outside of the box = cat starts meowing & scratching
- shows the cat that there is a lever for the cat to get out
- right before door opened, that is the behavior that is more likely to reoccur in the