Study Guide for Second Exam

The material included in the following questions is fair game for the exam. We will take most of the exam questions, in some form, from the following list. However, you should know that this list is not exhaustive, and there may be some questions on the test that are not covered by the questions below.

**Sensation and Perception**

**Sensation**
- Retina
- Pre-attentive processes

**Perception**
- Rods
- Visual search

**Receptors**
- Cones
- Gestalt principles

**Transduction**
- Fovea
- Perceptual constancy
- Blind spot
- Figure vs. ground

**Sensory adaptation**
- Receptive fields
- Illusory contours

**Amplitude**
- Spatial frequency
- Stereopsis

**Frequency**
- Agnosia
- Change Blindness

**Pitch perception**
- “what” vs. “where"
- Stroop Interference

**Basilar membrane**
- neural pathways

**Cochlea**
- Feature integration

**Auditory masking**
- Feature integration

**Phonemic restoration**
- theory

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1. Be able to step through the basic transduction processes involved in taking distal stimuli and creating neural impulses in both the visual and auditory senses.

2. What can we learn about the neural organization of the sensory system through studying sensory adaptation? Be prepared to give an example.

3. Name three Gestalt principles and how they might account for (or explain) a visual illusion (either one from the textbook, from lecture, or from your own experience).

4. Describe two different processes used by people to interpret depth in their visual environment.

5. Give an example from the visual and auditory domains for how context can play a role in perception.

6. What is the difference between a bottom-up process and a top-down process? Give an example of each.

7. Describe the basic notion behind Triesman’s Feature Integration Theory. What are illusory conjunctions and how do they support her theory?
Learning
Habituation  |  Recovery from extinction  |  Positive reinforcement
CR  |  Generalization  |  Negative reinforcement
CS  |  Operant responses  |  Positive punishment
UCS  |  Law of effect  |  Negative punishment
UCR  |  Reinforcers  |
Association  |  Shaping  |
Extinction  |  Partial reinforcement

1. Give an example of how psychologists make use of habituation and classical conditioning to learn about infants.

2. Explain one reason that drug addicts frequently return to drug use, even after physical rehabilitation. Make use of the notions of classical conditioning in your answer.

3. Some animals can do amazing things. Discuss how you might use operant conditioning to train your dog to stop barking and to open a door.

Memory
Sensory memory  |  Procedural  |  Elaboration
Iconic memory  |  Repetition priming  |  Depth of processing
Echoic memory  |  Retrograde amnesia  |  Chunking
Working memory  |  Anterograde amnesia  |  Retroactive interference
Phonological loop  |  Digit span  |  Proactive interference
Visuo-spatial sketchpad  |  Serial position effect  |  Encoding-specificity
Central executive  |  Interference  |  Context-dependent
Long-term memory  |  Phonological similarity  |  memory
Episodic memory  |  effect  |  False memory
Semantic memory  |  Word length effect  |
Implicit  |  Mental rotation  |
Explicit  |  Rehearsal  |

1. Draw a serial position curve (approximately) and label the areas representing the primacy effect and the recency effect. What memory processes account for each of these effects?

2. Give evidence for the phonological loop in Baddeley’s working memory.

3. Mental imagery

4. Name two memory systems that are believed to be neurologically distinct (i.e., supported by separate areas of the brain). What evidence exists to support this hypothesis?

5. What are the major differences between so-called “Hollywood” amnesia (the kind often observed on soap operas) and the anterograde amnesia we discussed in class?

6. List three methods of improving your memory for test material.

7. Give two examples from real life and one example from an experiment that illustrate the following statement: “Memories are not so much retrieved as reconstructed.”
1. Give two examples of methods people use to coordinate different levels of action in conversation.

2. Give evidence for the innateness of language use. Give evidence for the learnedness of language use.

3. What are the five major properties of language? Give examples of each.

4. There are many theories about how we apply meaning to language. Outline in detail one of these theories. Why is this a good theory? Why is this a bad theory?

5. In what ways can language affect how we think about and perceive the world?

**Thinking**

1. Describe and contrast notions of intelligence according to Binet, Spearman, and Cattell. (The names are not as important as their ideas.)

2. What evidence is there that intelligence is hereditary? What evidence to the contrary?

3. What kinds of biases do people have when making decisions? What benefits do we gain from these biases?

4. Name two blocks to problem solving and illustrate them with examples. What do they reveal about how people solve problems?