**Psy 360 Learning**

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**Fall 2021**

**Study Guide for Test #2**

**Chapters 5,6,7 and 8**

**TERMS TO KNOW:**

Instrumental/operant conditioning instrumental/operant behavior R-S learning vs. S-R learning

Thorndike’s puzzle box tests S-R association learning satisfying (state of) events

discrete trial procedures free operant procedure Operant response

clicker training shaping Response rate

absolute response rate relative response rate local response rate

Positive reinforcement negative reinforcement positive punishment

Negative punishment omission training differential reinforcement schedules

DRO and DRA DRL DRH

Parameters of reinforcement effects of reinforcer rate effects of reinforcer quality

Effects of reinforcer delay response-reinforcer relation importance temporal relation

Interim responses schedules of reinforcement multiple schedules

Ratio schedules temporal schedules continuous reinforcement

Partial reinforcement fixed ratio schedule variable ratio schedule

Variable ratio schedule variable interval schedule limited hold

concurrent schedules feedback function in sched’s concurrent schedule

Chain schedules forward chains backward chains

matching law Undermatching parameter (a) reward sensitivity (a)

bias in the matching law (b) Causes of undermatching sources/causes of bias in matching law

Generalized matching equation Herrnstein’s matching equation changeover delay (COD)

Molecular maximizing molar maximizing melioration

Optimization behavioral economics closed vs. open economies

Price, supply and demand substitutable commodities complementary commodities

Elastic vs inelastic reinforcers melioration reinforcer hierarchy

Self control delay discounting commitment

Behavioral contracts sooner/smaller rewards later/larger rewards

Controlling responses delay of gratification Mischel’s marshmellow test and results

Disequilibrium theory response satiation response deprivation

Premack principle probability of response transituationality of reward

Behavioral regulation S-R association and Law of effect role of dopamine in reward

response allocation stimulus control stimulus discrimination

excitatory gradients inhibitory gradients generalization gradients

stimulus generalizations Peak shift Spence’s theory

Factors affecting discrimination differential responding transpositional/interdimensional theory

Interdimensional shifts perceptual learning tests of generalizations

Compound stimuli simple stimuli conditional stimuli

Matching to sample arbitrary discrimination matching to sample

Concept formation stimulus class stimulus equivalence

Reflexivity symmetry transitivity

Feature positive effect feature negative effect errorless learning paradigm

ESSAY QUESTIONS

1. How do Skinner’s version of the law of effect and Thorndike’s version of the law of effect differ in how they describe reinforcers and punishers in operant conditioning? Is this an important distinction? Why or why not. Do they both describe operant conditioning?
2. Briefly describe the four basic reinforcement schedules (VI, VR, FI, FR) and how behavior patterns should be different between each of them. Be sure and give a real-world example for each type of schedule.
3. Are reward and punishment simply opposites, or are they qualitatively different? That is, do the same parameters apply to both reinforcement and punishment, and can we quantify reward settings such that x number of reinforcers equals x number of punishers? Defend your answer!
4. How does extinction during operant conditioning differ from extinction during classical conditioning? Why is this important to know in clinical settings?
5. What does Herrnstein mean by "matching"? His 1970 equation was P = kR/R + Ro. Explain what P, k, R and Ro are, and how this equation can demonstrate that an animal “matches”.
6. Baum's (1974) generalized matching law is: P1/P2= b(R1/R2)a or log(P1/P2)= a \* log(R1/R2) = log b. What does P1, P2, b, R1, R2 and “a” stand for (hint, the book uses B for P and k for lower case b). What does “matching” mean, according to this equation?
7. According to Baum’s matching law, what is undermatching or the reward sensitivity parameter? What might cause undermatching? What is bias? What might cause bias?
8. What is behavioral contrast (briefly describe the phenomenon). Show how Baum’s Generalized Matching Law predicts this. Give a real world example of how understanding the Generalized Matching Law might help you better utilize a reinforcement program.
9. What is the difference between a molar model and a molecular model of choice behavior? Give an example of each and describe how each tries to explain how an animal makes the “best” or “good enough” choice.
10. What is temporal discounting? Why is this important for psychologists to know about, and how can it influence how an organism responds to a particular reinforcer? Give a real life example to support your answer.
11. Can self control be taught or trained? Why or why not….and support your answer with evidence from lecture, the book and your own life!
12. How is operant behavior BOTH R-S and S-R learning? Why is this an important concept when understanding how an organism learns a contingency? How does understanding this concept improve our knowledge about how organisms learn?
13. What is meant by disequilibrium, according to disequilibrium theory? What is response deprivation and response satiation? Finally, how is the disequilibrium model an improvement over Premack’s model?
14. How does a behavioral economic approach explain reinforcers? What do the theorists mean by elasticity of demand and substitutability of commodities? How can using a behavioral economics approach improve what we know about reinforcement?
15. Describe stimulus control and explain why this is such an important concept for operant conditioning. Give at least three examples of the importance of stimulus control in applied settings.
16. What is errorless learning? Why does errorless learning offer an improvement in teaching stimulus control? Give three examples of how errorless learning could be used for teaching psychology.
17. What are the feature positive and feature negative effects? How are these effects demonstrations of a biological boundary on learning?
18. Using what you know about Feature positive and Feature Negative effects, why is a multiple choice question which asks “which of the following is NOT one of the ……” more difficult than “which of the following is an example of….”

**Test will consist of:**

6 5 point definitions 30 points

3 10 point compare and contrasts 30 points

2 20 point Essay questions (given 3, write on 2) 40 points

The terms for the definitions and compare/contrast will come only from this study guide.

The two essay questions given on the test will be copied VERBATIM from this study guide. You choose which one of the two to answer.