

Psychology 201: Midterm Exam Review Sheet

Introduction to Cognition

1. What is the general definition of “cognition”?
2. With what perspective was Watson associated? Can you think of any criticisms to his perspective?
3. What is cognitive psychology?
4. Describe cognition as a ‘complex’ process. What does it involve?
5. Understand the theoretical AND practical reasons for the study of cognition. Link this to prediction, understanding, and controlling human behavior.

History of Cognition

6. What does it mean to say that humans are “information processors”?
7. What are mental representations? How does this contrast with mental processing? How do these two concepts overlap?
8. Describe Wundt’s contributions to the field of cognition. How did this later influence other researchers like Ebbinghaus and James?
9. Define “Functionalism”. Be specific!
10. Explain how Functionalism differs from Behaviorism.
11. What is Gestalt psychology? Understand the major grouping principles of Law of Proximity, Similarity, Closure, Continuity, Reification, Multistability, and Invariance
12. What role did the rise of artificial intelligence research and linguistics play in terms of shaping cognitive psychology as a discipline?
13. Understand the impact of the cognitive revolution in the 1960s on human behavior research.

Cognition and the Brain

14. What is phrenology? What aspects of this research were flawed? What good came from it?
15. Describe the difference between serial search and parallel search.
16. What is brain localization? What evidence is there to support this concept?
17. Understand the major lobes of the brain, and the role of the cerebellum.
18. Be prepared to identify various elements of the nervous system (i.e., PNS, CNS, SNS, etc)
19. What is the Golgi stain? What did this contribute to cognitive psychology?
20. Compare/contrast the 4 major ways researchers gather behavioral data.
21. What is a ceiling effect? What is a floor effect? Which is worse?
22. What are expectancy effects?
23. Explain how instrumentation issues impact the quality of data gathering.
24. What does attitude accessibility refer to in terms of evaluating stimuli?
25. What do the WISC Card Sorting Task and Clock Drawing Task demonstrate in cognition (and clinical) research?
26. Compare/contrast (a) CT scans, (b) fMRI/MRI, (c) PET scans, and EEGs.

Sensation and Perception

27. What is sensation? Contrast this with perception.
28. What does it mean to be “data-driven”? How does thinking shift to become more “conceptually-driven?”
29. Define parallel processing. How does the Stroop Effect demonstrate this?
30. What are feature detector neurons?
31. Explain the basic sensory system, along with the stimulus and receptors responsible for the process of transduction.
32. What is contrast sensitivity? How can it be improved?
33. What is the Muller-Lyer Illusion? What does it help describe?

Mental Imagery and Mapping

34. What is mental imagery? Why did Behaviorists disagree with it?
35. Understand the differences AND similarities between perception and mental imagery.
36. Define the dual-coding hypothesis.
37. Define the conceptual-propositional hypothesis.
38. Define the functional-equivalency hypothesis (*careful with this one! What is perceptual overlap?*)
39. Compare/contrast automatic vs. controlling processing. What does this have to do with mental imagery?
40. What are cognitive maps? How are they formed?
41. Define route knowledge vs survey knowledge. Which is more difficult to create, and why?
42. Define mental rotation. What did Feng et al (2007) have to say about this?
43. What did Wu and Spence (2013) discover with regard to playing action video games and visual search?
44. To what extent does angle of mental rotation impact reaction time on an experimental task?
45. Identify factors that contribute to the formation of cognitive maps (including social factors)
46. Why do we create ‘cognitive short-cuts’ with cognitive maps? What purpose does this serve?
47. Define spatial iconicity.

Attentional Processes and Cognition

48. What is attention? What is signal detection and vigilance?
49. What does research by Loftus (1978) remind us about conceptual dysfluency?
50. What is meant by the phrase “overactive top-down processing” (*careful....this is surprisingly complex!*)
51. What is meant by the phrase “perception without attention”? What are some advantages and disadvantages?

52. What is meant by the phrase “perception requires attention”? What are some advantages and disadvantages?
53. Define consciousness.
54. Compare mental rebound effects with mind wandering.
55. Explain the process of selective attention.
56. What is dichotic listening?
57. What is divided attention? What facts impact this (and other) attentional processes (*hint: there are roughly 4*)
58. Compare/contrast inattention blindness with change blindness.
59. Compare/contrast goal-directed attention with stimulus-driven attention.
60. Describe attentional blink. Think of some examples not covered in class, or readings.
61. Describe cognitive load. How is it generated?
62. Explain Treisman’s Attenuation Model. What is “subjective loudness”?
63. Explain Treisman’s Feature Integration Theory. What is feature vs conjunctive search? When is one utilized over the other?
64. Understand Kahneman’s Capacity Theory, and the impact of cognitive load.
65. What is Similarity Theory? How does it compare to other attentional theories?
66. What is Guided Search Theory? How does it compare to other attentional theories?
67. Recognize the “bottleneck” vs. “filter” interpretation of attentional theories.
68. Define 1-2 points of consideration (i.e., limitations) of some research on attention and focus.

Attention and Memory

69. Understand the Informational Processing Model of memory.
70. Compare sensory memory, short-term memory, and long-term memory as it applies to specifically to cognition and mental processing.
71. Understand research conducted by Loftus and Palmer (1976) and information recall.
72. What are some issues with the reliability of eyewitness testimony?