Unit 2 Study Aid: Cognitive Approach

In preparation for your assessments, you should be able to discuss the terms & topics and connect them to the broad picture of psychology. You may want to make them into flashcards, but consider going beyond just a definition understanding. You will also want to be able to answer the learning objectives in a short essay format, supported with research. For the study aid grade, you will only complete the vocab words.

This study guide is an OPTIONAL assignment. You can earn up to 10 points by:

- Defining and APPLYING 20 of the topics/terms below.
    - ie) There are two **hippocampi** in each hemisphere of the brain and they are centers for explicit memories. A case study that proves that the **hippocampus** is involved in memory is that of Clive Wearing, who developed herpesviral encephalitis that damaged this region of the brain, causing him to suffer from anterograde & retrograde amnesia.

This will be due the day of the test and *MUST BE COMPLETE BY HAND*. You will not be able to submit this digitally.

Cognitive Terms & topics

1. Effortful v. automatic processing
2. Shallow v. deep processing
3. Selective v. divided attention
4. Metacognition
5. Short-term memory
6. Implicit/procedural memory
7. Explicit/declarative memory
8. Iconic v. echoic memories
9. Flashbulb memories
10. Primacy v. recency effect
11. Sensory v. Long-term v. short-term memory
12. Prospective memory
13. Semantic v. episodic memory
14. Herman Ebbinghaus
15. Confabulation
16. Atkinson-Shiffrin memory model
17. Baddeley-Hitch working memory model
18. Clive Wearing
19. H.M. (Henry Molaison)
20. Elizabeth Loftus
21. George Miller
22. Noam Chomsky
23. Wolfgang Köhler
24. Insight
25. Mnemonic devices
26. Retroactive v. proactive interference
27. Retrograde v. anterograde amnesia
28. Divergent v. convergent thinking
29. Algorithms v. heuristics
30. Functional fixedness
31. Framing effect
32. Fluid v. crystalized intelligence
33. Flynn effect
34. Stereotype effect

35. Prototype
36. IQ distributions
37. Savant syndrome
38. Charles Spearman
39. G-factor v. S-factor
40. Howard Gardner
41. Multiple intelligence
42. Robert Sternberg
43. Analytical v. practical v. creative intelligence
44. Alfred Binet
45. Francis Galton
46. Lewis Terman
47. David Wechsler
48. Language acquisition
49. Morpheme v. phoneme
50. Linguistic determinism
51. Sapir-Whorf hypothesis
52. Semantics
53. Order of language acquisition in children
54. Cooing v. babbling

Introduction to Cognition | Chapter 7.1

IB-SL learning objectives

1. Mental processes can be studied scientifically (principle).
2. Mental representations guide human behavior (principle).
3. Cognitive processes do not function in isolation (principle).
4. Biases in cognitive processes can be systematic and predictable (principle).
5. Discuss how and why particular research methods are used at the cognitive level of analysis *(for example, experiments, observations, interviews)*.
6. Discuss ethical considerations related to research studies at the cognitive level of analysis.

AP learning objectives

7. Identify key contributors in cognitive psychology (e.g., Noam Chomsky, Hermann Ebbinghaus, Wolfgang Köhler, Elizabeth Loftus, George A. Miller).

Chapter 7.1 terms & topics

1. Cognition
2. Concepts (natural v. artificial)
3. Prototypes
4. Schema

Memory | Chapter 8

1. Distinguish the various ways that information is **encoded** into memory.
2. Explain the Atkinson & Shiffrin and the Baddely & Hitch memory models (be able to sketch them).
3. Examine how the **storage** of memories are enhanced or hindered.
4. Discuss the localization of memory in the brain with reference to relevant research.
5. Discuss the validity of flashbulb memories.
6. With reference to relevant research, explain how organic damage to the brain can cause a failure in memory.
7. To what extent is memory fallible? *(consider eyewitness testimony)*
8. Evaluate ways in which memories can be enhanced and hindered.
9. Outline the Schacter's "Seven Sins of Memory."

AP Learning objectives

10. Apply bias to memory.
11. Compare and contrast various cognitive processes: effortful versus automatic processing; deep versus shallow processing; focused versus divided attention.
12. Describe and differentiate psychological and physiological systems of memory (e.g., short-term memory, procedural memory).
13. Outline the principles that underlie effective encoding, storage, and construction of memories.
14. Describe strategies for memory improvement.

IB-SL learning objectives

15. Evaluate two models or theories of memory with reference to research studies.
16. With reference to relevant research studies, to what extent is memory reliable?
17. Examine how the biological and sociocultural approach impacts memory.

Language, Thinking, and Intelligence | Chapter 7.3 - 7.6

1. Outline language development in humans.
2. Compare and contrast the Skinner's and Chomsky's theories of language development.
3. To what extent does language impact thinking? Use research to support your answer.
4. Examine the critical periods of speech in human development.
5. Identify the localization of language functions in the brain.
6. Evaluate the use of algorithms, heuristics, and trial & error in problem solving.
7. Discuss challenges to problem solving.
8. To what extent can biases impact problem solving (apply biases to psychological research, as well)?
9. Describe the types of intelligence.
10. Discuss Sternberg's triarchic theory of intelligence.
11. Describe and evaluate Gardner's theory of multiple intelligence.
12. Distinguish between divergent and convergent thinking.
13. Outline the history of measuring intelligence.
14. Compare and contrast the Stanford-Binet test to the tests developed by David Wechsler.
15. Discuss how statistics are used to describe intelligence.
16. Explain how human intelligence is on a spectrum.
17. Examine the role of nature and nurture in the psychology of intelligence.
18. Outline several learning disabilities.

AP learning objectives

19. Synthesize how biological, cognitive, and cultural factors converge to facilitate acquisition, development, and use of language.
20. Identify problem-solving strategies as well as factors that influence their effectiveness.
21. List the characteristics of creative thought and creative thinkers.

IB-SL learning objectives

22. Compare and contrast normative and descriptive models of thinking.
23. Evaluate macro-level and micro-level decision making models with reference to research studies.
24. Examine biases in thinking and decision making with reference to research studies *(for example, heuristics, intuitive thinking, schemas, framing effect, confirmation & congruence bias, cognitive dissonance, ect).*
25. To what extent do cognitive and biological factors interact in emotion *(for example, two factor theory, arousal theory, Lazarus' theory of appraisal)*?
26. Evaluate how one theory of how emotion may affect one cognitive process *(for example, state-dependent memory, flashbulb memory, affective filters)*.