

## Unit 7 Reading Guide

### Cognition: Memory, Thinking, Language

#### Module 31: Studying and Building Memories (pg. 316-328)

- **Memory:**
  - There are 3 steps of memory (according to information-processing models):
    1. **Encoding:**
    2. **Storage:**
    3. **Retrieval:**
  - **Parallel processing:**
  - What happens to the neurons in your brain every time you learn something new?
  - Forming memories is another 3 step process:
    1. **Sensory memory:**
    2. **Short-term memory:**
    3. **Long-term memory:**
  - **Working Memory** (short-term memory):
- A. Building Memories: Encoding
  - **Explicit memory** (declarative memory):
    - Encoded through **effortful processing**:
  - **Implicit memory** (nondeclarative memory):
    - Encoded through **automatic processing**:
    - Examples of things you automatically process:

#### Types of sensory memories

- **Iconic memory:**
  - Example:
- **Echoic memory:**
  - Example:
- How many things can short-term memory hold?

#### Ways to help effortful processing

- **Chunking:**

- Example:
- **Mnemonics:**
  - Example:
- **Hierarchies:**
  - Look at the layout of your reading guide—am I using a hierarchy to help you?!!
- **Spacing effect:** aka. Don't cram!
- **Testing effect:**

#### Levels of Processing

- **Shallow processing:**
  - Example:
- **Deep processing:**
  - Example:
- Which is better for your memory over time—shallow or deep?

#### Module 32: Memory Storage and Retrieval (pg. 329-340)

- What is the capacity for long term memory?
- What part of the brain lays down new explicit memories (names or events)?
- What happens to memories while you are sleeping?
- What kinds of memories does the cerebellum form?
- What kinds of memories does the basal ganglia form?
- **Flashbulb memories:**
  - What part of the brain is involved in emotional memories, like flashbulb memories?
  - Describe an especially strong (probably emotional memory) that you can remember about yourself.

- **Long-Term Potentiation (LTP):**

- A. Retrieval
- 3 measures of retention:
    - **Recall:**
    - **Recognition:**

- **Relearning:**
- What is the point to remember about Ebbinghaus' learning experiments?
- Retrieval cues are things that can make it easier to remember something. Give 2 examples of retrieval cues.
- **Priming:**
- **State-dependent memory:**
- **Mood congruent:**
- **Serial position effect:**

Module 33: Forgetting, Memory Construction, and Memory Improvement (pg. 341-355)

- What is the difference between **anterograde** and **retrograde amnesia**?
  - What are the possible reasons we could forget something because of an encoding failure?
  - What did Ebbinghaus' forgetting curve prove about how much time it takes to forget something?
  - When you have a retrieval failure, what is one way you could help yourself remember the information?
  - **Proactive Interference:**
    - Example:
  - **Retroactive interference:**
    - Example:
  - **Repression:**
    - Famous psychologist associated with repression:
- A. Memory Construction Errors
- What is reconsolidation?
  - **Misinformation effect:**
    - Psychologist associated with this:

- **Source Amnesia:**
- **Déjà vu:**
- Is it easy to tell real memories from false one?

B. Improving Memory

- Suggestions to help you improve your memory while studying (just list, don't need to describe):
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Module 34: Thinking, Concepts, and Creativity (pg. 356-360)

- **Cognition:**
- **Concepts:**
- **Prototypes:**
  - Example:
- **Creativity:**
- **Convergent thinking:**
  - Example:
- **Divergent thinking:**
  - Example:
- Do you consider yourself a creative person? Why/why not?
- 5 components of creativity:
  1. Expertise:
  2. Imaginative thinking skills:
  3. A venturesome personality:
  4. Intrinsic motivation:
  5. A creative environment:

Module 35: Solving Problems and Making Decisions (pg. 361-371)

A. Problem Solving: Strategies and Obstacles

- **Algorithms:**

- Example:

- **Heuristics:**

- Example:

- **Insight:**

Obstacles to Problem Solving

- **Confirmation Bias:**

- Example:

- **Mental Set:**

- Example:

B. Forming Good and Bad Decisions and Judgments

- **Intuition:**

- **Representative heuristic:**

- Example:

- **Availability heuristic:**

- Example:

- **Overconfidence:**

- Example:

- How is overconfidence related to happiness?

- **Belief Perseverance:**

- **Framing:**

Module 36: Thinking and Language (pg. 372-383)

- **Language:**

A. Language Structure

- **Phonemes:**

- Example:

- **Morphemes:**

- Example:

- **Grammar:**

B. Language Development

- What is receptive language? How old are babies when they understand that?

- What is productive language?

- **Babbling Stage:**

- **One-Word Stage:**

- **Two-Word Stage:**

- **Telegraphic Speech:**

- What does Noam Chomsky believe about language development?

- What happens to children who have not been exposed to any speaking language before their critical period ends?

- **Aphasia:**

- **Broca's Area:**

- **Wernicke's Area:**

- **Linguistic determinism:**

- Example: