Textbook Study Guide for Dr. Dark's Section of Psych 101 (Exam 1)
Fall 2018

The statements below emphasize the material that I want you to master from the textbook (Myers & DeWall, *Psychology: Twelve Edition in Modules*). The study guide statements are in terms of actions on your part (e.g., summarize, describe, and discuss). They will be the **basis** of the **textbook test questions** and the **text-only questions** on the exam. Questions on the exam or the tests might ask you to define a concept referenced in a statement below, to describe a person's theory, to apply the concept to a situation, to distinguish the concept from some other concept (or one person's work/ideas from another person's work/ideas), or to otherwise recognize the concept or person.

For the textbook tests, I will have questions from a large number of each of the study guide statements (the statements below). The questions will be grouped into sets. Each time you attempt a quiz, one of the questions in the set will be chosen. So, the quiz will change randomly each time you take it. Out of about 40-50 possible items, you will see a random 10 each time, but the 10 questions will be distributed across different study guide statements.

I will design each text-only multiple-choice question on the first exam so that it is answerable on the basis of the information (concepts and/or people) referred to in one of the study guide statements.

Readings for Lecture 1: History & Overview

Module 1, The Story of Psychology

The entire module is assigned.
When you have mastered the material in Module 1, you should be able to do the following:

1. Describe what is meant by critical thinking
2. Describe the key elements of taking a scientific attitude.
3. Describe Wilhelm Wundt’s contribution to establishing psychology as a science.
4. Distinguish between the structuralist and functionalist schools of thought in psychology.
5. Describe Mary Calkins' and Margaret Washuburn’s roles in early psychology.
6. In a sentence or two you should be able to describe the main ideas underlying each of these schools of thought: behaviorism, Freudian psychology, humanistic psychology.
7. Define psychology and describe the role of cognitive psychology and cognitive neuroscience in contemporary psychology.
8. Discuss the basic ideas of evolutionary psychology and how they relate to the nature-nurture issue.
9. Describe psychology’s three levels of analysis and be able to recognize the kinds of questions related to each..
10. Describe the SQ3R method of studying and how it relates to the phenomena of the testing effect, distribution of study time, thinking critically, active processing, and overlearning.

Readings for Lecture 2: Research Methods in Psychology

Module 2, Research Strategies: How Psychologists Ask and Answer Questions

The entire module is assigned.
When you have mastered the material in Module 2, you should be able to do the following:

1. Describe hindsight bias, overconfidence, and the tendency to perceive order in random events and how they influence intuition and common sense.

2. Describe the Scientific Method, including the role of a theory, an hypothesis, an operational definition, and replication.
3. Describe what is meant by descriptive research and be able to distinguish among the three methods: case studies, naturalistic observation, and surveys.
4. Describe the relationship between a sample and a population, including why random sampling is important.
5. Distinguish between positive and negative correlations, and be able to recognize from a scatterplot whether a relationship is positive or negative.
6. Define what is meant by regression to the mean.
7. Describe why correlations enable prediction but not cause-effect explanation (LOQ 2-6).
8. Describe the characteristics of an experiment that make it possible to isolate cause and effect, including independent and dependent variables, experimental and control groups, and confounding variables.
9. Describe a double-blind procedure, including why it is necessary.
10. Describe how a psychologist would respond to a statement like the following: "Experiments don't re-create real life, so they aren't useful to understand behavior."
11. Describe the requirements for using animal subjects.
12. Describe the requirements for using human subjects.
13. Describe the way in which values influence science.

Module 3, Statistical Reasoning in Everyday Life

The entire module is assigned.

When you have mastered the material in Module 3, you should be able to do the following:

1. Distinguish between central tendency and variability.
2. Distinguish among the mean, median, and mode.
3. Describe the normal curve, including the role of the standard deviation.
4. Describe how the type of sample, the sample size, and variability in the sample affect the reliability of an observed difference.
5. Describe what it means when an observed difference is described as significant.

Readings for Lecture 3: Brain & Behavior

Module 4, Neural and Hormonal Systems

The first six sections (Mod 4.1- 4.6) are assigned.

When you have mastered the material assigned from Module 4, you should be able to do the following:

1. Critically discuss phrenology.
2. Describe the concept of plasticity.
3. Describe the various parts of the neuron and the functions of those parts.
4. Describe the action potential, including why it is described as an all-or-none response and why there is a refractory period.
5. Describe what a synapse is and describe how communication occurs at synapses via neurotransmitters.
6. Describe the process of reuptake.
7. Differentiate between what it means for a drug or other chemical to be a neurotransmitter agonist versus a neurotransmitter antagonist.
8. Describe the organization of the nervous system including the peripheral versus central systems and the main divisions within each.

Module 5.1 The Tools of Discovery: Having Our Head Examined

This is the only part of Module 5 that is assigned.

When you have mastered the material in Module 6.1, you should be able to do the following:

1. Define what is meant by a brain lesion and why lesions are useful.
2. Describe these methods, including what kind of information they provide: EEG, MRI, fMRI.

Module 6, The Cerebral Cortex and Our Divided Brain

The entire module is assigned.

When you have mastered the material in Module 6, you should be able to do the following:

1. Describe what is meant by the cerebral cortex.
2. Describe the structure of the cerebral cortex in terms of hemispheres and the corpus callosum.
3. Name and locate the four lobes of the cerebral cortex and describe their key functions.
4. Describe what is meant by cognitive neural prosthetics including how they work.
5. Describe the function and location of the association areas.
6. Describe where the false statement that humans only use 10% of their brain came from.
7. Describe what is meant by plasticity of the brain with a focus on its role in reorganization and neurogenesis after brain damage.
8. Summarize split-brain research including what has been learned about differences between the two hemispheres.
9. Describe how research on cerebral specialization is done in normal subjects and what generalizations have been drawn based on this research.

Readings for Lecture 4: Sleep & Dreaming

Module 8, Sleep and Dreams

The entire module is assigned.

When you have mastered the material in Module 8, you should be able to do the following:

1. Define circadian rhythms and the difference between owls and larks.
2. Describe the three levels of NREM sleep, including their length and EEG signatures.
3. Describe the characteristics of REM sleep, including its length and EEG signature.
4. Describe how the sleep cycle evolves through the night and how sleep patterns are related to age and culture.
5. Describe the role of light and melatonin in determining sleep patterns.
6. Describe five theories about the functions of sleep.
7. Know which of these events is associated with which stage of sleep: dreaming, sleepwalking, bedwetting, sexual arousal, and difficulty wakening.
8. Describe the relationship between sleep and athletic performance.
9. Summarize the effects of sleep deprivation, including the health ramifications of sleep loss.
10. Describe the relationship between accidents and the change to and from daylight savings time.
11. Differentiate among the sleep disorders of insomnia, narcolepsy, sleep apnea, night terrors, and sleepwalking.
12. Summarize research findings on dream content.
13. Describe the Freudian view of why we dream, including the difference between latent and manifest content.
14. Describe the information processing view of why we dream, including the relationship between dreams and memory.
15. Describe the “to make sense of neural static” view, or activation-synthesis view, of why we dream. Describe the cognitive development view of dreams.
16. Describe REM rebound and what it says about the biological need for REM sleep.

Readings for Lecture 5: Sensation &Perception

Module 17, Basic Concepts of Sensation and Perception

The entire module is assigned.

When you have mastered the material in Module 17, you should be able to do the following:

1. Describe the difference between sensation and perception and between bottom-up processing and top-down processing.
2. Describe the process of transduction, the three steps that are basic to all our sensory systems.
3. Describe the nature of the absolute threshold and how it might relate to so-called subliminal stimuli.
4. Describe the difference threshold, or JND, and Weber's law.
5. Describe the meaning and significance of sensory adaptation.
6. Describe what is meant by perceptual set and how perceptual set influences perception.
7. Describe how context, motivation, and emotion influence perception.

Module 18, Vision: Sensory and Perceptual Processing

The entire module is assigned.

When you have mastered the material in Module 18, you should be able to do the following:

1. Describe the energy that we see as visible light.
2. Describe how the eye transforms light energy into neural messages, including a description of the fovea, the blindspot, and the organization of the retina
3. Be able to distinguish between the trichromatic and opponent-process theories of color vision, and describe how both are correct.
4. Describe what is meant by a feature detector.
5. Describe what is meant by parallel processing and how it is related to visual phenomena like blindsight.
6. Describe how the Gestalt psychologists thought about perceptual organization, including the concepts of figure-ground and grouping.
7. Be familiar with the difference between monocular (based on one-eye) and binocular (based on two-eyes) depth cues and be able to describe/recognize examples of each type of cue.
8. Describe the phi phenomenon.
9. Describe what is meant by perceptual constancies (color, brightness, shape, & size).
10. Describe what the research on restored vision, sensory restriction, and perceptual adaptation reveals about the effects of experience on perception, including the concept of the critical period.

Readings for Lecture 6: Memory – the Basics

Module 23, Studying and Encoding Memories

The entire module is assigned.

When you have mastered the material in Module 23, you should be able to do the following:

1. Describe the three measures of retention: recall, recognition, and relearning.
2. Describe the three basic human memory processes of encoding, storage, and retrieval.
3. Describe the Atkinson & Shiffrin three-stage processing model of memory
4. Describe Baddeley's model of working memory.

5. Describe the difference between effortful and automatic processing and between explicit and implicit memory.
6. Describe the types of information that appear to be processed automatically.
7. Describe the role of the sensory store in memory, including how Sperling was able to study it.
8. Describe the characteristics of short-term memory including capacity in terms of amount and duration.
9. Describe these effortful processing strategies: chunking, mnemonics, hierarchies, and distributed practice.
10. Describe what is meant by levels of processing and the relation of depth of processing to later memory.

Readings for Lecture 7: Memory - Accuracy

Module 24, Storing and Retrieving Memories

The entire module is assigned.

When you have mastered the material in Module 24, you should be able to do the following:

1. Describe what we know about the capacity and location of our long-term memories.
2. Describe the difference between episodic and semantic memory.
3. Describe the role of the frontal lobes and hippocampus in formation of explicit memory.
4. Describe the role of the cerebellum and basal ganglia play in formation of implicit memory.
5. Describe the role of the amygdala in memory processing, including flashbulb memories.
6. Describe what is meant by long-term potentiation.
7. Be able to explain the two memory systems as shown in Figure 24.4.
8. Describe what is meant by a retrieval cue.
9. Describe the phenomenon of priming and what it reveals about memory.
10. Describe the phenomenon of context-dependent memory.
11. Describe the phenomenon of state-dependent memory.
12. Describe the serial position effect in memory.

Module 26, Forgetting, Memory Construction, and Improving Memory

The entire module is assigned.

When you have mastered the material in Module 26, you should be able to do the following:

1. Distinguish between retrograde and anterograde amnesia, including the implications for the two-track mind.
2. Describe the construct of encoding failure.
3. Describe storage decay and the shape of forgetting curves.
4. Describe the construct of retrieval failure.
5. Distinguish between retroactive and proactive interference.
6. Describe Freud's construct of repression.
7. Describe what it means to say that memory is constructed.
8. Describe what is meant by reconsolidation.
9. Describe the misinformation effect, including the role of imagining.
10. Describe source memory and the role that source amnesia (source misattribution) might play in phenomena like the misinformation effect and déjà vu.
11. Describe the difficulty in distinguishing between true and false memories.
12. Describe potential problems with children's recall of an event.

13. Describe the different points of view in the controversy over "repressed" memory for childhood sexual abuse.
14. Describe the SQ3R method of improving memory and other variables that lead to better memory.

Readings for Lecture 8: Attention & Consciousness

Module 7, Brain States and Consciousness
The entire module is assigned.
When you have mastered the material in Module 7, you should be able to do the following:

1. Describe what is meant by consciousness.
2. Describe what cognitive neuroscience has contributed to the study of consciousness.
3. Describe what is meant by selective attention and how the cocktail party phenomenon indicates that the selection is not complete.
4. Describe the role of selective attention in accidents.
5. Describe the phenomena of inattentional blindness and change blindness.
6. Describe what is meant by dual-processing and the two-track mind.
7. Describe blindsight and how it supports the dual-processing idea of a visual action track and a visual perception track.
8. Describe the distinction between parallel and sequential processing.

Module 19, The Nonvisual Senses
Only three subsections are assigned: Module 19.5, 19.8-19.9 (Note—the original syllabus mistakenly said 19.7-19.9)
When you have mastered the material in Module 19, you should be able to do the following:

1. Describe the gate-control theory of pain.
2. Describe how the experience of pain is biopsychosocial.
3. Describe the social influence theory of how hypnosis works to control pain.
4. Describe the dissociation theory of how hypnosis works to control pain.
5. Describe what is meant by sensory interaction and be able to give an example.
6. Describe what is meant by embodied cognition.
7. Describe what is meant by extra-sensory perception including distinguishing among telepathy, clairvoyance, and precognition.
8. Define parapsychology.
9. Describe claims that have been made about ESP and what most research psychologists have concluded after putting these claims to the test.