Physiology Questions

100 – Q: This walnut-sized structure in the brain is central to the link between emotion and cognition.
A: amygdala  (expand on it by talking about the limbic system, which it’s a part of)

200 – Q: This is the name for the region of a particular shape, size, and location within the visual field to which a particular cell responds
A: receptive field for that cell (go over feature detectors, lines, movement, etc)

300 – Q: This is the name for the massive bundle of fibers connecting the two sides of the brain.
A: corpus callosum (point out that it’s made of white matter, i.e., axons, while the cortex and prefrontal cortex are made of grey matter, i.e: cell bodies. Generate parts of the brain, roughly speaking)

400 – Q: The order of cells on the back of the retina, out of: (amacrine cells, bipolar cells, cones, ganglion cells, and rods)
A: rod/cone, bipolar, amacrine, ganglion. (could go over structure of the eye and why we have a blind spot, briefly)

500 – Q: The excitation threshold, in millivolts, causing the onset of an action potential.
A: -55mV (could go over the process of synaptic transmission here)

Perception Questions

100 – Q: This is the name for cues for depth perception that come from the image obtained with one eye alone.
A: monocular depth cues (could briefly review some important ones, like motion parallax, linear perspective, and relative size)

200 – Q: This was demonstrated in a famous experiment in which subjects were oblivious to a gorilla walking through a scene of basketball players
A: change blindness (briefly discuss that this is about attention, not vision)

300 – Q: This theory suggests that the signals from the cone receptors are recoded into pairs of opposing signals, in which excitation of one member of the pair automatically inhibits the other.
A: The opponent-process theory (discuss the pairs: red-green, blue-yellow, black-white, and how this explains some of the illusions from class)

400 - Q: The two important brain areas that receive information from the visual cortex
A: the “what” system and the “where” system (will also accept parietal and temporal cortex).

A: Fechner: S = klogI, where k is a constant whose value depends on the Weber fraction (ΔI/I). (can go over how this means that we’re sensitive to proportional differences in stimulus intensity, not absolute differences. And k is different in different sense modalities)
Cognitive Development Questions

100 – Q: This task, which measures the ability of a child to imagine a situation from someone else’s point of view, would be failed by a three-year-old.
A: the false belief task (give examples, discuss egocentrism and examples where children can tell what others are thinking)

200 – Q: According to Piaget, children move from this stage when they begin to be able to manipulate and interrelate the representations that are available to them.
A: preoperational (go over how in sensorimotor they learn to represent, and preoperational is about learning to manipulate – and what ages (2-7))

300 – Q: This is a term for one’s thinking about one’s own mental functioning
A: metacognition (explain how children seem to lack it, and increasing memory ability may be related to the recognition that you can do things like rehearse and chunk).

400 – Q: This approach broadly compares human cognitive functioning to the complex ways in which a computer functions.
A: the information-processing approach. (contrast it with other “big picture” ideas like the stage theory of Piaget, or learning theory, to get an idea of big picture stuff)

500 - Q: This error refers to an infant’s tendency to search at a place where he previously found a toy rather than a place where he has just seen a toy hidden
A: the A-not-B effect (this was used by Piaget to demonstrate that infants didn’t have object permanence, but recent arguments suggest they aren’t good at inhibiting their arm movements, since they look at the right one but reach for the wrong one)

Language Questions

100 – Q: An example of this error is when a kid says ‘goed’ rather than ‘went’
A: Overgeneralization (go into how this shows kids are inducing rules, rather than just memorizing what they hear)

200 – Q: Two main theories of word meaning.
A: prototype and definitional are best. (also would accept exemplar and theory-theory. go over briefly what each one says)

300 – Q: According to this hypothesis, the brain of the young child is particularly well-suited to language learning, but as they grow older later language learning is much more difficult.
A: the critical period hypothesis (go over, very briefly, evidence for and against)

400 – Q: These are the smallest units of language that carry bits of meaning.
A: Morphemes. (discuss also phonemes, words, phrases)

500 – Q: This hypothesis says that linguistic differences can result in differences in thinking.
A: The Whorfian hypothesis. (discuss a few results indicating one thing or another)
Memory Questions

100 – Q: This term refers to the kind of memory in which we are affected by past experience without realizing that we are remembering.
A: implicit memory (compare to explicit memory. Discuss repetition priming)

200 – Q: These effects account for our remembering list items better if they occur at certain positions in the list.
A: primacy effect and recency effect (discuss working memory, 7 +/- 2, transfer into long term memory, chunking)

300 – Q: This is the specific term for the disorder you would be experiencing if you bumped your head in a bike accident and forgot everything that you had done for the past day.
A: retrograde amnesia (discuss trace consolidation. Compare to anterograde amnesia, where no new memories are formed but procedural memory is preserved)

400 – Q: These two factors help explain why we forget things over time.
A: decay and interference (memory trace, forgetting curve, retrieval failure, tip-of-the-tongue)

500 – Q: Because of this, our memory errors import elements of general knowledge into specific episodes, or mix-up information from multiple episodes.
A: source confusion (discuss also schemas and scripts, flashbulb memories, hypnosis/repressed memories)

Reasoning Questions

100 – Q: The Wason selection task relies on the participant performing this form of reasoning.
A: Deductive reasoning (also okay: solving syllogisms. Partial credit for conditional statements)

200 – Q: This effect demonstrates how the automaticity of reading interferes with our ability to perform other tasks such as naming colors of ink.
A: Stroop effect

300 – Q: This term describes the tendency to take evidence consistent with one’s beliefs more seriously than evidence inconsistent with one’s beliefs.
A: confirmation bias (availability heuristic, representativeness heuristic)

400 – Q: A person trying to solve a problem who gets stuck because of some unnoticed assumptions about the situation is being misled by this.
A: mental set (incubation, discuss also subroutines of problem solving, analogies, restructuring)

500 Q: This experiment suggests that people process mental images similarly to real images in some ways. A: Acceptable in favor of picture-like mental images: mental rotation of letters, scanning mental maps (time proportional to distance or angle of rotation); (discuss also evidence for non-picture-like mental images: people’s inability to reinterpret duck-rabbit. Also okay—spatial thinking reasoning that San Diego is west of Reno)
Learning Questions

100 – Q: In Pavlov’s original experiment conditioning dogs, this was the conditioned response.  
A: Salivation (identify US/CS/UR)

200 – Q: This principle of Thorndike’s states that a response which is followed by a reward will be strengthened, where as one followed by no reward or by punishment will be weakened.  
A: Law of effect (discuss operant. vs classical conditioning)

300 – Q: Slot machines are an example of how high rates of response can be obtained by rewarding a subject on this kind of schedule.  
A: Variable-ratio schedule (discuss fixed ratio, fixed schedule, variable schedule examples, extinction)

400 – Q: This is the main neural mechanism responsible for post-synaptic plasticity and learning.  
A: Long term potentiation (spread of potentiation is activity dependent; dendrites grow new dendritic spines)

500 – Q: This claim states that all associations can be learned with equal ease.  
A: equipotentiality principle (discuss counterexamples: belongingness, taste aversion)