

Saladin 7E
Answer Key
Chapter 14, The Brain and Cranial Nerves

Testing Your Comprehension

1. (a) The trigeminal nerve; (b) the glossopharyngeal nerve; and (c) the vagus nerve.
2. A lesion in the cerebellum causes uncoordinated voluntary muscle contractions. That is, when one wants to perform a certain action, it is difficult or impossible to coordinate the muscles well enough to carry it out. A lesion in the basal nuclei, by contrast, causes tremors and other unwanted (involuntary) contractions.
3. Experiment 1 would result in paralysis of muscles inferior to the neck. Experiment 2 would result in a loss of some sensations from the same part of the body.
4. The cerebral functions essential for survival are duplicated in the right and left hemispheres, so the loss of even an entire hemisphere is not fatal. It will, however, result in such things as visual, motor, language, and cognitive deficits. The hypothalamus, however, is involved in so many basic homeostatic functions that its loss or destruction is not survivable.
5. (a) Anterograde amnesia, the inability to form new memories; (b) an abnormal lack of fear; (c) aphasia, the inability to speak; (d) blindness; (e) inability to move the tongue normally in speech, food manipulation, and swallowing.