1. What brain region might be engaged by someone using biofeedback techniques?

a. Amygdala.

b. Insula.

c. Pons.

d. Tectum.

2. Nodes of Ranvier are likely to be found between what type of cells?

a. Bipolar neurons.

b. Unipolar neurons.

c. Astrocytes.

d. Oligodendrocytes.

3. What type of cells helps prevent toxic substances in the bloodstream from entering the brain?

a. Bipolar neurons.

b. Unipolar neurons.

c. Astrocytes.

d. Oligodendrocytes.

2-12

4. What did scientists use to determine that there are similar numbers of glial cells as there are neurons in the brain?

a. Biofeedback techniques.

b. Histological techniques.

c. Bromodeoxyuridine (BrdU) labeling.

d. Isotropic fractionation.

5. What is one reason that neurons in the central nervous system (CNS) do not regenerate?

a. Inhibitory proteins.

b. The close association of CNS neurons with Schwann cells.

c. Activation of the autonomic nervous system.

d. Dermatomes.

6. Which of the following rats should exhibit the most neurogenesis?

a. Socially housed rats allowed to run.

b. Socially housed rats not allowed to run.

c. Individually housed rats allowed to run.

d. Individually housed rats not allowed to run.

7. Which of the following structures is likely the most critical for maintaining basic functions needed to support life?

a. Forebrain.

b. Substantia nigra.

c. Medulla oblongata.

d. Cerebellum.

8. Which of the following structures should appear as white matter?

a. Superior colliculi.

b. Reticular formation.

c. Pituitary gland.

d. Corpus callosum.

9. An individual remembers very specific details about what he or she had for breakfast the morning of September 11, 2001, when learning about the tragic events unfolding in the United States. Why might this happen?

a. Reduced dopamine activity in the basal ganglia.

b. Increased stress hormone activation of the hippocampus.

c. Increased neurogenesis of the reticular formation.

d. A severed corpus callosum.

10. A particular individual can only verbally describe an object if it is presented in the right side of his or her visual field and not the left. Why might this happen?

a. Reduced dopamine in the basal ganglia.

b. Increased stress hormone in the hippocampus.

c. Increased neurogenesis of the reticular formation.

d. A severed corpus callosum.

11. What helps to protect the brain from sudden jarring movements of the head?

a. The right hemisphere.

b. Cerebrospinal fluid (CSF).

c. Meninges.

d. The hypothalamic–pituitary–adrenal (HPA) axis.

12. Some neuroscientists have argued that long-term use of some drugs leads to a chronic (all-the-time) increase in the activation level of fear/anxiety systems in the brain. This is an example of \_\_\_\_\_\_\_\_.

a. Allostasis.

b. Homeostasis.

c. The hypothalamic–pituitary–adrenal (HPA) axis.

d. Adaptive immunity.

13. Which of the following would activate B cells?

a. Glucocorticoids.

b. Antibodies.

c. Antigens.

d. Allostatic overload.

14. What was an important implication of Ader and Cohen’s work?

a. Depression is associated with reduced hippocampal activation.

b. Extended stress can increase risk for disease.

c. Morality is processed in the right hemisphere of the brain.

d. The immune system communicates with the nervous system.

15. How were Brainbow mice made?

a. Mouse brains are stained using a process originally described by Camillo Golgi.

b. Mice are exposed to a cowpox virus.

c. Genes from jellyfish and coral are expressed in mice.

d. Mice are exposed to long-duration stressors.

**Answer Key**

1. B

2. D

3. C

4. D

5. A

6. A

7. C

8. D

9. B

10. D

11. B

12. A

13. C

14. D

15. C