Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date \_\_\_\_\_Period \_\_\_

**HAP: CHAPTER 12 Worksheet**

Answer these true or false in the space provided in front of each statement. If the statement is false, CORRECT THE UNDERLINED WORD(S) by writing the correct term in the space provided after the statement.

1. \_\_\_ The primary somatosensory area of the cerebral hemisphere(s) is found in the postcentral gyrus. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_ Auditory cortical areas are found in the temporal lobe. \_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. \_\_\_ The primary motor area in the occipital lobe is involved in the initiation of voluntary movements. \_\_\_\_\_\_\_\_\_\_\_\_

4. \_\_\_ The specialized motor speech area is located at the base of the precentral gyrus in an area called Wernicke's area. \_\_\_\_\_\_\_\_\_\_\_

5. \_\_\_The right cerebral hemisphere receives sensory input from the right side of the body. \_\_\_\_\_\_

6. \_\_\_ The pyramidal tract is the major descending voluntary motor tract. \_\_\_\_\_\_\_\_\_

7. \_\_\_\_The primary motor cortex is located in the post central gyrus. \_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. \_\_\_\_ Centers for control of repetitious or stereotyped motor skills are found in the premotor cortex. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9.  \_\_\_ The largest parts of the motor humunculus are the lips, tongue and toes. \_\_\_\_\_\_

10. \_\_\_ Sensations such as touch and pain are ***integrated*** in the somatosensory association cortex. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. \_\_\_ The primary visual cortex is in the frontal lobe of each cerebral hemisphere. \_\_\_\_\_\_

12. \_\_\_ In most humans, the area that controls the comprehension of language is located in the left cerebral hemisphere. \_\_\_\_\_\_

13. \_\_\_ Areas in the cerebral hemisphere opposite the ones containing Broca's and Wernicke's areas are centers for cognitive language. \_\_\_\_\_\_\_\_\_\_\_\_\_\_

14. \_\_\_ Cerebral dominance refers to the hemisphere that is dominant for language. \_\_\_\_\_\_

Match the following: a. basal nuclei   b. brain stem   c. cerebellum

d. cerebral hemispheres  e. cortex   f. diencephalon   g. septum pellucidum

h. ventricles   i.  white matter

1. \_\_\_, \_\_\_, \_\_\_\_, \_\_\_\_ The four major subdivisions of the adult brain

2. \_\_\_\_ Contain cerebrospinal fluid.

3. \_\_\_\_ Masses of gray matter embedded deep within the cerebral white matter.

4. \_\_\_\_ Myelinated fiber tracts.

5. \_\_\_\_ Consists of the midbrain, pons, and medulla.

6. \_\_\_\_ Separates the lateral ventricles.

7. \_\_\_\_ Thin layer of gray matter on outer surface of cerebral hemispheres and cerebellum.

8. \_\_\_\_ Account for more than 60% of the total brain weight.

9. \_\_\_\_ Consists of the hypothalamus, thalamus and epithalamus.

Name the parts corresponding to the statements below:

1. Site of regulation of water balance, body temperature, rage, and pain centers, the main visceral (autonomic) center of the brain. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Reflex centers involved in regulating respiratory rhythm in conjunction with lower brain stem centers. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Responsible for the regulation of posture and coordination of skeletal muscle movements. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Important relay station for afferent fibers traveling to the sensory cortex for interpretation. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Contains autonomic centers that regulate blood pressure and respiratory rhythm, as well as coughing and sneezing centers. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. Midbrain area consisting of large, descending motor tracts. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. Influences body rhythms; interacts with the biological clock. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (more info on page 575)

8. Location of middle cerebellar peduncles. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. Locations of visual and auditory reflex centers. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. Where the optic nerves cross and become white matter tracts for vision. \_\_\_\_\_\_\_\_\_\_\_ (more info on page 575)

Relative to the limbic and reticular systems, identify the correct system for each characteristic described blow.  Write L for the limbic system and R for the reticular system:

1.  \_\_\_ Maintains cortex in a conscious state.

2. \_\_\_ Includes the RAS.

3. \_\_\_ Originates in primitive rhinecephalon.

4. \_\_\_ Its hypothalamus is the gatekeeper for visceral responses.

5. \_\_\_ Severe injury may result in personality changes.

6. \_\_\_ Depressed by alcohol and some drugs; severe injury may cause coma.

7. \_\_\_ Helps distinguish and filter out unimportant stimuli.

8. \_\_\_ Functioning may be associated with psychosomatic illness.

Match the following:  a. decussation   b. funiculus   c. gray matter

d. motor   e. sensory   f. somatotopy

1.  \_\_\_ Its central location separates white matter into columns.

2. \_\_\_ Crossing of fibers from one side to the other side of the spinal cord.

3. \_\_\_ Precise spatial relationship of most spinal cord pathways to an orderly mapping of the body.

4. \_\_\_ Pathways from the brain to the spinal cord.

5. \_\_\_ Ascending spinal cord pathways.

6. \_\_\_ A white column of the cord containing several tracts.

\*created by Patti Carothers

\*edited by Angela Bush