**Chapter 4**

Multiple Choice

1. A hemispherectomy refers to what operation?

\*A) removing half of the cerebrum

B) removing half of the cerebellum

C) removing half of the prefrontal cortex

D) removing half of the brainstem

(Reference Page 104)

2. Your brain physically changes when you:

\*A) learn something new

B) change your body (such as losing a limb)

C) are interested in something

\*D) all of the above

(Reference Page 104-105)

3. Severing the sensory nerves is called:

A) amputation

\*B) deafferentation)

C) hemispherectomy

D) stroke

(Reference Page 106)

4. The way your brain maps your body onto itself is referred to as the:

A) motor map

B) retinotopic map

C) homunculus

\*D) tonotopic map

(Reference Page 105)

5. The brain’s ability to allocate neural activity depending on the organism’s needs is called:

\*A) adaptive coding

B) optimal allocation

C) agonism

D) the neuron doctrine

(Reference Page 109)

6. Cholinergic neurons release what neurotransmitter?

A) dopamine

B) epinephrine

\*C) acetylcholine

D) serotonin

(Reference Page 111)

7. Your brain will release acetylcholine and increase plasticity when you are \_\_\_\_\_\_ the task at hand.

A) disinterested in

\*B) interested in

C) having difficulty with

D) do well at

(Reference Page 111-112)

8. Aphasia is the damage to or loss of:

A) vision

B) auditory sensitivity

\*C) language skills

D) plasticity

(Reference Page 114)

9. You change your major from accounting to English. What can we expect will happen to your brain?

A) your brain will form a new map over a smaller area of tissue

B) your brain will form a new map over a smaller area of tissue

\*C) your brain will begin to devote more resources to learning all there is to know about psychology

D) your brain will begin allocating more resources to erasing what you have already learned about political science

(Reference Page 114)

10. A region of the brain where many cholinergic neurons exist is the:

\*A) basal forebrain

B) hindbrain

C) visual cortex

D) amygdala

(Reference Page 111)

11. The visual cortex in mammals corresponds to this in a frog:

A) the retina

\*B) the optic tectum

C) the occipital lobe

D) the homunculus

(Reference Page 113)

12. The brain is able to compensate for \_\_\_\_\_ by compressing its map into a smaller area.

A) loss of a sensory input

\*B) loss of a region of sensory tissue

C) sensory substitution

D) sensory addition

(Reference Page 113)

13. A transfer of language function to the right hemisphere might happen after:

\*A) a stroke

B) being raised without social enrichment

C) learning the violin

D) learning a new language

(Reference Page 114)

14. As shown in the case of Danielle, the child from Plant City, Florida, lack of social interaction can lead to:

A) genetic abnormalities

B) Down syndrome

C) autism

\*D) severely impaired language

(Reference Page 115)

15. Longer periods of helplessness are evident in organisms with greater brain:

\*A) flexibility

B) activity

C) size

D) speed

(Reference Page 116)

16. As we age, plasticity goes down, and \_\_\_\_\_\_\_ goes up.

A) IQ

B) attention

C) motivation

\*D) efficiency

(Reference Page 116)

17. Shrunken dendrites may be found in the brains of organisms that have spent much of their lives:

A) in a cold environment

B) in a noisy environment

\*C) in deprived environments

D) in an enriched environment

(Reference Page 118)

18. The language area of the brain may have more \_\_\_\_\_\_\_ in individuals who have attended college when compared to those who have only attended high school.

A) densely packed axons

B) sparsely connected neurons

\*C) dendritic branching

D) cell bodies

(Reference Page 118)

19. Major life changes often lead to \_\_\_\_\_ changes in the brain.

\*A) significant

B) minor

C) temporary

D) subtle

(Reference Page 118)

20. Because much of visual perception is experience dependent, atypical experience during \_\_\_\_\_ can lead to lasting abnormal perception.

A) early adulthood

B) late adulthood

C) middle age

\*D) early development

(Reference Page 119)

21. Axonal branches can be retracted in a process called:

A) apoptosis

\*B) pruning

C) deafferentation

D) diffusion

(Reference Page 120)

22. Neurotrophins are critical for a neuron’s \_\_\_\_\_ .

A) action potential

B) conduction rate

\*C) survival

D) voltage

(Reference Page 121)

23. A baby is born with 50% more \_\_\_\_ than it requires.

\*A) neurons

B) genes

C) brain tissue

D) plasticity

(Reference Page 121)

24. Individuals with degenerating photoreceptors can benefit from using:

\*A) a bionic retinal implant (BRI)

B) bifocals

C) sunglasses

D) pruning

(Reference Page 123)

25. The tongue is used in many sensory substitution because of its exceptional:

A) pain tolerance

\*B) sensitivity

C) accessibility

D) connectivity

(Reference Page 124)

Answer Key

1. A

2. A

3. B

4. D

5. A

6. C

7. B

8. C

9. C

10. A

11. B

12. B

13. A

14. D

15. A

16. D

17. C

18. C

19. A

20. D

21. B

22. C

23. A

24. A

25. B