**Chapter 13**

Multiple Choice

1. Why, in the case study of the woman who underwent deep brain stimulation to alleviate the symptoms of Parkinson's disease, did symptoms of extreme depression occur?

A) Her serotonin levels were far too high

B) There was a lesion on her hypothalamus

\*C) One of the electrodes was placed slightly off-target

D) There was a lesion on her dorsomedial prefrontal cortex (DMPFC)

(Reference Page 400-401)

2. According to the James-Lange theory, once the body has a physical reaction to a stimulus (such as an increase in heart rate), the body will:

A) Enter fight-or-flight mode

\*B) Interpret those responses as an emotion

C) Begin decreasing the intensity of the physical reaction

D) Attempt to ignore the physical reactions

(Reference Page 403)

3. As with the unnamed woman in the case study, demyelination in the tracts of white matter connecting the cortex to the brainstem can lead to:

A) Extreme anxiety and sham rages

B) A tendency to perceive faces as negative

\*C) Uncontrollable laughter and crying

D) The inability to feel pleasure (anhedonia)

(Reference Page 405)

4. How is epinephrine related to emotional responses?

\*A) Epinephrine is also known as adrenaline, and heightens emotional responses

B) Epinephrine is involved in the cortex's management of emotional responses

C) Epinephrine is released when one feels sadness or grief

D) Epinephrine is present only when one is attempting to suppress emotions

(Reference Page 407)

5. What did Schachter and Singer's study show about the effect of situational context on emotional responses?

A) Situational context has an effect on emotional response only if a person is aware that they are being observed for an emotional response

B) Situational context does not have an effect on emotional response

\*C) Situational context can influence an emotional response

D) Situational context does not have an effect on emotional response unless there is also an increase in adrenaline levels

(Reference Page 407)

6. Which of the following is a female sex hormone?

A) Testosterone

\*B) Estradiol

C) Cortisol

D) Androgen

(Reference Page 409)

7. Estrogens and androgens are both associated with:

\*A) Sexuality

B) Metabolism

C) Growth

D) Infection

(Reference Page 409)

8. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_ monitors the presence of infection, hunger levels, and ovulation.

A) Thalamus

B) Cortex

\*C) Hypothalamus

D) Amygdala

(Reference Page 409)

9. The paraventricular nucleus is an output pathway from the hypothalamus that stimulates:

A) Sexual behavior

B) Increase of white blood cells when there is infection

\*C) The sympathetic and parasympathetic nervous system

D) Hormone production

(Reference Page 410)

10. In the case study of the woman who experienced drastic hormonal changes resulting in changed eating behavior and fits of rage, where was the tumor that was responsible for the hormonal changes?

A) The amygdala

\*B) The hypothalamus

C) The thalamus

D) The hippocampus

(Reference Page 411)

11. What three areas of the brain receive input from the amygdala?

\*A) The brainstem, the hypothalamus, and the cortex

B) The cortex, the cerebellum, and the thalamus

C) The brainstem, the pituitary gland, and the thalamus

D) The hypothalamus, the cerebellum, and the pituitary gland

(Reference Page 412)

12. If you see a large dog bearing its teeth and growling at you, and you begin to sweat, breathe faster, and prepare to move away, which brain region was just involved in detecting the threat and preparing you for flight?

\*A) The amygdala

B) The cerebellum

C) The brainstem

D) The pituitary gland

(Reference Page 413)

13. Kulver and Bucy experimented on rhesus monkeys by removing their anterior temporal lobes (including the amygdala). Looking at their findings, what conclusions can we draw about the role of these regions in the rhesus monkey?

A) These regions are correlated with parenting and communication

B) These regions are correlated with aggression, sleep, and foraging

\*C) These regions are correlated with fear, eating, and sexuality

D) These regions are correlated with maternal bonding and mate selection

(Reference Page 413-415)

14. The anterior hippocampus is involved in releasing which type hormone?

A) Male sex hormones

B) Growth hormones

C) Female sex hormones

\*D) Stress hormones

(Reference Page 417)

15. The hippocampus in patients with \_\_\_\_\_\_\_\_\_ disorders can be reduced in volume.

A) Eating

B) Sexual

\*C) Mood and anxiety

D) Personality

(Reference Page 417)

16. The circuit that connects many brain structures involved with monitoring the internal and external environment, as well as emotions is called the:

A) Blood brain barrier

\*B) Circuit of Papez

C) Cingulate cortex

D) Medial preoptic area

(Reference Page 418)

17. Why might a doctor advise using deep brain stimulation (DBS) on a patient?

\*A) Drugs and cognitive-behavioral treatment are not working

B) The risks outweigh the benefits

C) The patient is demanding the use of DBS while ignoring alternative options

D) The patient is at risk for brain injury

(Reference Page 419)

18. Seizures originating in the anterior insula will often (not always) produce this effect:

A) Grief or depression

B) Anger or aggression

\*C) Pleasure or bliss

D) Anxiety or tension

(Reference Page 421)

19. Phineas Gage received damage to this brain region after a dynamite accident, affecting his personality.

\*A) The ventromedial prefrontal cortex

B) The anterior hypothalamus

C) The amygdala

D) The cingulate cortex

(Reference Page 423)

20. Which of the following is associated with the ventromedial prefrontal cortex?

A) Feelings of fear

B) Feelings of pleasure

C) Assigning reward value

\*D) All of the above

(Reference Page 424)

21. When a person is attempting to reappraise an emotional situation, higher activation in the ventromedial prefrontal cortex (VMPFC) can lead to:

A) Increased heart rate

\*B) Reduced pupil dilation

C) Quickened breathing

D) Increased sweating

(Reference Page 426)

22. If a person experiences low levels of serotonin over several days, which of the following symptoms may occur?

A) Increased amygdala responses to fearful faces

B) Changes in the ventral striatal and VMPFC activity similar to patients with depression

C) Reduced memory for positive emotional information

\*D) All of the above

(Reference Page 430)

23. 5HT1A autoreceptors regulate the amount of \_\_\_\_\_\_\_\_\_ released via negative feedback mechanisms.

\*A) Serotonin

B) Norepinephrine

C) GABA

D) Estradiol

(Reference Page 431)

24. Anxiety, agitation, and aggression are associated with which neurotransmitter?

A) Serotonin

B) Norepinephrine

\*C) GABA

D) Dopamine

(Reference Page 432)

25. Benzodiazepines drugs like Xanax can work by:

A) Acting as a GABA antagonist

\*B) Acting as a GABA agonist

C) Acting as a Serotonin agonist

D) Acting as a Serotonin antagonist

(Reference Page 433)