CHAPTER 2--THE BODY'S REACTIONS TO STRESS

Student: _____

1. All of the following are true about post-traumatic stress disorder except:

   A. it can result from battle fatigue.
   B. symptoms include flashbacks and nightmares.
   C. it increases the chances of substance abuse problems.
   D. it is experienced immediately after a stressful event.
   E. all statements are true about post-traumatic stress disorder.

2. The area of the brain important for controlling emotional responses is the:

   A. reticular activation system.
   B. limbic system.
   C. sympathetic nervous system.
   D. basal ganglia.
   E. primary association cortex.

3. In response to immediate stress, the ____ is activated.

   A. adrenocorticotropic hormone (ACTH) pathway
   B. vasopressin pathway
   C. thyroxine pathway
   D. hypothalamus-pituitary-adrenal (HPA) pathway
   E. sympathetic nervous system

4. This stress hormone is a mineralocorticoid:

   A. aldosterone
   B. cortisol
   C. vasopressin
   D. thyroxine
   E. triiodothyronine

5. This structure is the first to be activated during fear responses:

   A. hippocampus
   B. thalamus
   C. hypothalamus
   D. pituitary gland
   E. amygdale

6. When Dr. Wilder Penfield used electrical stimulation on a certain region of a patient's brain, he noticed that the patient raised his arm uncontrollably. From this experiment, Penfield learned that the motor program of the ____ has the capability to override the signals sent from other systems and explains why you might feel helpless to control certain impulses that are overridden by another source of power.

   A. prefrontal lobe
   B. motor cortex
   C. occipital lobe
   D. primary somatic sensory cortex
   E. premotor area

7. Sustained stress can lead to atrophy of the hippocampus, which in turn can contribute to:

   A. severe depression.
   B. Cushing's syndrome.
   C. permanent impairment of various brain functions after a stroke.
   D. all of the above.
   E. none of the above.

8. The parasympathetic nervous system:

   A. turns "on" under the "Four F" conditions.
   B. accelerates energy expenditure.
   C. promotes energy storage.
   D. promotes the release of epinephrine and norepinephrine.
   E. all of the above.

9. Which gland is <u>not</u> one of the most relevant to the stress response with regard to the endocrine system?

   A. thyroid
   B. thymus
   C. adrenal
   D. pituitary
   E. all the above glands are most relevant

10. The study of the interactions between the immune system, the nervous system, and behavior is called:

   A. psychoneuroimmunology.
   B. egostical immunology.
   C. cellular biology.
   D. autoimmunology.
   E. immuneurology.

11. The number one killer in North America is:

    A. cancer.
    B. heart disease.
    C. stroke.
    D. accidents.
    E. suicide.

12. Unnecessary muscular contraction due to stress is called:

    A. extraneous myography.
    B. muscle fabrication.
    C. galvanic muscular response.
    D. bracing.
    E. none of the above.

13. Sensate focus exercises are used for:

    A. sport performance.
    B. sexual dysfunction.
    C. work performance.
    D. time management.
    E. concentration.

14. When ____ is released in moderate, brief intervals, it is experienced as pleasurable. But when this neurotransmitter becomes sustained and repetitive, depression can result.

    A. serotonin
    B. epinephrine
    C. dopamine
    D. acetylcholine
    E. tryptophan

15. Which one is not a condition that separates eustress from distress:

    A. extent of uncertainty
    B. amount of relevant information available
    C. amount of psychological demand
    D. amount of control
    E. interpersonal conflict

16. The hippocampus controls anger, fear, and aggressive behavior, while the amygdala is important for memory storage and retrieval.

    True False

17. Excessive stress can lead to "brain shrinkage" in the hippocampal region.

    True False

18. The sympathetic nervous system is responsible for energy expenditure while the parasympathetic nervous system is responsible for energy conservation.

    True False

19. Chronic stress can decrease white blood cell production, thus leaving you vulnerable to disease, illness, and infections.

    True False

20. Another name for a heart attack is arteriosclerosis.

    True False

21. Describe how the sympathetic and parasympathetic nervous systems respond during and after a stressful episode. Be sure to list some of the symptoms associated with each system.

22. Describe how the endocrine system responds to stress. Elaborate on the various pathways, naming important glands, organs, and brain components involved. List the physiological effects of the hormones that are produced. Is the endocrine system used mainly for acute stress or chronic stress?

23. List the risk factors associated with the development of heart disease.

24. What is hypertension? How is hypertension developed? What are some life-style changes you could make to prevent hypertension? Lastly, define arteriosclerosis and describe the process by which you could develop arteriosclerosis.

25. According to your text, there are basically four conditions that separate eustress from distress. Elaborate on each one.

26. Match the following:

1. lie detector	galvanometer	____
2. produces white blood cells	epinephrine	____
3. endocrine pathway	amygdala	____
4. adrenaline	autoimmune disease	____
5. sexual desire	libido	____
6. aids in metabolism of carbohydrates, proteins, and fats	thymus gland	____
7. first structure to be activated during fear responses	parasympathetic nervous system	____
8. aids in regulating electrolytes and water balance	HPA	____
9. rheumatoid arthritis	aldosterone	____
10. energy conservation	cortisol	____

CHAPTER 2--THE BODY'S REACTIONS TO STRESS Key

1. D

2. B

3. E

4. A

5. E

6. A

7. D

8. C

9. B

10. A

11. B

12. D

13. B

14. C

15. C

16. FALSE

17. TRUE

18. TRUE

19. TRUE

20. FALSE

21. Answer not provided.

22. Answer not provided.

23. Answer not provided.

24. Answer not provided.

25. Answer not provided.

26. lie detector :: galvanometer *and* adrenaline :: epinephrine *and* first structure to be activated during fear responses :: amygdala *and* rheumatoid arthritis :: autoimmune disease *and* sexual desire :: libido *and* produces white blood cells :: thymus gland *and* energy conservation :: parasympathetic nervous system *and* endocrine pathway :: HPA *and* aids in regulating electrolytes and water balance :: aldosterone *and* aids in metabolism of carbohydrates, proteins, and fats :: cortisol