**SHIOTA & KALAT, *EMOTION* 3rd edition TEST BANK, CHAPTER 7**

**Multiple Choice**

1. Which of the following best describes the autonomic nervous system?
   1. The brain and spinal cord
   2. The nerves carrying sensation from the body, including pressure, heat, and pain, back to the brain
   3. The nerves carrying instructions from the brain out to the visceral organs in the body, such as the heart, digestive system, and skin
   4. The nerves carrying instructions from the brain out to the skeletal muscles, telling them when and how to move
2. Which of the following is NOT a result of increased sympathetic nervous system activation?
   1. Shortened period of time between the start of ventricular contraction and the ejection of blood from the heart into the aorta
   2. Increased sweat gland activity
   3. Constriction of pupil diameter
   4. Greater constriction of the arteries feeding the skin
3. Which of the following is a result of increased sympathetic nervous system activation?
   1. Expansion of the air sacs in the lungs
   2. Increase in respiratory sinus arrhythmia
   3. Increase in saliva in the mouth
   4. Increase in blood flow to the digestive system
4. Which of the following is a result of increased parasympathetic nervous system activation?
   1. Increased difference in heart rate between breathing in and breathing out
   2. Increased dilation of the arteries feeding the skeletal muscles
   3. Reduced salivary gland activity
   4. Increased sweating
5. Which of the following is a result of increased parasympathetic nervous system activation?
   1. Increased respiration rate
   2. Increased pupil diameter
   3. Increased blood pressure
   4. Increased respiratory sinus arrhythmia
6. Which of the following physiological variables is influenced by BOTH sympathetic and parasympathetic nervous system activation?
   1. Cardiac interbeat interval
   2. Cardiac pre-ejection period
   3. Skin conductance
   4. None of the above are influenced by both sympathetic and parasympathetic activation.
7. Which of the following is the correct term for contraction of the intestines, moving food through the digestive system?
   1. piloerection
   2. vasoconstriction
   3. peristalsis
   4. homeostasis
8. Which of the following is the correct definition of piloerection?
   1. When the penis becomes erect prior to sexual intercourse
   2. When the taste buds in the tongue pop out, in response to food or irritation
   3. When the small hairs in the ears are activated by sound
   4. When muscles around hair follicles contract, so the hair stands up on end
9. One of the effects of heroin, many painkillers, and other opiate drugs is an increase in parasympathetic nervous system activation. If a patient comes into the emergency room and the doctor suspects he or she is under the influence of heroin, what simple physical symptom is the doctor likely to look for?
   1. Cold, clammy hands
   2. Very small pupils
   3. Pale skin
   4. Rapid breathing
10. The endocrine system consists of:
    1. a set of neurons carrying information from the brain to the visceral organs.
    2. a set of neurons carrying information from the visceral organs to the brain.
    3. a set of molecules carrying instructions through the bloodstream to visceral organs.
    4. a set of molecules carrying sensory information from the body to the brain.
11. Which of the following is both a neurotransmitter and a hormone?
    1. Oxytocin
    2. Dopamine
    3. Cortisol
    4. None of the above are both a neurotransmitter and a hormone
12. In an ECG, researchers detect heart rate by measuring:
    1. the sound of the heart beating.
    2. the electrical activity generated by heart muscle in the process of contracting.
    3. the change in pressure in the chest cavity, as the heart thumps.
    4. the change in pressure in the blood vessels after the ventricles contract.
13. Which of the following is the key advantage of cardiac interbeat interval (IBI) over beats per minute (BPM) as a measure of heart rate?
    1. BPM can only be measured with an x-ray or similar imaging, whereas IBI can be measured with sensors placed on the skin.
    2. Far more complex data analysis is required to calculate BPM than IBI.
    3. IBI is only influenced by sympathetic activation, whereas BPM is influenced by both sympathetic and parasympathetic activation.
    4. Changes in IBI can be measured on a finer scale than changes in BPM.
14. Which of the following is the key advantage of pre-ejection period (PEP) over interbeat interval (IBI) as a measure of cardiac activity?
    1. IBI can only be measured with an x-ray or similar imaging, whereas PEP can be measured with sensors placed on the skin.
    2. PEP is influenced only by emotional stress, whereas IBI can also be influenced by physical movement.
    3. PEP is only influenced by sympathetic activation, whereas IBI is influenced by both sympathetic and parasympathetic activation.
    4. Changes in PEP can be measured on a finer scale than changes in IBI.
15. Which of the following is the best definition of respiratory sinus arrhythmia?
    1. The increase in heart rate due to sinus infection
    2. The increase in heart rate caused by rapid breathing (hyperventilation)
    3. The difference in heart rate between inhaling and exhaling
    4. The change in the heart’s rhythm due caused by strong emotion
16. The heart’s natural rhythm, determined by its pacemaker in the absence of any input from the autonomic nervous system, is approximately beats per minute.
    1. 50
    2. 70
    3. 90
    4. 110
17. In order to interpret someone’s heart rate during an experience of strong emotion, it must be compared to:
    1. the same person’s heart rate right before the emotional experience.
    2. another person’s heart rate during the same emotional experience.
    3. the average person’s heart rate at rest, in the absence of strong emotion.
    4. the average person’s heart rate during the same emotional experience.
18. The study by Ekman, Levenson, and Friesen (1983) and the study by Levenson, Ekman, Heider, and Friesen (1992) both claimed to find differences in the autonomic nervous system “profiles” associated with different emotions. Which of the following classic emotion theorists predicted that different emotions might involve qualitatively different physiological profiles?
    1. Schachter and Singer
    2. James and Lange
    3. Both Schachter-Singer and James-Lange would have made this prediction.
    4. Neither Schachter-Singer nor James-Lange would have made this prediction.
19. Which of the following best describes the autonomic specificity hypothesis?
    1. Each organ in the body is enervated by a specific branch of the autonomic nervous system.
    2. Each emotion activates a specific visceral organ, by way of the autonomic nervous system.
    3. Different emotions are associated with different degrees of sympathetic nervous system activation.
    4. Different emotions are associated with different patterns of activity across organs throughout the body.
20. Which of the following is NOT a characteristic component of the response to long-term physical or psychological stress?
    1. Loss of appetite
    2. Sleepiness and fatigue
    3. Weakened immune system
    4. Increased sex drive
21. Which stage of the General Adaptation Syndrome, or stress response, is characterized by heightened cortisol activity?
    1. Alarm
    2. Resistance
    3. Exhaustion
    4. All of the above are characterized by high cortisol activity.
22. Which stage of the General Adaptation Syndrome, or stress response, is characterized by very high sympathetic nervous system activation?
    1. Alarm
    2. Resistance
    3. Exhaustion
    4. All of the above are characterized by very high sympathetic activity.
23. At which stage of the General Adaptation Syndrome, or stress response, is the body most vulnerable to infection and illness?
    1. Alarm
    2. Resistance
    3. Exhaustion
    4. All of the above are equally characterized by vulnerability to infection and illness.
24. Which of the following is NOT an effect of the hormone cortisol?
    1. Cortisol mobilizes fats and proteins stored in the body, so they can be converted into glucose.
    2. Cortisol increases blood pressure by retaining sodium and fluids, and by increasing vascular resistance.
    3. Cortisol alters the density of dendrites and synapses in different parts of the brain.
    4. Cortisol reduces metabolism, conserving glucose for future use.
25. Which of the following statements about cortisol is FALSE?
    1. In healthy people, cortisol is always low unless they have a stressful experience.
    2. Cortisol enhances some aspects of immune functioning, and inhibits others
    3. People with a history of chronic, intense stress, especially in childhood, often show a smaller-than-normal cortisol response to new stressful events.
    4. All of the statements above are true.

**Multiple Choice Answer Key**

1. The nerves carrying instructions from the brain out to the visceral organs in the body, such as the heart, digestive system, and skin (c)

2. Constriction of pupil diameter (c)

3. Expansion of the air sacs in the lungs (a)

4. Increased difference in heart rate between breathing in and breathing out (a)

5. Increased respiratory sinus arrhythmia (d)

6. Cardiac interbeat interval (a)

7. peristalsis (c)

8. When muscles around hair follicles contract, so the hair stands up on end (d)

9. Very small pupils (b)

10. a set of molecules carrying instructions through the bloodstream to visceral organs. (c)

11. Oxytocin (a)

12. the electrical activity generated by heart muscle in the process of contracting. (b)

13. Changes in IBI can be measured on a finer scale than changes in BPM. (d)

14. PEP is only influenced by sympathetic activation, whereas IBI is influenced by both sympathetic and parasympathetic activation. (c)

15. The difference in heart rate between inhaling and exhaling (c)

16. 90 (c)

17. The same person’s heart rate right before the emotional experience. (a)

18. James and Lange (b)

19. Different emotions are associated with different patterns of activity across organs throughout the body. (d)

20. Increased sex drive (d)

21. Resistance (b)

22. Alarm (a)

23. Exhaustion (c)

24. Cortisol reduces metabolism, conserving glucose for future use. (d)

25. In healthy people, cortisol is always low unless they have a stressful experience. (a)

**True/False**

1. Either the sympathetic nervous system OR the parasympathetic nervous system is activated at any one time in a person’s body; they cannot both be activated at once.

2. When the sympathetic and parasympathetic nervous systems both ennervate the same organ, they typically produce opposing effects.

3. The arteries – blood vessels leading away from the heart – are surrounded by thin layers of smooth muscle than can constrict or relax.

4. Effects of sympathetic nervous system activation are all caused by the same mechanism, so they all occur together; different effects cannot occur independent of the others.

5. Evidence suggests that a sharp increase in the “stress hormone” cortisol upon waking up in the morning is normal and psychologically healthy.

6. Only females have the hormones estrogen and progesterone; only males have testosterone.

7. Research evidence suggests that people who more accurately perceive their body’s visceral responses, such as changes in heart rate, also experience stronger negative emotions.

8. The physiological stress response was discovered largely by accident, in a study designed to address the causes of cancer in rats.

**True/False Answer Key**

1. False
2. True
3. True
4. False
5. True
6. False
7. True
8. True

**Short Answer**

1. Describe one aspect of emotional experience in which both sympathetic and parasympathetic nervous system activation are involved.
2. Explain the difference between systolic and diastolic blood pressure.
3. Explain the difference between neurotransmitters and hormones.
4. Differentiate the alarm, resistance, and exhaustion stages of Hans Selye’s General Adaptation Syndrome, a.k.a the stress response.

**Short Answer Key**

1. Answers may vary, but good options are: (i) in sexual activity, parasympathetic activation increases blood supply to the genitalia, necessary for arousal, and sympathetic activation facilitates the muscle contractions in orgasm; (ii) in nausea, sympathetic activation produces retching and parasympathetic activation stimulates the intestines; and (iii) when a rabbit sees a predator but has not itself been detected, sympathetic activation dilates the pupils and increases sweating, but parasympathetic slows the heart rate to avoid attracting the predator’s attention.
2. Systolic pressure is the pressure of blood against the arteries while the ventricles are contracting, and diastolic pressure is when the ventricles are relaxed.
3. Neurotransmitters are molecules that carry messages from one neuron to another, or between neurons and immediately adjacent organs in the body. Hormones are molecules released by glands into the bloodstream, carrying instructions to organs located some distance away.
4. Alarm: a brief period of high activation of the sympathetic nervous system, preparing the body for vigorous activity. Resistance: longer-term but more moderate arousal, mediated by the stress hormone cortisol rather than sympathetic nervous system activation. Exhaustion: The stage in which the body’s resources are depleted, lacking energy for continued resistance and at increased risk of infection and illness.

**Essay Question**

1. The human stress response is one example of an aspect of human nature that was adaptive in our ancestral environment, yet can be problematic in the modern world. (i) Compare and contrast the nature of the typical stressor in the ancestral environment versus the modern, developed world. (ii) Describe three specific aspects of the human stress response that were adaptive for human ancestors, yet can threaten long-term health in the modern era.