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TEST BANK TO ACCOMPANY

APPLIED BIOLOGICAL PSYCHOLOGY

SECOND EDITION

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CHAPTER 1

HISTORY OF NEUROBIOLOGY

1. When was the “Decade of the Brain” declared by the Library of Congress and National Institute of Mental Health?
 - a. 1970s
 - *b. 1990s
 - c. 2010s
 - d. 2000s
2. What was a novel concept in the field’s understanding of the brain as a result of studying Phineas Gage after his accident?
 - a. Changes to intelligence
 - b. Role in motor skills
 - *c. Role in personality, social behavior, and emotional processing
 - d. Changes to sensory abilities
3. The injury to Phineas Gage occurred in the
 - a. Occipital lobe
 - b. Parietal lobe
 - c. Temporal lobe
 - *d. Frontal lobe
4. Phrenology was the study of brain functioning as it relates to what?
 - *a. Bumps and indentations on the head
 - b. Hand/foot size
 - c. Eye color
 - d. Height/weight
5. An abnormal change in brain tissue is called
 - a. Atrophy
 - *b. Lesion
 - c. Phrenology
 - d. Microglial
6. Broca area and Wernicke area are both areas of the brain that control what aspect of cognitive functioning?
 - a. Motor skills
 - b. Mood
 - c. Memory
 - *d. Language

7. What is anterograde amnesia?
 - a. Inability to recall long-term events
 - *b. Inability to form new memories
 - c. Inability to remember any memories
 - d. Inability to recall childhood memories
8. What is “in vivo examination”?
 - a. Examining an individual’s brain postmortem
 - *b. Research conducted on a living individual
 - c. Examinations completed with close relatives of the individual
 - d. None of the above
9. When was intelligence testing first introduced by Alfred Binet?
 - a. Early 2000s
 - b. Early 1980s
 - *c. Early 1900s
 - d. Mid-1800s
10. Neuropsychological testing or objective cognitive testing was initially utilized for what purpose?
 - *a. Military
 - b. Occupational
 - c. Mental health
 - d. Educational
11. The CT scan was the first method to
 - a. Scan slides of a deceased brain
 - *b. See a live picture of the brain
 - c. Locate brain regions accurately
 - d. None of these
12. Prior to the mid-1930s and late 1940s, what were most psychiatric medications intended to do?
 - a. Treat mental health symptoms
 - *b. Cause or assist with sedation
 - c. Improve cognitive functioning
 - d. Assist with pain

CHAPTER 2

RESEARCH AND CLINICAL METHODS

1. Knowledge of scientific techniques available for the study of the brain is important because
 - *a. Clinicians can make better treatment recommendations and referrals
 - b. All clinicians will eventually complete research
 - c. Neuropsychologists are trained in using these
 - d. None of the above
2. Microscopic evaluation can only be conducted
 - a. In specific laboratory settings
 - b. While the patient is under anesthesia
 - *c. Postmortem
 - d. For treatment purposes
3. Research conducted on animals is ____ in neuroscience.
 - a. Illegal
 - b. Unethical
 - *c. Relatively commonplace
 - d. Ethical
4. Which is true about the surgical technique of ablation?
 - a. It can be conducted on living organisms.
 - b. It destroys or removes a portion of neural or brain tissue.
 - c. The goal is to examine localization.
 - *d. All of the above.
5. An EEG can be used for what purposes?
 - a. Determining nonepileptic seizures
 - b. Examining delirium
 - c. Aid in evaluating sleep disorders
 - *d. All of these
6. CT scans
 - *a. Are not very detailed in terms of brain structures
 - b. Provide a very clear image of the brain
 - c. Can accurately represent all areas of the brain
 - d. Are an expensive procedure
7. MRI scans are typically more detailed and higher strength in what situation?
 - a. For clinical purposes
 - *b. For research purposes
 - c. When the client is younger
 - d. When conducted at a slower speed

8. MRI images produced when examining the brain from the face to the back of the head are called ____ view.
- *a. Coronal
 - b. Axial
 - c. Linear
 - d. Sagittal
9. MRI images produced when examining the brain from the top of the head are called ____ view.
- a. Coronal
 - *b. Axial
 - c. Linear
 - d. Sagittal
10. MRI images produced when examining the brain from the left to the right side are called ____ view.
- a. Coronal
 - b. Axial
 - c. Linear
 - *d. Sagittal
11. Magnetic resonance angiography can assist with what?
- a. Examining blood vessels
 - b. Creating slides of the brain
 - c. Aid in understanding vascular changes
 - *d. A and C
12. Functional MRI (fMRI) is currently only used for
- a. Treatment/clinical purposes
 - *b. Research purposes
 - c. Older adults
 - d. Examining animal brains
13. Neuropsychological examinations can successfully be conducted using telehealth.
- *a. True
 - b. False
14. Neuropsychological examinations include
- a. Evaluation of cognitive abilities
 - b. Evaluation of emotional functioning
 - c. Personality assessment
 - *d. All of these

CHAPTER 3

NERVOUS SYSTEM AND BRAIN STRUCTURE

1. The peripheral nervous system (PNS) consists of
 - a. The brain and spinal cord
 - *b. The somatic nervous system and autonomic nervous system
 - c. Only the brain
 - d. None of these
2. All somatosensory information runs through the peripheral nervous system (PNS).
 - *a. True
 - b. False
3. The ____ nervous system regulates through increasing energy during times of stress and arousal, while the ____ nervous system conserves energy when the body is relaxed.
 - a. Somatic; sympathetic
 - b. Sympathetic; central
 - *c. Sympathetic; parasympathetic
 - d. Autonomic; parasympathetic
4. Dysregulation of the autonomic nervous system contributes to what kind of disorders?
 - a. Trauma and stress disorders
 - b. Anxiety and panic disorders
 - c. Mood disorders
 - *d. All of these
5. Deep breathing and other relaxation techniques can be effective in improving peripheral nervous system (PNS) functioning.
 - a. False
 - *b. True
6. Neurons are
 - a. Found throughout the body
 - b. Found only within the brain
 - c. Important in transmitting electrical and chemical signals
 - *d. B and C
7. Demyelination, or the loss of the myelin sheath, contributes to what?
 - *a. Slower transmission of electrical signals
 - b. Improved processing speed
 - c. Brain shrinkage
 - d. Electrical signals moving more quickly along the axon

8. Neurotransmitters are the brain's chemical messengers and are processed and packed by what?
- a. Neurons
 - *b. Golgi bodies
 - c. The axon
 - d. Dendrites
9. ____ neurotransmitters decrease the likelihood that a neuron will fire an action potential, whereas ____ neurotransmitters increase the likelihood.
- a. Excitatory; inhibitory
 - b. Small; large
 - *c. Inhibitory; excitatory
 - d. Dopamine; epinephrine
10. The first identified neurotransmitter was what?
- a. Serotonin
 - *b. Acetylcholine
 - c. Catecholamines
 - d. Glutamate
11. A depletion of dopamine can contribute to symptoms of
- a. Schizophrenia
 - b. Anxiety
 - c. Alzheimer disease
 - *d. Parkinsonism
12. ____ matter is necessary for cognitive abilities, while ____ matter is essential for sending signals and is correlated with learning potential.
- a. White; gray
 - b. Black; white
 - *c. Gray; white
 - d. White; white
13. The cerebellum is important for what?
- *a. Motor skills and balance
 - b. Memory
 - c. Language
 - d. Executive functions
14. There are ____ lobes within the brain.
- a. Three
 - b. Six
 - *c. Four
 - d. Two
15. The frontal lobe is most responsible for
- a. Vision
 - *b. Executive functions
 - c. Motor skills
 - d. Sensory functioning

CHAPTER 4

MAJOR NEUROBIOLOGICAL BRAIN SYSTEMS

1. The limbic system is considered to be the human coordination and balance system and the most primitive part of the brain.
 - a. True
 - *b. False
2. The limbic system plays a role in controlling appetite, regulating sleep cycles, processing smells, controlling libido, and
 - a. Vision
 - b. Pain
 - *c. Emotions
 - d. None of these
3. The limbic system includes the
 - a. Amygdala, thalamus, hippocampus, and putamen
 - b. Putamen, globus pallidus, and caudate
 - *c. Amygdala, thalamus, hippocampus, and hypothalamus
 - d. Putamen, globus pallidus, and thalamus
4. Damage to the hippocampus can result in the inability to
 - *a. Form new memories
 - b. Perceive smell
 - c. Recall old memories
 - d. Move independently
5. The vital function of the amygdala is
 - *a. To serve as the emotional response center
 - b. To consolidate new memories
 - c. Motor control
 - d. Spatial orientation
6. A symptomatic presentation of dysregulation of the amygdala could include
 - a. Depression
 - b. Mania
 - c. Irritability
 - d. Negative thinking
 - *e. All of the above

7. The hypothalamic–pituitary–adrenal (HPA) axis regulates
 - a. Digestion
 - b. Mood
 - c. Reaction to stress
 - *d. All of the above
 - e. None of the above
8. The basal ganglia includes
 - *a. Putamen, caudate, globus pallidus, and substantia nigra
 - b. Putamen, amygdala, globus pallidus, and nucleus accumbens
 - c. Amygdala, thalamus, hippocampus, and hypothalamus
 - d. Amygdala, thalamus, hippocampus, and nucleus accumbens
9. The basal ganglia serves several functions, but is thought to be particularly important for integrating
 - a. The senses
 - *b. Feelings and movement
 - c. Memories
 - d. Motor coordination
10. The orbital frontal prefrontal cortex is important for aiding individuals in engaging in socially appropriate behaviors.
 - *a. True
 - b. False
11. The medial basal prefrontal cortex is important for
 - a. Attention
 - b. Memory
 - *c. Goal-directed behavior
 - d. None of these
12. The anterior cingulate cortex is important for
 - a. Impulse control
 - b. Memory
 - c. Cognitive flexibility
 - *d. A and C
 - e. All of the above
13. Prosopagnosia, or the inability to recognize familiar faces, can occur when there is damage to this part of the brain.
 - a. Frontal lobes
 - b. Amygdala
 - c. Posterior cingulate cortex
 - *d. Fusiform gyrus
14. Neuroplasticity is the concept that the brain is a dynamic, ever-changing organ that can be adaptive and trained/retrained. By this concept, it can be argued that therapy is an attempt at utilizing neuroplasticity.
 - *a. True
 - b. False

15. A primary neurobiological system involved in psychiatric disorders includes
- a. Prefrontal system
 - b. Fusiform gyrus system
 - c. Limbic system
 - *d. All of the above
16. The cingulate system is composed of ____ major area(s).
- *a. Two
 - b. Four
 - c. One
 - d. Three