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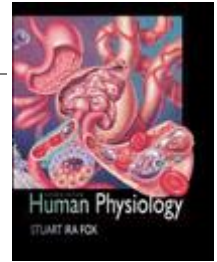
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Human Physiology, 7/e
 Stuart I Fox, Pierce College

The Central Nervous System




Results Reporter

Out of 39 questions, you answered 20 correctly, for a final grade of 51%.

20 correct (51%) 
 19 incorrect (49%) 
 0 unanswered (0%)


Please answer all questions

Your Results:

The correct answer for each question is indicated by a .


- 1 CORRECT**

The nervous system arises from the same embryonic tissue layer that produces the epidermis.(p. 188)

 (A) TRUE
 (B) FALSE


Feedback: Correct: The epidermis destined to become the nervous system is the neural ectoderm. (p. 188)
- 2 INCORRECT**

At 1.4 kg, the brain forms about 2.4% of the weight of a 60 kg (132 lb) adult, and correspondingly it receives about 2.4% of the total blood flow to the body. (p. 190)

(A) TRUE
 (B) FALSE


Feedback: Incorrect: The brain will receive approximately 20% of blood flow. (p. 190)
- 3 CORRECT**

About 80% of the mass of the brain arises from the telencephalon of the embryonic neural tube and forms the cerebrum. (p. 189)

 (A) TRUE
 (B) FALSE


Feedback: Correct: The telencephalon gives rise to the cerebrum which is comprises approximately 80% of the mass of the human brain. (p. 191)
- 4 CORRECT**

The hand and facial muscles are controlled by a much larger part of the precentral gyrus than muscles of the trunk and legs. (p. 191)

 (A) True
 (B) False

Feedback: Correct: The control of muscles is not distributed evenly throughout the motor cortex. (p. 191)
- 5 CORRECT**

Temporal lobe damage can impair visual perception resulting in a lack of recognition and ability to associate visual information with past experience even though the eyes function normally.(p. 192)

 (A) True
 (B) False

Feedback: Correct: The temporal lobe is a region of the brain where visual memories are stored. (p. 192)

- 6 INCORRECT** Theta waves are a normal part of the electroencephalogram (EEG) of an adult who is awake and relaxed, with the eyes closed and not concentrating on any mental task. (p. 195)
 (A) True
 (B) False
Feedback: Incorrect: Theta waves in awake adults are indicative of severe emotional stress. (p. 195)
- 7 CORRECT** If you find your professor's lectures mentally stimulating, your brain will produce more beta waves, but if the lectures put you to sleep, you will produce more delta waves. (p. 194)
 (A) TRUE
 (B) FALSE
Feedback: Correct: Beta waves are associated with mental activity and delta waves are associated with sleep in normal adults. (p. 195)
- 8 INCORRECT** All visual input from the left eye is transmitted to the right occipital lobe because of the crossing-over of optic nerve fibers. (p. 195)
 (A) True
 (B) False
Feedback: Incorrect: All of the optic nerve fibers do not decussate. (p. 195)
- 9 INCORRECT** Each cerebral hemisphere receives information only from the opposite (contralateral) side of the body. (p. 195)
 (A) True
 (B) False
Feedback: Incorrect: The corpus callosum provides communication between the left and right sides of the brain. (p. 195)
- 10 INCORRECT** Studies of split-brain patients who have had the corpus callosum severed in an effort to treat epilepsy, have shown that the left cerebral hemisphere is dominant over the right in most people. (p. 196)
 (A) True
 (B) False
Feedback: Incorrect: Split brain studies show that in most people the right hemisphere is the dominant hemisphere. (p. 196)
- 11 INCORRECT** Language and analytical abilities reside in the left cerebral hemisphere of right-handed people and in the right hemisphere of left-handed people. (p. 197)
 (A) True
 (B) False
Feedback: Incorrect: Language and analytical abilities are localized in the right hemisphere of most right- and left-handed people. (p. 197)
- 12 CORRECT** A person with damage to the left cerebral hemisphere can have a speech defect and yet be able to sing normally. (p. 197)
 (A) TRUE
 (B) FALSE
Feedback: Correct: The ability to sing is localized to the right hemisphere while speech is localized to the left hemisphere. (p. 197)
- 13 INCORRECT** People with damage to Broca's area cannot comprehend or produce coherent speech. (p. 197)
 (A) True
 (B) False

- 14 CORRECT** **Feedback: Incorrect: Damage to Broca's area can comprehend speech but are reluctant to speak. (p. 197)**
Damage to Wernicke's area impairs both the comprehension and the production of speech. (p. 197)
 (A) True
 (B) False
- 15 CORRECT** **Feedback: Correct: Wernicke's area is involved in both the comprehension and production of speech. (p. 197)**
Left-handed people have better chances of recovering from damage to Broca's area than right-handed people. (p. 198)
 (A) True
 (B) False
- 16 INCORRECT** **Feedback: Correct: In left-handed people it appears that language is more evenly distributed in both hemispheres than in right-handed people. (p. 198)**
The cerebral cortex of the brain has extensive nerve connections to the limbic system and exerts strong control over its functions. (p. 198)
 (A) True
 (B) False
- 17 INCORRECT** **Feedback: Incorrect: There is very little communication between these two brain regions. (p. 198)**
Movement of the limbs is largely under the control of the limbic system rather than the precentral gyrus. (p. 198)
 (A) True
 (B) False
- 18 INCORRECT** **Feedback: Incorrect: The limbic system has little control over voluntary muscle contraction. (p. 198)**
Sexual drive and sexual behavior are controlled entirely by centers in the hypothalamus and are not affected by damage to the cerebrum. (p. 198)
 (A) True
 (B) False
- 19 INCORRECT** **Feedback: Incorrect: Sexual drive and behaviors are primarily controlled by the limbic system which includes areas of the cerebrum. (p. 198)**
Treatments or injuries that affect memory seem to affect short-term and long-term memory equally. (p. 200)
 (A) True
 (B) False
- 20 CORRECT** **Feedback: Incorrect: The site and nature of the injury may affect one type of memory more than another. (p. 200)**
Different regions of the brain are specialized for different types of memory, and must cooperate with each other to produce a complete memory image. (p. 200)
 (A) True
 (B) False
- 21 CORRECT** **Feedback: Correct: Consolidation of memories requires the actions of the hippocampus, amygdaloid nucleus and adjacent areas while mathematical calculations require the interior temporal lobe. (p. 200)**
With frequent usage, presynaptic neurons become capable of releasing more neurotransmitter molecules, and the postsynaptic neurons become more sensitive to them. (p. 201)
 (A) True
 (B) False

- Feedback: Correct: Synaptic memory and long-term potentiation responses may be related to memories. (p. 201)**
- 22 CORRECT** The two hormones of the posterior lobe of the pituitary are actually synthesized in the hypothalamus and not in the pituitary gland. (p. 203)
 A) True
 B) False
- Feedback: Correct: Oxytocin and vasopressin are synthesized in the paraventricular and supraoptic nuclei of the hypothalamus. (p. 203)**
- 23 INCORRECT** The hypothalamus controls the posterior lobe of the pituitary by means of the hypothalamo-hypophyseal nerve tract, but it does not have any control over the anterior lobe. (p. 203)
 A) True
 B) False
- Feedback: Incorrect: The hypothalamus releases hormones that regulate the anterior pituitary gland. (p. 203)**
- 24 CORRECT** Several cranial nerves originate from nuclei located in the hindbrain (metencephalon). (p. 204)
 A) True
 B) False
- Feedback: Correct: Cranial nerves V-VIII originate from nuclei in the hindbrain. (p. 204)**
- 25 CORRECT** The cerebellum receives sensory (afferent) input from muscles and tendons. (p. 204)
 A) True
 B) False
- Feedback: Correct: The cerebellum receives this information to aid in the coordination of muscle function. (p. 204)**
- 26 CORRECT** All nerve fibers that communicate between the brain and spinal cord must pass through the medulla oblongata. (p. 205)
 A) True
 B) False
- Feedback: Correct: The medulla oblongata is continuous with the spinal cord and all fibers between the brain and spinal cord pass through the medulla oblongata. (p. 205)**
- 27 INCORRECT** The reticular activating system or RAS, responds to somesthetic sensations arriving via the spinal cord, but not to visual or auditory sensations that bypass this center. (p. 206)
 A) True
 B) False
- Feedback: Incorrect: The RAS receives information from all sensory modalities. (p. 206)**
- 28 INCORRECT** The spinal cord has a cortex of gray matter surrounding a central core (medulla) made up of white matter. (p. 206)
 A) True
 B) False
- Feedback: Incorrect: In the spinal cord, the gray matter of the spinal cord is surrounded by the white matter. (p. 206)**
- 29 CORRECT** If a fiber tract of the spinal cord is named with the prefix spino-, such as a spinothalamic tract, it can be assumed that it transmits information from the lower body toward the brain and not in the opposite direction. (p. 206)
 A) True

- B) False
- Feedback: Correct: The prefix indicates the site at which the nerve tract starts. (p. 206)**
- 30 INCORRECT** Any spinal nerve fibers that decussate (cross to the opposite side of the brain or body) always do so in the pyramids of the medulla. (p. 207)
- A) True
- B) False
- Feedback: Incorrect: Even within the pyramidal tracts, only 80%-90% decussate in the medulla. (p. 207)**
- 31 CORRECT** Nerve fibers of the major ascending tracts of the spinal cord originate mainly in the posterior or dorsal horn of the cord. (p. 207)
- A) True
- B) False
- Feedback: Correct: Of the major ascending tracts only the fasciculus gracilis and fasciculus cuneatus do not originate in the spinal cord. (p. 207)**
- 32 CORRECT** The pyramidal tracts get this name from the fact that most of their fibers pass through the pyramids located in the medulla oblongata. (p. 207)
- A) True
- B) False
- Feedback: Correct: The pyramidal tracts actually decussate in the medullary pyramids. (p. 207)**
- 33 INCORRECT** If the corticospinal tracts are severed, a person will be paralyzed from the neck down. (p. 209)
- A) True
- B) False
- Feedback: Incorrect: The person would only be paralyzed from the neck down if the corticospinal tracts were severed above a certain level of the spinal cord. (p. 209)**
- 34 CORRECT** The rubrospinal and vestibulospinal tracts consist of nerve fibers that originate in the brain and transmit information down the spinal cord. (p. 208)
- A) True
- B) False
- Feedback: Correct: Both tracts originate with the brain (red nucleus, vestibular nuclei) and then descend to the spinal cord. (p. 208)**
- 35 INCORRECT** The cerebellum has many nerve fibers that travel down the descending spinal tracts to coordinate the activity of skeletal muscle. (p. 208)
- A) True
- B) False
- Feedback: Incorrect: The cerebellum receives information that is then processed to affect the descending tracts. (p. 204)**
- 36 INCORRECT** Only one of the twelve pairs of cranial nerves is purely sensory. (p. 210)
- A) True
- B) False
- Feedback: Incorrect: Only three of the twelve pairs of cranial nerves is purely sensory. (p. 210)**
- 37 INCORRECT** Movements of the eyeball are controlled by the optic nerves (cranial nerve II). (p. 210)
- A) True
- B) False

- 38 CORRECT** **Feedback: Incorrect: Cranial nerve II is a sensory nerve that transmits visual information to the brain. (p. 210)**
 Motor commands from the spinal cord cannot leave by way of the dorsal root of the spinal nerve. (p. 212)
 A) True
 B) False
- 39 CORRECT** **Feedback: Correct: Ventral roots of spinal nerves transmit motor commands. (p. 212)**
 Spinal reflex arcs do not have to involve association neurons. (p. 212)
 A) True
 B) False
- Feedback: Correct: Some spinal reflex arcs involve just sensory and motor nerves. (p. 212)**

Routing Information

Date: Wed Jan 02 04:53:51 EST 2013

My name:

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