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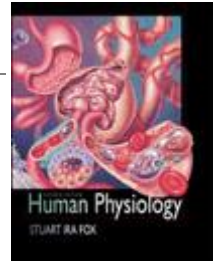
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Human Physiology, 7/e
 Stuart I Fox, Pierce College

The Central Nervous System




Results Reporter

Out of 40 questions, you answered 10 correctly, for a final grade of 25%.

10 correct (25%) 
 30 incorrect (75%) 
 0 unanswered (0%)

Please answer all questions

Your Results:

The correct answer for each question is indicated by a .

- 1 CORRECT** Which of the primary germ layers of the embryo gives rise to the nervous system? (p. 188)

A)ectoderm
 B)blastoderm
 C)mesoderm
 D)endoderm

Feedback: Correct: Ectoderm is the primary germ layer that will give rise to nervous tissue. (p. 188)
- 2 INCORRECT** The neural crest of the embryo gives rise to the _____. (p. 188)

A)cerebrum
 B)brain stem
 C)spinal cord
 D)peripheral ganglia

Feedback: Incorrect: The cerebrum arises from the neural tube. (p. 188)
- 3 INCORRECT** In the fourth week after conception, the anterior end of the neural tube differentiates into three principal swellings which will give rise to regions of the brain. Which of the following is not one of these three swellings? (p. 189)

A)prosencephalon
 B)neuroencephalon
 C)mesencephalon
 D)rhombencephalon

Feedback: Incorrect: The prosencephalon is the most anterior of the swellings. (p. 189)
- 4 INCORRECT** The brain contains a series of central cavities called ____ which are filled with cerebrospinal fluid (CSF). (p. 190)

A)chambers
 B)vesicles
 C)ventricles
 D)atria

Feedback: Incorrect: These central cavities are chambers, but they are termed ventricles. (p. 190)

5 CORRECT

The gray matter of the brain constitutes primarily the ____ portion of the brain. (p. 190)

- A) cortex**
 B) medulla
 C) gyri
 D) sulci

Feedback: Correct: Within the brain the gray matter is on the outside of the white matter and is found on the surface (cortex) of the brain. (p. 190)

6 INCORRECT

The white matter of the central nervous system gets its white color from the _____. (p. 189)

- A) scarcity of blood vessels**
 B) scarcity of pigment
 C) nerve cell bodies
 D) presence of myelin sheaths

Feedback: Incorrect: The brain is highly vascularized.

7 INCORRECT

The telencephalon gives rise to the _____. (p. 189)

- A) cerebrum and cerebellum**
 B) cerebrum and thalamus
 C) cerebrum only
 D) hypothalamus and thalamus

Feedback: Incorrect: The cerebellum arises from the metencephalon. (p. 189)

8 INCORRECT

The right and left cerebral hemispheres are connected to each other mainly by a bundle of nerve fibers called the _____. (p. 190)

- A) thalamus**
 B) insula
 C) corpus cavernosum
 D) corpus callosum

Feedback: Incorrect: Incorrect: The thalamus is a region of the diencephalon. (p. 189)

9 INCORRECT

The cerebrum is divided into five lobes, including all of the following except the _____. (p. 192)

- A) frontal**
 B) sagittal
 C) temporal
 D) occipital

Feedback: The frontal lobe is the anterior portion of each cerebral hemisphere. (p. 191)

10 CORRECT

Four lobes of the cerebrum can be seen from the surface, but a fifth lobe called the ____ lies deep to these and cannot be seen without probing or dissecting the brain. (p. 192)

- A) insula**
 B) occipital lobe
 C) parietal lobe
 D) temporal lobe

Feedback: Correct: The insula is the lobe that lies beneath the other lobes. (p. 192)

11 INCORRECT

Sensations from the skin are received by what part of the brain? (p. 191)

- A) the precentral gyrus**
 B) the postcentral gyrus

C) Wernicke's area

D) the amygdala

Feedback: Incorrect: The precentral gyrus stimulates movements of specific body parts. (p. 191)

12 INCORRECT

Impulses from the cochlea of the ear are transmitted to what part of the brain? (p. 192)

A) the hippocampus

B) the occipital lobe

C) the temporal lobe

D) the postcentral gyrus

Feedback: Incorrect: The hippocampus does not interpret auditory stimuli. (p. 192)

13 CORRECT

Blindness is usually caused by damage to the eyes, but could also result from destruction of part of the ____ caused by a stroke or trauma. (p. 192)

A) occipital lobe

B) parietal lobes

C) frontal lobe

D) mammillary bodies

Feedback: Correct: The occipital lobe is responsible for interpretation of visual stimuli. (p. 192)

14 INCORRECT

Your attempt to answer this question will most likely cause increased ____ activity in your cerebrum. (p. 193)

A) alpha wave

B) beta wave

C) theta wave

D) delta wave

Feedback: Incorrect: Alpha waves are associated with an awake relaxed state. (p. 193)

15 INCORRECT

Certain low frequency waves called ____ would be normal for your EEG if you were asleep, but would indicate brain damage if they appeared in your EEG while you were awake. (p. 194)

A) alpha wave

B) beta wave

C) theta wave

D) delta wave

Feedback: Incorrect: Alpha waves are common in awake relaxed adults. (p. 193)

16 CORRECT

Decussation (crossing over) of nerve fibers is responsible for the fact that ____ (p. 195)

A) somesthetic sensations from the right side of the body are received by the left cerebral cortex

B) left-handed people recover from damage to the language areas of the brain faster than right-handed people

C) the right cerebral hemisphere is better than the left at geometric puzzles, recognizing faces, and composing music

D) Leonardo da Vinci, Michelangelo, and the author of your text (S. Fox), were left-handed

Feedback: Correct: Decussation of fibers causes the interpretation of sensations to occur on the side of the brain opposite the side of the body on which they were received. (p. 195)

17 INCORRECT

The human limbic system is involved primarily in _____. (p. 198)

A) voluntary movement of the limbs

B) processing sensory information from the limbs

C) interpretation of olfactory stimuli

D) emotions

Feedback: Incorrect: Voluntary movement of limbs is associated with the frontal lobe. (p. 191)

18 INCORRECT

When ____ is damaged, a person is unable to comprehend written or spoken language, but speaks rapidly and fluidly in a nonsensical jumble of words that are made up or combined at random. (p. 197)

A) Broca's area

B) Wernicke's area

C) the cingulate gyrus

D) the angular gyrus

Feedback: Incorrect: Damage to Broca's area produces speech that is slow and poorly spoken. (p. 197)

19 INCORRECT

Fear appears to be processed by what part of the brain? (p. 198)

A) the frontal lobes

B) the angular gyrus

C) the thalamus

D) the limbic system

Feedback: Incorrect: The frontal lobes regulated motor function. (p. 191)

20 INCORRECT

The ____ seems to be involved in converting short-term memories into long-term memory. (p. 200)

A) basal nuclei, including the corpus striatum and the lentiform nucleus

B) Wernicke's area (superior temporal gyrus)

C) left medial temporal lobe, including the hippocampus and the amygdaloid nucleus

D) prefrontal cortex

Feedback: Incorrect: The basal nuclei are involved in motor function. (p. 196)

21 INCORRECT

The largest part of the diencephalon is the _____. (p. 201)

A) cerebellum

B) thalamus

C) epithalamus

D) hypothalamus

Feedback: Incorrect: The cerebellum is not part of the diencephalons. (p. 201)

22 INCORRECT

"Centers" for hunger, thirst, fear, sexual arousal, and pleasure are found in the _____. (p. 203)

A) precentral gyrus

B) thalamus

C) hypothalamus

D) medulla oblongata

Feedback: Incorrect: The precentral gyrus has no role in these feelings. (p. 203)

23 CORRECT

The corpora quadrigemina ("four twin bodies") of the midbrain are involved in _____. (p. 204)

A) vision and hearing

B) control of body temperature

C) olfaction and taste

D) alertness and sleep

Feedback: Correct: The corpora quadrigemina provide relay centers for auditory and visual information. (p. 204)

- 24 INCORRECT** The mesencephalon contains all of the following except the (p. 204)
- A) corpora quadrigemina**
 - B) cerebral peduncles**
 - C) basal nuclei**
 - D) red nucleus**
- Feedback: Incorrect: The corpora quadrigemina are part of the midbrain. (p. 204)**
- 25 CORRECT** The pons includes all of the following except the (p. 204)
- A) cardiac control center**
 - B) pneumotaxic center**
 - C) nerve fibers to the cerebellum**
 - D) nuclei where some cranial nerves originate**
- Feedback: Correct: The cardiac control center is found in the medulla oblongata. (p. 206)**
- 26 INCORRECT** Damage to the cerebellum, the second largest structure of the brain, causes (p. 204)
- A) hyperphagia**
 - B) coma**
 - C) aphasia**
 - D) ataxia**
- Feedback: Incorrect: The cerebellum does not regulate feeding behavior. (p. 204)**
- 27 INCORRECT** The pyramids of the medulla oblongata are the sites of (p. 204)
- A) origin of cranial nerves IX-XII**
 - B) decussation of nerve tracts**
 - C) respiratory, cardiac, and vasomotor control**
 - D) none of the above is correct**
- Feedback: Incorrect: Cranial nerves IX-XII originate in nuclei within the medulla oblongata. (p. 206)**
- 28 INCORRECT** The vagus nerve (cranial nerve X) carries parasympathetic nerve stimulation to most of the thoracic and abdominal viscera, and originates in the _____. (p. 206)
- A) red nucleus of the midbrain**
 - B) epithalamus**
 - C) pons**
 - D) medulla oblongata**
- Feedback: Incorrect: The red nucleus is responsible for connecting the cerebrum and cerebellum. (p. 204)**
- 29 INCORRECT** All of the following are vital centers of the medulla oblongata except (p. 204)
- A) vasomotor**
 - B) respiratory**
 - C) cardiac control center**
 - D) reticular activating system**
- Feedback: Incorrect: The vasomotor center is found in the medulla oblongata and regulates blood vessel diameter. (p. 206)**
- 30 CORRECT** The reticular formation extends through the _____, among other regions of the CNS. (p. 206)
- A) medulla, pons, midbrain, thalamus, and hypothalamus**
 - B) anterior and lateral spinothalamic tracts**
 - C) cerebellum and limbic system**
 - D) basal nuclei**

Feedback: Correct: The reticular formation extends through all of these regions. (p. 206)

31 INCORRECT The spinal cord originates at the medulla oblongata and terminates in the _____. (p. 206)

- A**)twelfth thoracic vertebra
- B**)first lumbar vertebra
- C**)sacrum
- D**)coccyx

Feedback: Incorrect: The spinal cord extends past the thoracic vertebra. (p. 206)

32 INCORRECT All of the following spinal tracts are ascending, transmitting information up to the brain, except the _____, which is a descending tract. (p. 207)

- A**)lateral spinothalamic tract
- B**)fasciculus cuneatus
- C**)corticospinal tract
- D**)anterior spinocerebellar tract

Feedback: Incorrect: The lateral spinothalamic tract transmits sensory information allowing for detection of pain and temperature. (p. 207)

33 CORRECT Most nerve fibers of the pyramidal tracts of the spinal cord originate in the _____. (p. 207)

- A**)precentral gyrus
- B**)thalamus
- C**)midbrain
- D**)pyramids of the medulla oblongata

Feedback: Correct: This is the region of the brain also known as the motor cortex. (p. 207)

34 INCORRECT Damage to the corticospinal tracts would be most likely to leave a person unable to _____.(p. 209)

- A**)breathe without a mechanical ventilator
- B**)feel anything below the neck
- C**)type on a word processor
- D**)sit up

Feedback: Incorrect: Involuntary breathing is not affected by damage to these tracts. (p. 209)

35 INCORRECT In an adult, the Babinski reflex is an indication that _____. (p. 209)

- A**)the spinal reflex arcs are functioning normally
- B**)there is damage to the corticospinal tracts
- C**)there is damage to the extrapyramidal tracts
- D**)midbrain functions are normal

Feedback: Incorrect: Babinski's reflex is used to test for damage to the corticospinal tracts. (p. 209)

36 INCORRECT The reticulospinal (extrapyramidal) nerve tracts consist of fibers that originate in the _____. (p. 208)

- A**)lumbar and thoracic regions of the spinal cord
- B**)motor cortex
- C**)cerebellum
- D**)reticular formation

Feedback: Incorrect: These fibers will terminate, not originate in the spinal cord. (p. 208)

37 INCORRECT There are ___ pairs of cranial nerves. (p. 209)

- A**)two
- B**)eight

- C) twelve
 D) thirty-one

Feedback: Incorrect: Twelve pairs of cranial nerves exist in humans. (p. 209)

38 INCORRECT Most cranial nerves are classified as ____ nerves. (p. 210)

- A) sensory
 B) motor
 C) mixed
 D) autonomic

Feedback: Incorrect: There are only three cranial nerves that have only sensory function. (p. 210)

39 CORRECT Sensory fibers from the neck down enter the spinal cord by way of the _____. (p. 212)

- A) dorsal root
 B) dorsal root ganglion
 C) ventral root
 D) ventral horn

Feedback: Correct: The dorsal root is the portion of the spinal nerve containing sensory fibers. (p. 212)

40 INCORRECT Spinal reflexes are muscle responses that can occur without the participation of any of the following except _____, which is/are indispensable. (p. 211)

- A) consciousness
 B) association neurons
 C) sensory receptors
 D) the brain

Feedback: Incorrect: Conscious awareness of the reflex is not required. (p. 211)

Routing Information

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