

Practice Questions Ch 4, part 2: Updated 2/19/2025

1. Which of the following statements about the precentral gyrus is true?
 - A. It is involved in motor control of the body.
 - B. It is involved in sensory perception in the body.
 - C. It is located in the frontal lobe.
 - D. answers A and B
 - E. answers B and C
 - F. answers A and C

2. Which of the following produce dopamine in the midbrain, and helps with muscle motor control?
 - A. Caudate nucleus
 - B. Red nucleus
 - C. Substantia nigra
 - D. Amygdala
 - E. Putamen
 - F. Claustrum
 - G. Paraventricular nucleus
 - H. Suprachiasmatic nucleus

3. The reticular activating system
 - A. is located in the brain stem.
 - B. functions to arouse the cerebral cortex to incoming "important" sensory information.
 - C. involves neurotransmitters ACh, norepinephrine, GABA, and hypocretin-1
 - D. is described correctly by all of these.

4. Which hypothalamic neuron is important in reproductive functions, and the fight/flight (sympathetic) response?
 - A. Preoptic.
 - B. Supraoptic.
 - C. Suprachiasmatic.
 - D. Lateral.
 - E. Ventromedial
 - F. Paraventricular.
 - G. Anterior

5. Which of the following would occur with damage to Broca's area of the left cerebral hemisphere?
 - A. Inability to feel touch, pressure, or pain on the right half of your body.
 - B. Inability to move the right half of your body.
 - C. Poor language comprehension with fluent, but meaningless, speech.
 - D. Good language comprehension, but slow and difficult motor speech ability.

6. Which of the following would occur with damage to Wernike's area of the left cerebral hemisphere?
 - A. Inability to feel touch, pressure, or pain on the right half of your body.
 - B. Inability to move the right half of your body.
 - C. Poor language comprehension with fluent, but meaningless, speech.
 - D. Good language comprehension, but slow and difficult motor speech ability.

7. The superior colliculi found within the midbrain that are involved in
 - A. visual reflexes.
 - B. auditory reflexes.
 - C. regulating pituitary hormones.
 - D. control of respiratory rate and depth.

8. The brain regions with autonomic control over breathing, heart rate, sneezing, swallowing, and gagging.
 - A. Cerebrum
 - B. Cerebellum
 - C. Midbrain
 - D. Medulla
 - E. Diencephalon
 - F. Pons

9. This hypothalamic nucleus is involved in circadian rhythm.
 - A. Preoptic.
 - B. Supraoptic.
 - C. Suprachiasmatic.
 - D. Lateral.
 - E. Ventromedial
 - F. Paraventricular.

10. Which cerebral lobe receives and interprets auditory information, and has parts of the Wernike's and Gnostic area?
A. Frontal
B. Occipital
C. Temporal
D. Parietal
E. Insula
11. Which structure within the diencephalon has autonomic sympathetic control of adrenal medulla norepinephrine and epinephrine release?
A. Pineal gland
B. Pituitary gland
C. Fornix
D. Thalamus
E. Hypothalamus
F. Optic chiasm
G. Mammillary body
12. Which brain region has a pneumotaxic and apneustic area for autonomic control of breathing?
A. Cerebrum
B. Pons
C. Midbrain
D. Diencephalon
E. Cerebellum
13. The dorsal horn of the spinal cord handles neural information about motor control of muscles and glands.
A. TRUE
B. FALSE
14. Which neurotransmitter calms the central nervous system but inhibits skeletal muscle activity during deep REM sleep?
A. ACh
B. Dopamine
C. GABA
D. Glycine
E. Norepinephrine
15. Which cerebral basal nuclei regulates movement learning, planning, and execution, and communicates with the substantia nigra of the midbrain?
A. Caudate nucleus
B. Putamen
C. Amygdala
D. Globus pallidus
E. Claustrum

Ch 4 part 2. Answers:

1. F
2. C
3. D
4. E
5. D
6. C
7. A
8. D
9. C
10. C
11. E
12. B
13. B
14. C
15. B

How did you do?