

Neuroscience Fundamentals

Neuroscience · Practice Test · 18 Questions

1. Which part of the brain is primarily responsible for balance, coordination, and fine motor control?

- A) Cerebrum
- B) Cerebellum
- C) Brainstem
- D) Thalamus

2. What is the gap between two neurons where neurotransmitters are released?

- A) Axon
- B) Myelin sheath
- C) Synapse
- D) Dendrite

3. Which lobe of the cerebrum is primarily associated with processing visual information?

- A) Frontal lobe
- B) Parietal lobe
- C) Temporal lobe
- D) Occipital lobe

4. What is the main function of the myelin sheath that covers an axon?

- A) To produce neurotransmitters
- B) To increase the speed of electrical impulses
- C) To protect the cell body
- D) To filter waste from the blood

5. Which of these is the chemical messenger that travels across the synaptic gap?

- A) Neurotransmitter
- B) Hormone
- C) Enzyme
- D) Antibody

6. The central nervous system consists of the brain and which other major component?

- A) Peripheral nerves
- B) Spinal cord
- C) Sensory organs
- D) Autonomic ganglia

7. What is the primary role of the frontal lobe?

- A) Processing touch
- B) Executive function and decision making
- C) Hearing
- D) Memory storage

8. Which part of a neuron typically receives incoming signals from other neurons?

- A) Axon terminal
- B) Cell body
- C) Dendrites
- D) Myelin sheath

9. Which part of the brain regulates essential life-sustaining functions like breathing and heart rate?

- A) Cerebellum
- B) Brainstem
- C) Hypothalamus
- D) Hippocampus

10. The somatic nervous system is part of which larger system?

- A) Peripheral nervous system
- B) Central nervous system
- C) Endocrine system
- D) Circulatory system

11. What is the primary function of the sensory neurons?

- A) Sending signals to muscles
- B) Processing complex thoughts
- C) Carrying information from the body to the CNS
- D) Storing long-term memories

12. Which brain structure is most closely associated with the formation of new memories?

- A) Hippocampus
- B) Amygdala
- C) Thalamus
- D) Pons

13. What is the name of the fatty, insulating substance that surrounds many axons?

- A) Dendrite
- B) Myelin
- C) Synapse
- D) Node of Ranvier

14. Which neurotransmitter is most commonly associated with feelings of reward and pleasure?

- A) Dopamine
- B) Adrenaline
- C) Insulin
- D) Melatonin

15. The 'fight or flight' response is controlled by which division of the autonomic nervous system?

- A) Parasympathetic
- B) Sympathetic
- C) Somatic
- D) Central

16. Which structure connects the two hemispheres of the brain?

- A) Corpus callosum
- B) Cerebral cortex
- C) Brainstem
- D) Optic chiasm

17. What is the primary function of motor neurons?

- A) Detecting light
- B) Sending signals to muscles or glands
- C) Storing genetic data
- D) Filtering spinal fluid

18. Which lobe of the brain is responsible for processing auditory information and language comprehension?

- A) Frontal lobe
- B) Parietal lobe
- C) Temporal lobe
- D) Occipital lobe