

Anatomy and Physiology Nervous System Exam Study Guide (chapters 12-17)

Use this guide to direct your attention toward the information to be covered by the test. This is NOT ALL of the information needed.

- 1. What are the components of the CNS?**
- 2. Which are the five cells of the neuroglia and their functions?**
- 3. What is the name of the junction found between two neurons?**
- 4. Which type of neuron receive messages from incoming stimuli?**
- 5. What structure of the neuron receives messages from incoming stimuli?**
- 6. What is the difference between gray and white matter?**
- 7. When is impulse conduction the fastest in neurons?**
- 8. When an action potential begins, which ion rapidly leaves the neuron?**
- 9. Describe the Na and K concentrations in and outside of a polarized neuron.**
- 10. What is the point at which a nerve impulse is transmitted from one neuron to another?**
- 11. What is the chemical released at the axon terminal that allows a message to be transmitted between two neurons?**
- 12. What is the correct pathway of a reflex arc?**
- 13. How are muscles and glands considered in regard to the nervous system?**
- 14. What are the three major parts of the brain stem?**
- 15. What is the term for a shallow groove on the surface of the cerebral cortex?**
- 16. Which term describes elevated ridges on the cerebral cortex?**
- 17. What structure connects the two hemispheres together so that they can communicate?**
- 18. Which part of the brain stem controls vital functions such as breathing, blood pressure, swallowing, and vomiting?**
- 19. What is responsible for the formation of the CSF?**
- 20. What is the function of CSF?**
- 21. Which lobe contains the auditory area?**
- 22. Which lobe contains the primary sensory cortex?**
- 23. Which lobe contains the somatic motor cortex?**
- 24. Which lobe contains the visual area?**
- 25. What is the function of the myelin sheath?**
- 26. What are the three classifications that neurons are classified by FUNCTION?**
- 27. What is the function of each type of neuron?**
- 28. The spinal cord is divided into how many segments?**
- 29. Sensory organs are part of which nervous system?**
- 30. What is the function of the thalamus?**
- 31. What is the function of the pons?**
- 32. What is the function of the cerebrum?**
- 33. What is the function of the cerebellum?**
- 34. What is the function of the medulla oblongata?**
- 35. What is the function of the hypothalamus?**
- 36. What is the function of the midbrain?**
- 37. What does the brain stem consist of?**
- 38. What are nodes of Ranvier?**
- 39. What is the function of Nodes of Ranvier?**

40. What are the four classifications that classify neurons based on STRUCTURE?

41. What is the fissure called that separates the two cerebral hemispheres?

42. What is the space called between two neurons?

43. What is a sudden, involuntary movement in response to a stimulus called?

44. What are the two systems that make up the nervous system?

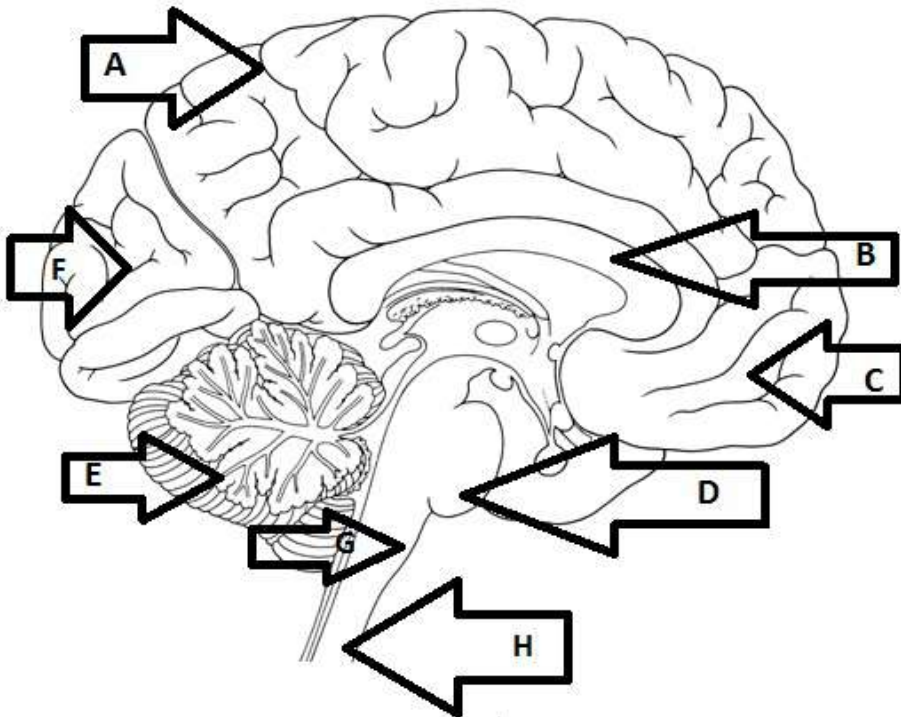
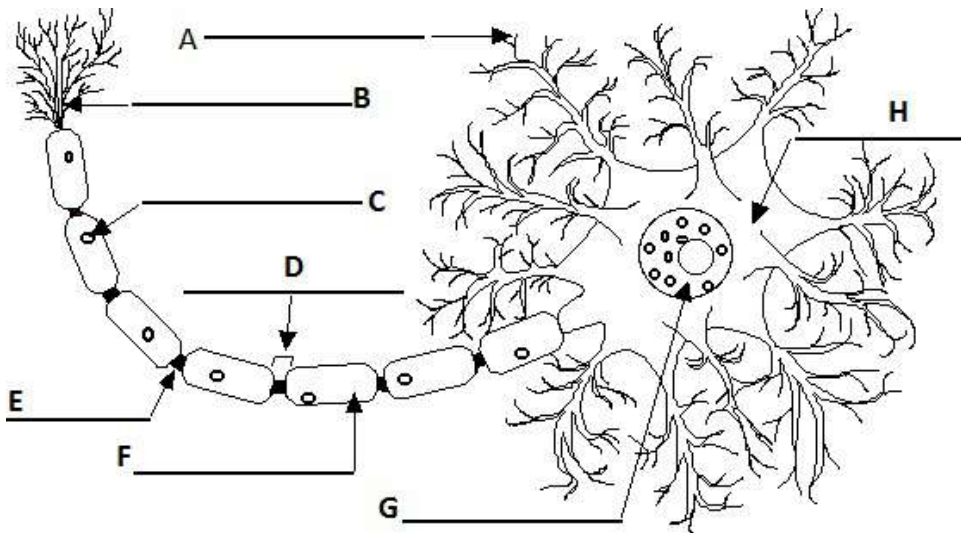
45. Which system controls voluntary actions?

46. Which system coordinates involuntary actions?

47. What is found in the PNS?

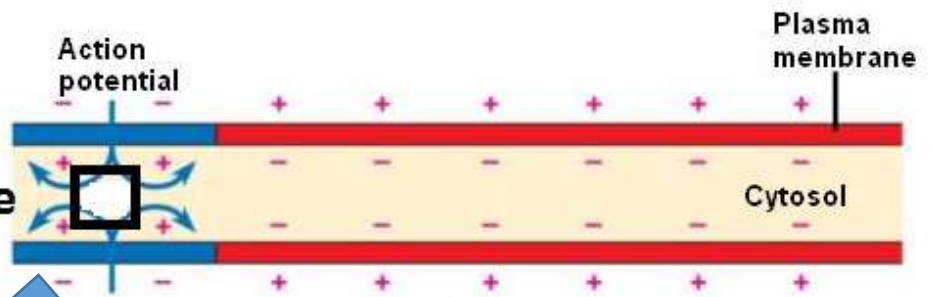
48. What system is in control during fight or flight?

49. What system is in control in normal conditions?

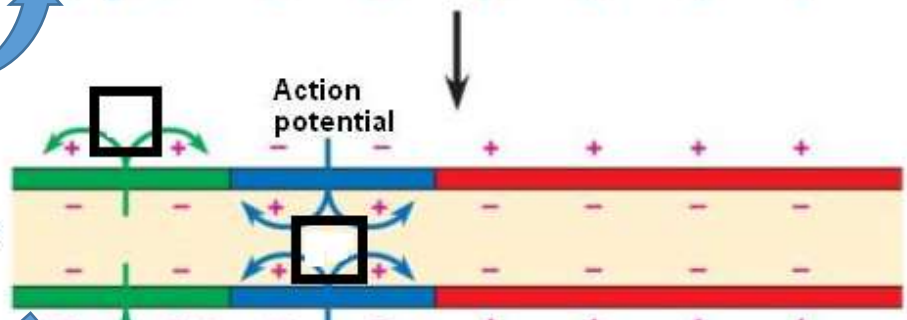


What would the cell membrane look like before this diagram? Draw it and name it.

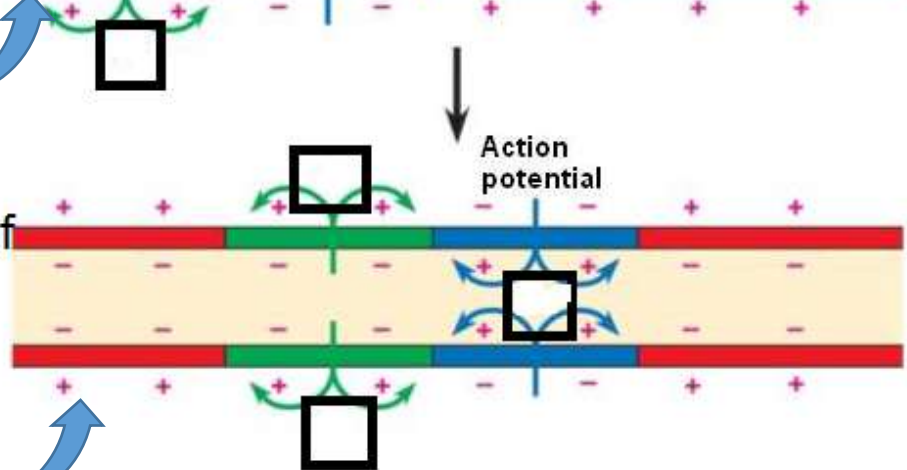
What is this portion of the cell membrane called?



What is this portion of the cell membrane called?



What is this portion of the cell membrane called immediately after?



Fill in all of the boxes in the diagram above. Make sure to answer all of the questions and understand what is happening in each picture.