Your Name Here_____

Kingsborough Community College of The City University of New York

Department of Biological Sciences

Biology 11 Brain Quiz

Multiple Choice - Use scantrons.

1. The convolutions of the brain serve to

a. increase the surface area of the cerebral cortex

b. decrease the surface area of the cerebral cortex

c. increase the blood flow to the cerebral cortex

d. cause the brain movements that occur when we think

e. both a and d

2. The brain's four ventricles

a. are filled with blood that nourishes the brain

b. are filled with cerebrospinal fluid that has as its main function the nourishment of the brain

c. contain cerebrospinal fluid that mainly supports and protects the brain

d. contain blood that mainly supports and protects the brain

3. The structures that produce the cerebrospinal fluid are the

a. ventricles b. arachnoid villi c. choroid plexuses d. nissl bodies

4. The white matter of the CNS is composed of

a. nuclei b. nerves c. ganglia d. tracts e. nissl substance

5. Cerebrospinal fluid returns to the blood through the

a. choroid plexuses b. meninges c. arachnoid villi d. ventricles e. tracts

6. The gray matter of the CNS is composed of

a. nuclei b. nerves c. ganglia d. tracts e. nissl substance

7. The spinal cord ends at a point called the

a. filum terminale b. conus medullaris c. cauda equina d. dorsal root ganglion

8. Pools of motor neuronal cell bodies are located in what region of the spinal cord?

a. dorsal roots b. dorsal horns of gray matter c. ventral horns of gray matter d. the dorsal root ganglia

9. A needle inserted at the level of L2-L3 of one's vertebral column, for a spinal tap, would encounter the

a. cauda equina b. conus medullaris c. spinal cord d. central canal e. sacral foramina

10. The meninges closest to the cord is the

a. dura mater b. arachnoid mater c. pia matter

11. Most of the cerebrospinal fluid around the spinal cord is found in the

a. spinal foramina b. subarachnoid space c. epidural space d. ventral and dorsal roots

12. The cell bodies of sensory neurons are located in the

a. dorsal root ganglion b. dorsal horns of gray matter c. ventral horns of gray matter d. ventral roots

13. The ventral root of any spinal nerve is

a. purely sensory b. purely motor c. a mixed nerve d. mostly sensory with some motor fibers

14. The long ventral and dorsal roots hanging inferior to the end of the spinal cord are called the

a. conus medullaris b. filum terminale c. mixed ganglia d. cauda equina e. dorsal columns

15. Within a peripheral nerve trunk, the connective tissue dividing the trunk into compartments is called

a. epineurium b. perineurium c. endoneurium d. dura mater e. arachnoid matter

16. Spinal nerves exit from the vertebral column through the

a. spinal canal b. subarachnoid space c. intervertebral foramina d. arachnoid granulations

17. The spinal cord and brain meet at the region of the

a. filum terminale b. sacral foramina c. foramen magnum d. conus medullaris e. atlas-axis junction

18. A reflex arc ends with

a. receptors b. effectors c. sensory fibers d. motor fibers e. the dorsal root ganglion

19. The largest region of the brain is the

a. cerebrum b. cerebellum c. brainstem d. diencephalons

20. The white color of white matter of the CNS is due to

a. myelinated nerve fibers b. myelinated cell bodies c. myelinated nerves d. a, b, and c

Diagrams - Write the **letter** of the correct anatomical term for each numbered item in the spaces provided on this page and in the corresponding places on the following pages. Do not use scantrons.

Figure 1 - Choose your answers for **Figure 1** from the following list:

a. transverse process e. spinal nerve i. communicating rami m. dorsal ramus of spinal nerve

b. spinous process f. dorsal root j. gray matter n. ventral ramus of spinal nerve

c. articulating facet g. ventral root k. white matter o. deep muscles of the back

d. vertebral body h. dorsal root ganglion l. pia mater p. subarachnoid space

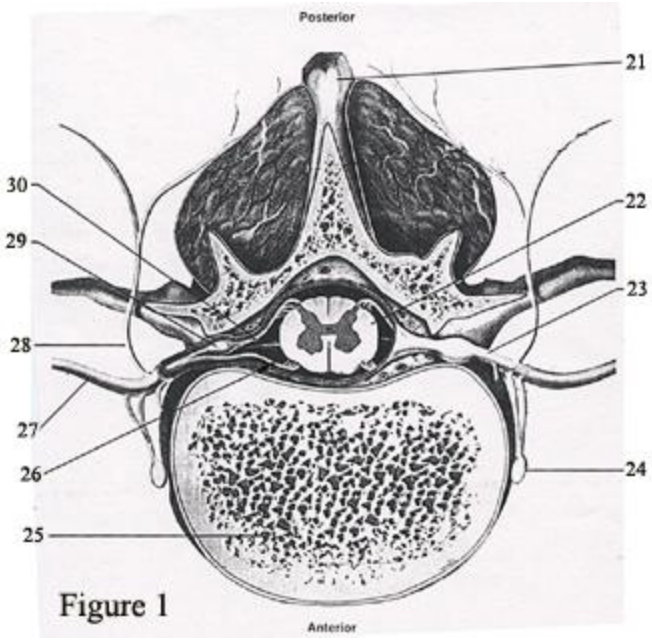


Figure 1

21. ____ 24. ____ 27. ____ 30. ____

22. ____ 25. ____ 28. ____

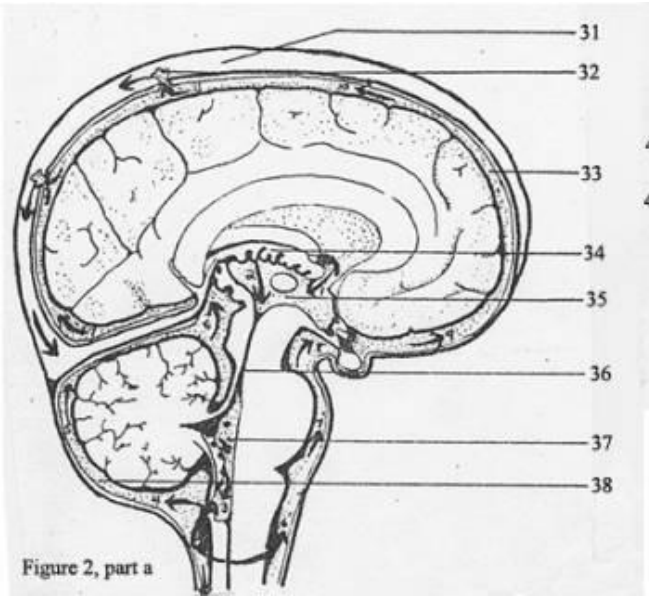
23. ____ 26. ____ 29. ____

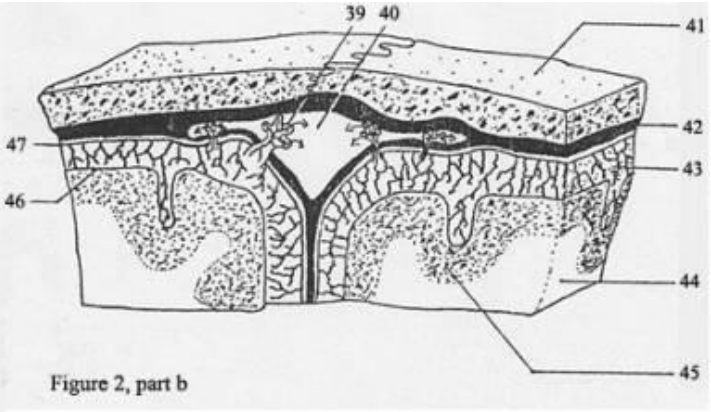
Figure 2 - Choose your answers for **Figure 2, parts a and b**, from the following list. Note - some answers may be used more than once and some answers may not apply.

a. skull bone d. arachnoid mater g. lateral ventricles j. cerebral aqueduct m. white matter

b. sagittal sinus e. pia mater h. 3rd ventricle k. choroid plexus n. gray matter

c. dura mater f. subarachnoid space i. 4th ventricle l. arachnoid villus o. middle cerebral artery





31. ____ 34. ____ 37. ____ 40. ____ 43. ____
46. ____

32. ____ 35. ____ 38. ____ 41. ____ 44. ____
47. ____

33. ____ 36. ____ 39. ____ 42. ____ 45. ____

Figure 3 - Choose your answers for Figure 3 from the following list.

a. gray matter d. motor neuron, axon in ventral root g. sensory neuron, axon in dorsal root j. receptors

b. white matter axon e. dorsal root ganglion k. spinal nerve h. sensory neuron,

c. effector neuron f. motor neuron, axon l. synapse i. association

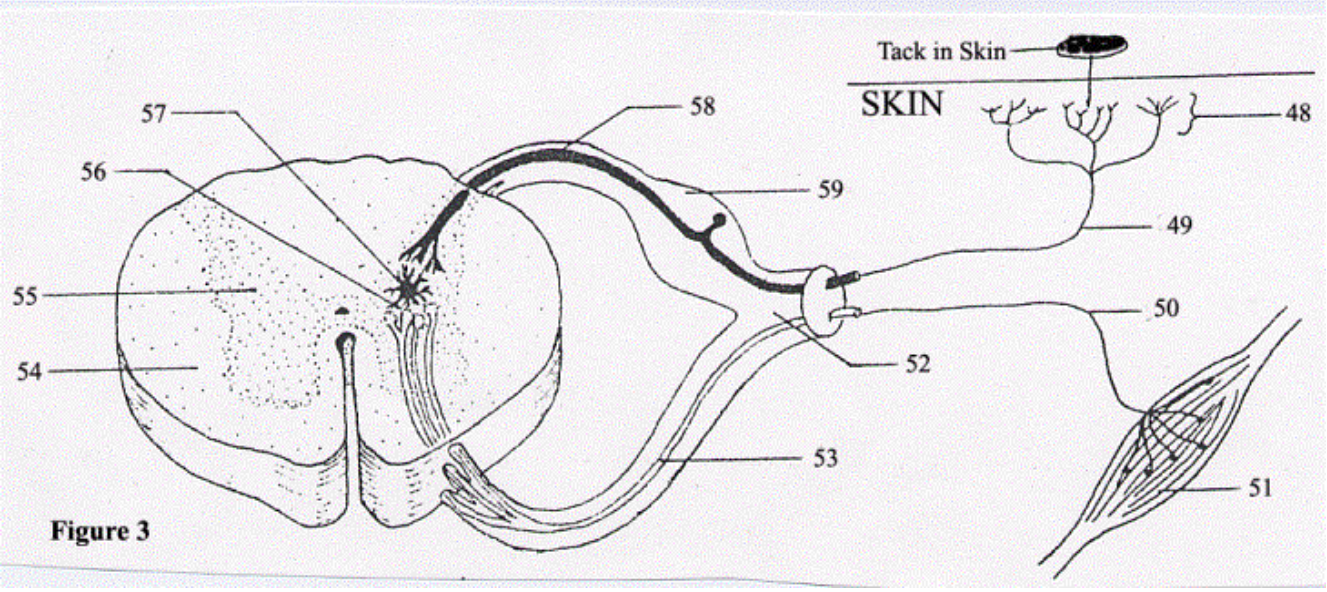


Figure 3

48. ____ 49. ____ 50. ____ 51. ____ 52. ____ 53. ____ 54. ____ 55. ____ 56. ____
57. ____ 58. ____ 59. ____

Figure 4 - Choose your answers for Figure 4 from the following selection.

a. dorsal root d. white matter g. endoneurium j. spinal cord
m. fascicle

b. ventral root e. epineurium h. spinal nerve trunk k. nerve
n. unmyelinated nerve

c. gray matter f. arachnoid matter i. blood vessels l. dorsal root ganglion fiber

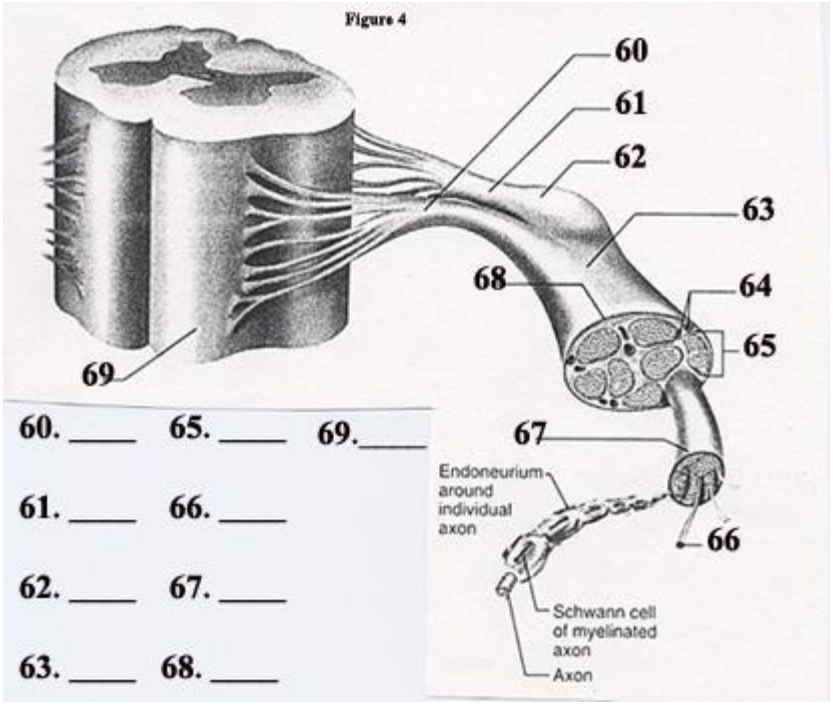
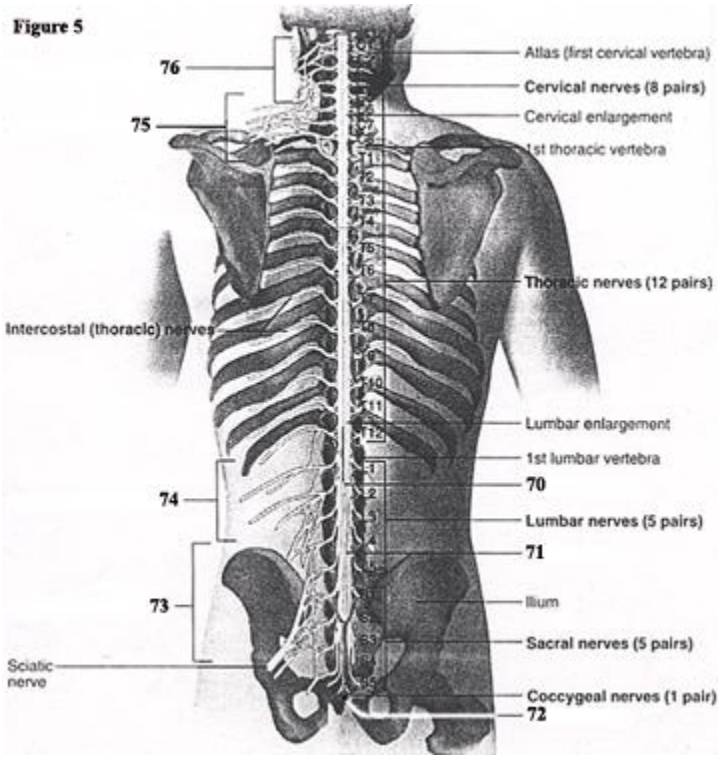


Figure 5 - Choose your answers for Figure 4 from the following selection.

a. cauda equina c. sacral plexus e. conus medullaris g. lumbar plexus

b. filum terminale d. brachial plexus f. cervical plexus

Figure 5



70. ____ 71. ____ 72. ____ 73. ____ 74. ____ 75. ____ 76. ____