Exam-nervous system - Notes

Introduction to Psychology (University of South Africa)

Anatomy & Physiology: Nervous System Exam

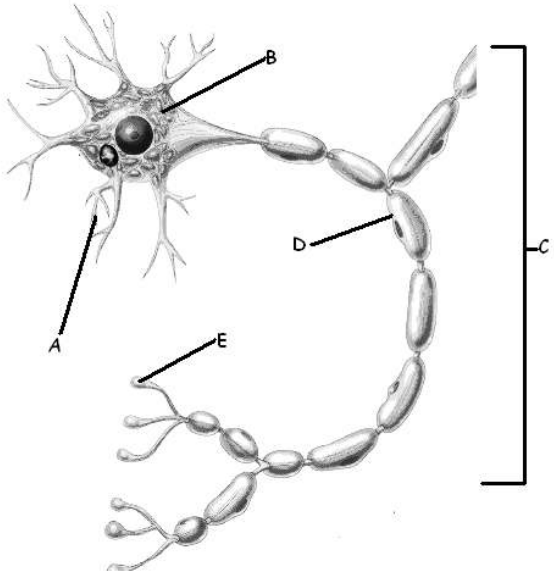
I. Matching

1. Form brain-blood barrier by covering capillaries & metabolize neurotransmitters
2. Responsible for Phagocytosis
3. Circulates/Produces Cerebrospinal Fluid
4. Responsible for the production of Myelin Sheath

A. Microglia
B. Oligodendrocytes
C. Astrocytes
D. Ependymal

II. Labeling & Matching:

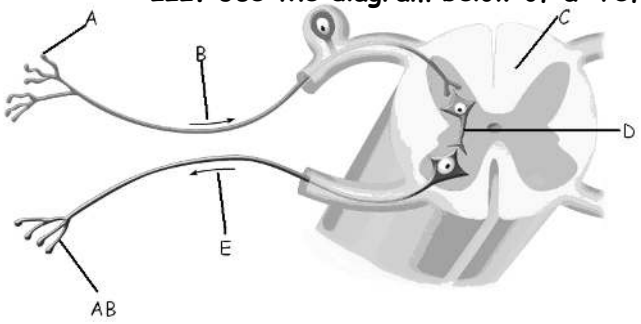
For questions 5-9 use the diagram for labeling the structures.
For questions 10-14 use the picture to match with the function of each structure.



Structures
5. Axon Terminals
6. Axon
7. Cell Body
8. Dendrites
9. Myelin Sheath

Functions
10. Neurotransmitter messenger
11. Relays impulse toward synapse
12. Neurotransmitter receiver
13. Contains nucleus & mitochondria
14. Controls transmitting/speed of impulses

III. Use the diagram below of a "reflex arc" to match the structure to its name.



15. Interneuron/Association Neuron
16. Efferent Neuron
17. Afferent Neuron

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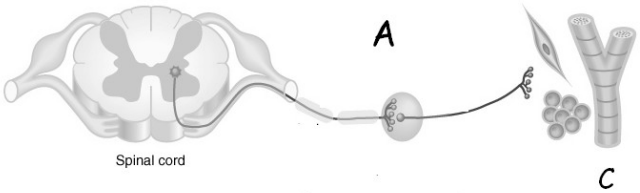
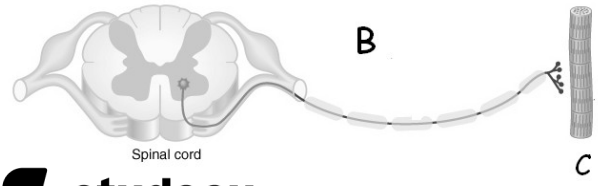
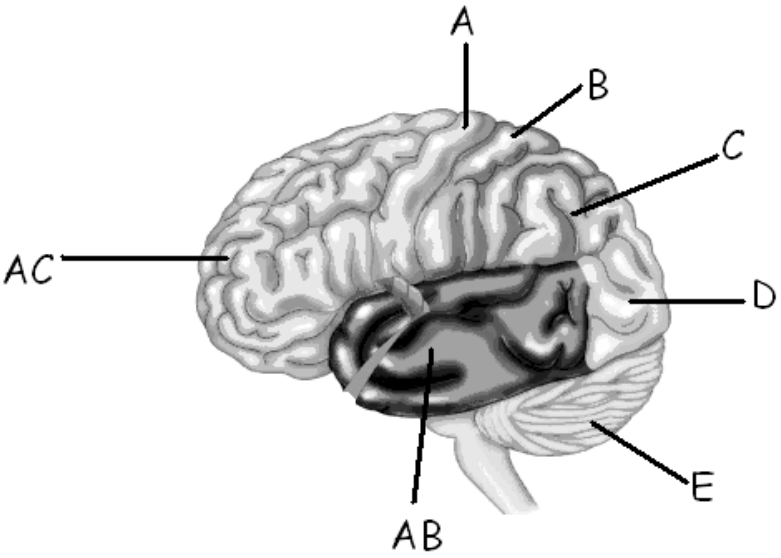
18. Effector
19. Somatic Nervous System Pathway
20. Autonomic Nervous System Pathway



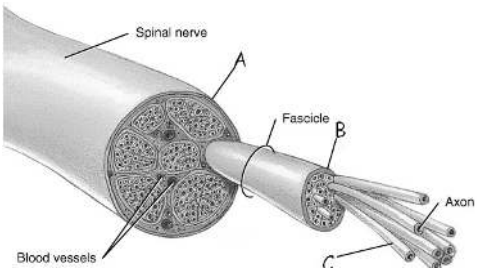


IV. Use the brain picture to match the following:



21. Temporal Lobe
22. Cerebellum
23. Post-Central Gyrus
24. Parietal Lobe
25. Frontal Lobe
26. Occipital Lobe
27. Pre-Central Gyrus

V. Multiple Choice



28. When referring to the picture to the right, which layer: A, B or C is the Epineurium?

29. Cranial Nerve V, _____ controls mastication (chewing).
a. Vagus b. Trigeminal c. Facial d. Optic

30. What lobe of your brain regulates vision?
a. Temporal b. Parietal c. Occipital d. Frontal

31. Functions such as thirst, hunger, anger and body temperature are regulated by the
a. Hypothalamus b. Thalamus c. Epithalamus d. None of these

32. Which part of the brain is considered the respiratory, cardiovascular and reflex center (coughing,sneezing)?
a. Cerebrum b. Medulla oblongata c. Thalamus d. Diencephalon

33. The grooves of the brain are called?
a. Gyrus b. Sulci c. Dura Mater d. Pia Mater

34. During and action potential, ion channels open, NA+ rushes in (_____) and K+ rushes out (_____).
a. repolarization, depolarization b. depolarization, repolarization

35. The progressive destruction of myelin sheaths of neurons in the CNS results in the short circuiting of nerve impulses. This leads to muscular weakness and abnormal sensations in which of the following (*there may be more than one answer*)
a. Epilepsy b. M.S. c. Parkinson's Disease d. Huntington's Disease e. ALD

36. Which of the following Neuronal Circuits deals with short term memory?
a. Diverging b. Converging c. Reverberating d. Parallel-after-Discharge

37. The space between the presynaptic and postsynaptic neuron is called a
a. Terminal bulb b. Synapse c. Chasm d. Node of Ranvier

38. The first 90 minutes of our sleep patterns is as follows
a. Stage: 1,2,3,4,2,REM b. Stage: 1,2,3,4,REM,2 c. Stage:REM,1,2,3,4 d.Stage:1,2,3,4,REM

39. Cells of the nervous system which supports the neurons by producing myelin sheaths, and attaching neurons to blood vessels are called
a. Plexi cells b. Neuroglial cells c. Somatic cells d. Peripheral cells

40. The somatic nervous system sends signals from the CNS to the:
a. Cranial Nerves b. Skeletal Muscles c. Cerebrum d. Viscera

41. The "S" is SLUDD Response stands for:
    a. Sleep b. Secrete c. Salivation d. Sensation

42. This type of paralysis is described as loss of motor function on one side only:
    a. Monoplegia b. Diplegia c. Hemiplegia d. Quadraplegia

43. The Peripheral Nervous System is divided into *2 Main* motor functional divisions:
    a. Sympathetic/Parasympathetic b. Autonomic/Somatic c. Afferent/Efferent

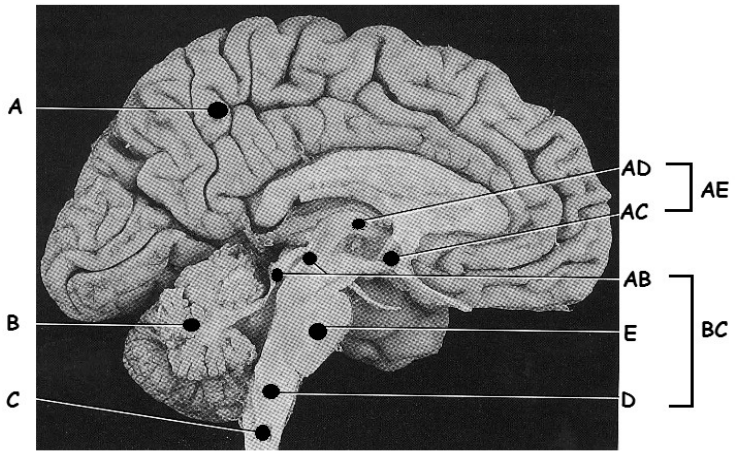
44. The Basal Ganglia serve, as one of its many functions, to:
    a. Decrease heart rate when needed b. Increase blood glucose levels
    c. Program automatic movements d. Restore body energy during times of rest

VI. Match the Disorder to its description for numbers 45-50:

45. 2nd Most common neurological disorder characterized by short, recurrent attacks initiated by electrical discharges in the brain
46. Loss of neurons that release Ach; Tangled protein filaments within neuron & abnormal protein plaques outside neuron
47. Damage to motor area of the brain often associated with oxygen loss during childbirth
48. A viral infection caused by one of the herpes viruses. It travels across the spinal nerves and causes blisters and severe pain.
49. Blocking the drainage of CSF leading to an increase in pressure and damage to tissues of the brain and spinal cord
50. Two types: Ischemic-decreased blood flow & Hemorrhagic-rupturing blood vessel; 3rd leading cause of death

a. Hydrocephalus
b. Cerebral Vascular Accident (CVA)
c. Epilepsy
d. Alzheimers
e. Cerebral Palsy
ab. Shingles

VII. Dissection Labeling 51-60:



51. Diencephalon
52. Cerebrum
53. Spinal Cord
54. Pons
55. Brain Stem
56. Thalamus
57. Hypothalamus
58. Midbrain
59. Medulla Oblongata
60. Cerebellum

VIII. Brain Functions

61. Reflexes
62. Motor Coordination
63. Autonomic Functions
64. Memory
65. Conscious Thought
66. Personality
67. Vision
68. Movement
69. Breathing/Heart Rate
70. Speech/Language
71. Motor Control
72. Disseminates Info

A. Cerebral Cortex	E. Occipital	AE. Hypothalamus
B. Cerebrum	AB. Temporal	BC. Cerebellum
C. Frontal	AC. Medulla	BD. Brain Stem
D. Parietal	AD. Pons	BE. Corpus Callosum

IX. Cranial Nerve Matching

73. Cranial Nerve I
74. Cranial Nerve II
75. Cranial Nerve III
76. Cranial Nerve IV
77. Cranial Nerve V
78. Cranial Nerve VI
79. Cranial Nerve VII
80. Cranial Nerve VIII
81. Cranial Nerve IX
82. Cranial Nerve X
83. Cranial Nerve XI
84. Cranial Nerve XII

A. Controls Neck Muscles like the Sternocleidomastoid
B. Vision
C. Mastication
D. Glandular Secretions in the Face
E. Lift Throats During Swallowing
AB. Accommodation of the Lens
AC. Superior Oblique Eye Muscle Control
AD. Controls Tongue During Speech
AE. Hearing and Balance
BC. Control Cardiac & Smooth Muscles
BD. Lateral Eye Movement (like in REM)
BE. Smell

X. Matching: Endocrine Gland & It's Representative Action

85. Pineal Body
86. Ovaries
87. Posterior Lobe of Pituitary Gland
88. Anterior Lobe of Pituitary Gland
89. Thyroid Gland
90. Parathyroid Gland
91. Thymus
92. Adrenal Gland
93. Pancreas
94. Testes

A. Promotes growth of uterus
B. Increases blood glucose levels, metabolism & constricts certain blood vessels
C. Involved in biological rhythms
D. Stimulates growth of bones and muscles
E. Stimulates metabolism and reduces blood calcium levels
AB. Reduces AND raises blood glucose levels
AC. Supports sperm formation
AD. Stimulates contraction of uterus & milk let-down; promotes retention of water by kidneys
AE. Raises blood calcium levels

XI. Lorenzo's Oil

95. The paperclip model used by Augusto was used to describe which scientific process?
    a. Enzyme Function b. Competitive Inhibition c. Demyelination

96. ALD is which kind of Neurological disease?
    a. Recessive X-Linked b. Dominant X-Linked c. Recessive Y-Linked

97. Why didn't a diet low in fat, alone, cure ALD?
    a. It did lower his VLCFA
    b. Because Lorenzo had already lost too much myelin to show any improvements
    c. Because Biosynthesis accounts for the majority of fat production, not diet

98. Lorenzo's Oil is a cure for ALD? a. True b. False

99. What did Lorenzo's Oil do specifically?
    a. It re-myelinated neurons b. It stopped/slowed down biosynthesis c. It cured ALD

100. ALD is characterized by____ (there may be more than one answer).
    a. Buildup of very long chain fatty acids (saturated fats C24 & C26)
    b. Faulty transport protein gene
    c. Demyelinated neurons

BONUS WORD OF THE DAY

Mark your answer on the right side of the scantron (just answer!!!).

1. _____ means ONE HALF 2._____ means PROCESS OF RECORDING
3. "PERI" means _____ 4. "POLIO" means _____