

Note: I have included the answers to last year's practical so you can get an idea of the test; they have already been added to the tables below. Many of last year's structures were for the first time, so they are catching on.

NEUROANATOMY 1999
PRACTICAL ANSWERS

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|-----|---|-----|---|
| 1. | ventral spinal a. | 31. | vision (tagged lateral geniculate body) |
| 2. | parahippocampal gyrus | 32. | cingulate gyrus |
| 3. | fasciculus cuneatus | 33. | stria terminalis |
| 4. | anterior limb internal capsule | 34. | inferior colliculus |
| 5. | ventral cochlear nucleus | 35. | foramen of monro |
| 6. | amygdaloid nucleus | 36. | olfactory bulb |
| 7. | superior olivary nucleus - sound localization | 37. | ventral horn w/ lower motor neurons |
| 8. | putamen | 38. | anterior nucleus of thalamus |
| 9. | lateral lemniscus | 39. | cerebellum via cuneocerebellar tract |
| 10. | fimbria of fornix | 40. | putamen |
| 11. | brachium of superior colliculus | 41. | raphe nucleus |
| 12. | nucleus accumbens | 42. | anterior commissure |
| 13. | subthalamic nucleus | 43. | medial longitudinal fasciculus |
| 14. | substantia nigra | 44. | body of caudate |
| 15. | mammillothalamic tract | 45. | reticular nucleus of thalamus |
| 16. | oculomotor n. | 46. | claustrum |
| 17. | genu of internal capsule | 47. | fornix |
| 18. | optic tract | 48. | insula |
| 19. | smell (olfactory tract was tagged) | 49. | pain and temperature fibers cross here |
| 20. | vermis | 50. | post. horn of lateral ventricle |
| 21. | substantia gelatinosa | 51. | inferior cerebellar peduncle |
| 22. | pons | 53. | basilar a. |
| 23. | spinal tract of trigeminal n. | 53. | medial vestibular nucleus |
| 24. | 4th ventricle | 54. | middle cerebral a. |
| 25. | taste (nucleus solitarius tagged) | 55. | trochlear n. |
| 26. | massa intermedia | 56. | quadrigeminal cistern |
| 27. | motor nucleus of CN 5 | 57. | dorsomedial nucleus |
| 28. | superior temporal gyrus | 58. | precentral gyrus |
| 29. | medial lemniscus | 59. | optic chiasm |
| 30. | body of corpus callosum | 60. | arachnoid membrane |

The following tables list all structures tagged over the last 9 years in Neuroanatomy followed by the number of times they were tagged. This was compiled from a list of answers so I had no way of knowing whether the structure was tagged on gross or brain stem slides. Therefore, I have listed the structure wherever it is mentioned in the lab manual.

LAB #1

I. Meninges

Arachnoid membrane	1
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II. Arterial Supply of Brain and Circle of Willis

The Systems of the Vertebral Artery

Anterior Spinal Artery (=ventral spinal artery)	4
Posterior Spinal Artery	1
Basilar Artery	6
Posterior Cerebral Artery	4

The Systems of the Carotid Arteries

Anterior Cerebral Artery	6
Anterior Communicating Artery	1
Middle Cerebral Artery	6

Ganglionic and Striate Arteries

Lateral Striate Branches of Middle Cerebral Artery	1
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III. Drainage of Blood

Superior Sagittal Sinus	1
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IV. The Cranial Nerves

Optic Nerve	1
Oculomotor Nerve	6
Oculomotor Bulb	1
Trochlear Nerve	3
Trigeminal Nerve	4
Abducens Nerve	1
Facial Nerve	5
Auditory or Vestibulo-cochlear Nerve	2
Hypoglossal Nerve	4

LAB #2

Lateral Surfaces

Central Sulcus	6
Lateral Sulcus	1
Calcarine Sulcus	6
Parieto-occipital Sulcus	3

Medial and Inferior Surfaces

Cingulate Gyrus	6
Lingual Gyrus	1
Parahippocampal Gyrus	5
Uncus	1

Frontal Lobe

Precentral Gyrus	5
Superior Frontal Gyrus	4
Superior Frontal Sulcus	1
Gyrus Rectus	3

Parietal Lobe

Postcentral Gyrus	3
Supramarginal Gyrus	1

Temporal Lobe

Superior Temporal Gyrus	5
Superior Temporal Sulcus	1

Insula	9
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Important Structures on the Base of the Brain and Brainstem

Optic Chiasm	2
Mammillary Bodies	1
Cerebral Peduncles	1
Interpeduncular Cistern	2
Cerebellum	2
Cerebellum via cuneocerebellar tract	1
Vermis	6
Lateral Recess of the 4 th Ventricle	3
Inferior Olives of Medulla	2

Oblongata	
Pyramids of Medulla	3
Oblongata	
Pons	1

Contrast the White Matter and Gray Matter of the Spinal Cord

Thoracic region	3
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Slides from the U of I Brainstem Series

Sacral Spinal Cord

Substantia Gelatinosa	4
Fasciculus Gracilis	4
Lissauer's Tract	2

Lumbar Spinal Cord

Substantia Gelatinosa	4
Fasciculus Gracilis	4

Thoracic Spinal Cord

Substantia Gelatinosa	4
Fasciculus Gracilis	4
Nucleus Dorsalis of Clarke	3
Ventral Horn w/ Lower Motor Neurons	1

Cervical Spinal Cord

Substantia Gelatinosa	4
Fasciculus Gracilis	4
Spinothalamic Tract – KNOW THAT THIS IS CONCERNED WITH PAIN, TEMP, AND PRESSURE FOR THE EXAM	3
Lateral Corticospinal Tract	4
Lissauer's Tract	2
Ventral White Commissure – Pain and temp fibers cross here	2

LAB #3

Cerebellum

Vermis	6
Flocculonodular lobe	1

Fourth Ventricle

Shape of the 4 th ventricle	5
Superior Cerebellar Peduncle	4
Middle Cerebellar Peduncle	2
Stria Medullaris of the 4 th Ventricle	1
Facial Colliculus	1

Medial Aspect of the Hemisphere

Corpus Callosum, Splenium	4
Corpus Callosum, Body	1
Corpus Callosum, Genu	7
Corpus Callosum, Rostrum	1
Anterior Commissure	8
Interventricular Foramen of Monro	8
Lateral Ventricles	1
Septum Pellucidum	7
Third Ventricle	4
Fourth Ventricle	5
Fornix, Body	4
Fornix, Column	4
Fornix, Fimbria	1
Caudate Nucleus	4
Parieto-occipital Sulcus	3
Calcarine Sulcus	6
Parahippocampal Gyrus	5
Massa Intermedia	1
Stria Medullaris Thalami	2
Posterior Commissure	2
Superior Colliculus	3
Inferior Colliculus	7
Quadrigeminal Cistern	2
Trochlear Nerve	3
Brachium of Superior Colliculus	1

LAB #4

Horizontal Sections

Caudate Nucleus	4
Fornix	6
Anterior Limb of Internal Capsule	8
Posterior Limb of Internal Capsule	5
Pulvinar	4
Dorsal Medial Nucleus of the Thalamus	3
Tail of the Caudate Nucleus	2
Hippocampus	5

Coronal Sections

Cerebral Peduncle	1
Substantia Nigra	6
Red Nucleus	6
Anterior Horn of Lateral	1

Ventricle	
Posterior Horn of Lateral Ventricle	1
Head of the Caudate Nucleus	4
Anterior Commissure	8
Globus Pallidus	7
Genu of Internal Capsule	2
Interventricular Foramen of Monro	8
Anterior Thalamic Nucleus	3
Posterior Limb of Internal Capsule	5
Putamen	5
Inferior Horn of Lateral Ventricle	3
Hippocampus	5
Dentate Gyrus	2
Nucleus Accumbens	1

LAB#5: CT and MRI

Quadrigeminal Cistern	2
Interpeduncular Cistern	2
Basilar Artery	6
Proximal Part of Middle Cerebral Artery	3
Anterior Cerebral Artery	6
Superior Oblique Muscle of the Eye	1
Lateral Rectus Muscle of the Eye	2

LAB #6 and #7: Brainstem

Decussation of the Pyramids (Lower)

Nucleus Gracilis	5
Fasciculus Cuneatus	1
Fasciculus Gracilis	4
Spinal Trigeminal Nucleus	4
Pyramidal Decussation	1

Decussation of the Pyramids (Upper)

Nucleus Gracilis	5
Fasciculus Gracilis	4
Fasciculus Cuneatus	1
Nucleus Cuneatus	3
Hypoglossal Nucleus	2
Central Gray	3
Spinal Trigeminal Tract	3
Medial Longitudinal Fasciculus	7
Pyramidal Decussation	1

Caudal Edge of Accessory Olivary Nuclei

Nucleus Gracilis	5
Fasciculus Gracilis	4
Nucleus Cuneatus	3
Hypoglossal Nucleus	2
Central Gray	3
Spinal Trigeminal Nucleus	4
Medial Longitudinal Fasciculus	7
Accessory Cuneate Nucleus	3
Dorsal Spinocerebellar Tract	1

Mid-Olive

Ventricle	4
Dorsal Nucleus of X	2
Hypoglossal Nucleus	2
Hypoglossal Nerve	4
Nucleus Solitarius – taste	1
Tractus Solitarius	6
Dorsal Longitudinal Fasciculus	1
Spinal Tract of V	5
Medial Longitudinal	7

Fasciculus	
Medial Lemniscus	8
Olivary Complex	5

Inferior Olive (More Rostral)

Fourth Ventricle	5
Hypoglossal Nucleus	2
Hypoglossal Nerve	4
Nucleus Solitarius – taste	1
Tractus Solitarius	6
Dorsal Longitudinal Fasciculus	1
Spinal Tract of V	5
Medial Longitudinal Fasciculus	7
Medial Lemniscus	8
Pyramid	3
Raphe Nuclei	4
Spinothalamic Fasciculus – KNOW THAT THIS IS CONCERNED WITH PAIN, TEMP, TOUCH	3

Cochlear Nuclei #1

Dentate Nucleus	4
Fourth Ventricle and Position of lateral Foramen of Luschka	2
Ventral Cochlear Nucleus	1

Cochlear #2

Raphe Nuclei	4
Medial Vestibular Nucleus	3
Inferior Vestibular Nucleus	3
Stria Medullaris	1
Ventral Cochlear Nucleus	1

Abducens Nuclei

Superior Cerebellar Peduncles	2
Middle Cerebellar Peduncles	2
Inferior Cerebellar Peduncles	3
Superior Medullary Velum	2
Facial Colliculus	1
Abducens Nerve	1
Abducens Nucleus	1
Facial Nerve	5
Facial Nucleus	1
Superior Vestibular Nucleus	2
Spinal Tract of V	5
Medial Lemniscus	8
Basilar Pontine Nuclei	3
Superior Olivary Nucleus – Sound Localization	1

Trigeminal Nuclei

Superior Cerebellar Peduncles	2
Fourth Ventricle	5
Mesencephalic Tract of CN V	1
Motor nucleus of CN V	1
Trigeminal Nerve	4
Medial Longitudinal Fasciculus	7

Upper End of 4th Ventricle

Superior Cerebellar Peduncles	2
Fourth Ventricle	5
Trigeminal Nerve	4
Medial Longitudinal Fasciculus	7
Medial Lemniscus	8
Lateral Lemniscus	6
Spinothalamic Tract – Pain, Temp, Touch	3

Rostral Pons

Superior Cerebellar Peduncle	2
Lateral Lemniscus	6
Medial Lemniscus	8
Spinothalamic Tract	3

4th Nerve Exit

Superior Cerebellar Peduncle	2
Lateral Lemniscus	6
Medial Lemniscus	8
Spinothalamic Tract	3
Decussation of Superior Cerebellar Peduncles	1
Central Gray	3

Inferior Colliculus

Cerebral Aqueduct	2
Central Gray	3
Medial Longitudinal Fasciculus	7
Decussation of Superior Cerebellar Peduncle	1
Substantia Nigra	6
Cerebral Peduncle	1
Oculomotor Nerve	6

Superior Colliculus

Cerebral Aqueduct	2
Central Gray	3
Oculomotor Nucleus	1
Red Nucleus	6
Superior Cerebellar Peduncle	2
Substantia Nigra	6
Cerebral Peduncle	1
Fornix	6
Third Ventricle	4
Optic Tract	4
Medial Geniculate Body (hearing)	3
Lateral Geniculate Body (vision)	7

Coronal Section through Thalamus and Brainstem

Fornix	6
Stria Terminalis	4
Caudate Nucleus	4
Reticular Nucleus	3
Insula	9
Parahippocampal Gyrus	5
Superior Colliculus	3
Central Gray	3
Trochlear nerve nucleus	2
Medial Longitudinal Fasciculus	7

NOTE THAT CORONAL SECTION THROUGH POSTERIOR COMMISSURE STRUCTURES ARE ALL UNDER OTHER SECTIONS.

Thalamus

Dorsal Medial Nucleus (=dorsomedial nucleus)	6
Centromedian Nucleus	3
Ventral Posteromedial Nucleus	3
Ventral Posterolateral Nucleus	3
Red Nucleus	6
Superior Cerebellar Peduncle	2
Subthalamic Nucleus	2
Substantia Nigra	6
Cerebral Peduncle	1

Dorsomedial Thalamic Nucleus

Gyrus Cinguli	6
Fornix	6
Clastrum	5
Body of Caudate Nucleus	3
Tail of Caudate Nucleus	2
Globus Pallidus	7
Dorsal Median Nucleus (=dorsomedial nucleus)	6
Ventral Lateral Nucleus	1
Substantia Nigra	6

Anterior Thalamic Nucleus

Gyrus Cinguli	6
Corpus Collosum	2
Fornix	6
Clastrum	5
Body of Caudate Nucleus	3
Dorsal Median Nucleus (=dorsomedial nucleus)	6
Internal Medullary Lamina of Thalamus	1
Globus Pallidus	7
Substantia Nigra`	6
Anterior Thalamic Nuclei	1
Mammillothalamic Fasciculus	5

Mammillothalamic Fasciculus

Posterior Limb of Internal Capsule	5
Cerebral Peduncle	1
Rostral Hippocampus	3
Fornix	6
Mammillary Body	1
Mammillothalamic Fasciculus	5
Anterior Thalamic Nucleus	3
Caudate Nucleus	4
Amygdaloid Nucleus	1
Stria Medullaris Thalami	2

NOTE THAT ALL THE VENTRAL ANTERIOR THALAMIC NUCLEUS STRUCTURES ARE COVERED IN OTHER PARTS.

Optic Chiasm

Middle Cerebral Artery	5
Fornix	6
External Medullary Lamina	1
Anterior Thalamic Nuclei	3
Head of Caudate Nucleus	4
Tail of Caudate Nucleus	2
Globus Pallidus	7
Clastrum	5

Anterior Commissure

Column of Fornix	4
Anterior Cerebral Arteries	6
Gyrus Rectus	3
Head of Caudate Nucleus	4
Tail of Caudate Nucleus	2
Globus Pallidus	7
Clastrum	5

Globus Pallidus

Third Ventricle	4
Intraventricular Foramen of Monro	8
Fornix	6
Hypothalamus	2
Head of Caudate Nucleus	4
Tail of Caudate Nucleus	2
Globus Pallidus	7
Clastrum	5
Amygdala	4

Anterior Limb of Internal Capsule

Gyrus Cinguli	6
Septum Pellucidum	7
Rostrum of Corpus Callosum	1
Gyrus Rectus	3
Olfactory Tract	6
Head of Caudate Nucleus	4
Clastrum	5
Nucleus Accumbens	1