

Biology 358 — Neuroanatomy

Written Portion of the Final Exam

Please **print your name clearly** on the back of the last page of this exam. Please read the instructions preceding each section carefully.

You must read the instructions for each section of this exam, as they differ with each section. Final exams are NOT returned. If you wish to see it you must stop into my office before Friday of the first week of spring term.

The following pages are unlabeled, unnumbered pictures of the central nervous system. Your instructions are as follows:

- Note that each page is numbered, by hand, in the upper right-hand corner.
- In the spaces on the next page you are to indicate where this section is within the central nervous system. You are to provide more than simply the area of the brain (i.e. mesencephalon). Rather, you are to provide the exact area within the brain (i.e. mesencephalon at the level of the superior colliculus). Each of these labels is worth 2 points.
- On the next page you will find a list of 25 structures. For these structures you are to do the following:
 - Utilizing the blue marker supplied to you, label the following structures on any and all photos in which they would be found by a well-trained neuroanatomist.
 - Outline the area in the photo where the structure would be found, and then extend a line from the photo out to the white margin. (As with the other exams, you only need to do this on one side.)
 - In the white margin, using the blue pen, label the outlined segment with the number found to the left of the structures below.
 - If the structure is not found on the photo do nothing; DO NOT write NFOS in the margin.
 - 1 point will be awarded for each and every structure that is labeled correctly on a section
 - 1 point will be deducted for each and every structure that is labelled as being on the section but should not be labelled.
 - ¼ point will be awarded for each structure that you *correctly* did not label because it is not found on that section
 - Total points will be awarded by multiplying the number of points indicated for each section times the weighted value of each page.

Section 1. Labeling the section of the CNS on each page. See instructions on previous page.

Page 1 section level: _____

Page 2 section level: _____

Page 3 section level: _____

Page 4 section level: _____

Page 5 section level: _____

Page 6 section level: _____

Page 7 section level: _____

Page 8 section level: _____

Section 2: Structure labeling See instructions on previous page.

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| 1. Medial lemniscus pathway | 14. Middle cerebellar peduncle |
| 2. Spinothalamic pathway | 15. Superior cerebellar peduncle |
| 3. Fasciculus cuneatus | 16. Inferior cerebellar peduncle |
| 4. Nucleus cuneatus | 17. Red nucleus |
| 5. Inferior olive | 18. Substantia nigra |
| 6. Anterior corticospinal tract | 19. Medial geniculate body |
| 7. Lateral corticospinal tract | 20. VPL |
| 8. Spinocerebellar tracts | 21. VPM |
| 9. Rubrospinal tract | 22. Caudate |
| 10. Giant cell reticular nucleus | 23. Putamen |
| 11. Small cell reticular nucleus | 24. Globus pallidus |
| 12. Thalamic reticular formation | 25. CM |
| 13. Reticular formation | |