

**Applied Human Structure and Function PAS-703**  
**Head and Neck Written Examination – 100 Points**

December 11, 2019

---

1. A 51 year old male presents to the Free Clinic with complaints of neck pain and feeling short of breath. He states he had a toothache two weeks ago and had some swelling on his lower left jaw. Exam of his mouth shows his tongue to be elevated and posteriorly displaced. On auscultation you hear a high pitched noise (stridor) in his neck. Radiographic imaging shows an apical abscess on the lower left second molar. **Why did his tooth pain subside? Discuss the spaces defined by the cervical fasciae. Include boundaries, contents, relationships, lymphatic drainage, and significance. (10 pts)**

2. A seventy two year-old male comes to your office with complaints of hoarseness. You note the distinct smell of tobacco. He has ptosis of the left eye and the left pupil is smaller than the right. There is fullness over the left supraclavicular region. A Pancoast tumor is highly suspected. **Discuss the anatomy of the left vertebral triangle. Include boundaries, contents, relationships, fascial specializations, vasculature, innervation, and lymphatic drainage. (10 pts)**

3. A 38 year-old male presents to the Emergency Department with a swollen left orbital region. The patient has ptosis, proptosis, and an inability to abduct his left eye. He has hyperesthesia from the forehead to the upper margin of the mandible. His fundoscopic exam shows papilledema. **Discuss the anatomy of the cavernous sinus. Include boundaries, contents, and relationships. What symptoms are caused by damage to the structures within the cavernous sinus? (10 pts)**

4. Review the anatomy of the tongue. Include movements, relationships, muscles, vasculature, innervation, and lymphatic drainage. Cite the clinical deficit for unilateral hypoglossal nerve injury. (10 pts)

5. There are many venous pathways that allow extracranial venous drainages to communicate with the intracranial dural venous sinuses. These emissary pathways provide a conduit for extracranial infections and cancers to spread to intracranial locations. **Give a description of the anatomy of the dural venous sinuses, including how they may be involved in the spread of cancer and infections from extracranial sources. (10 pts)**

6. Thyroglossal duct cysts reflect the developmental descent of the thyroid gland from the base of the tongue. **Review of the anatomy of the thyroid gland. Include innervation, relationships, vasculature, and lymphatic drainage. Include an explanation of an anatomical variation of the thyroid gland. (10 pts)**

7. A weekend warrior, not wearing a batter's helmet, is hit on the side of the head by a wild pitch. Initially, she is "knocked out." She quickly regains consciousness. Thirty minutes later, she again loses consciousness. **Discuss the anatomy, including bones and relationships, of the pterion and epidural hematoma. (10 pts)**

8. Wildcard. (10 pts)



9. Wildcard. (10 pts)

10. Wildcard. (10 pts)