**Review for Exam Five, BSC 181**

Please note that this review does not cover ALL of the material discussed in the lecture notes. *It is meant as a guide only*. Exam questions will come from the lecture material, not this review. Please be familiar with all of the topics we discussed in lecture.

1. What are the gray areas of the spinal cord? The white areas
   1. Which features are found in these areas?
2. What are the ascending and descending pathways? What (specific) type of info do they carry?
3. What are the classifications for the sensory receptors?
4. What sequence of neurons are associated with sensory input? With motor output?
5. What are the layers that surround a nerve? How are the prefixes descriptive? What do they tell you about the location of the layers?
6. What are the classifications of nerves?
7. What are the four types of mixed nerves?
   1. What does somatic refer to?
   2. What does visceral refer to?
   3. What does afferent refer to
   4. What does efferent refer to?
8. Know the cranial nerves by their names, numbers (Roman Numerals), and functions
   1. Olfactory:
      1. Where are the receptors for it?
      2. Where is olfaction perceived in the brain?
   2. Optic
      1. Where are the receptors
      2. What is the tract/pathway to the brain?
      3. What is an optic chiasm?
   3. Oculomotor
      1. What does the name tell you about the nerve?
      2. Which muscles are innervated by CNIII?
   4. Trochlear
      1. Which muscles does it innervate
   5. Trigeminal
      1. What are the branches? Where do they go and what do they do?
      2. Sensory or motor or both?
   6. Abducens
      1. Function
   7. Facial
      1. Functions?
      2. Sensory or motor or both?
   8. Vestibulocochlear
      1. Vestibular refers to what?
      2. Cochlear refers to what?
      3. Sensory or motor or both?
   9. Glossopharyngeal
      1. Glosso refers to what?
      2. Pharyngeal refers to what?
      3. Functions?
      4. Sensory, motor, both?
   10. Vagus
       1. What is unusual about the Vagus nerve?
       2. Function?
       3. Sensory, motor, or both?
   11. Spinal accessory
       1. What is unusual about the spinal accessory nerve?
       2. Function?
       3. Sensory, motor, both?
   12. Hypoglossal
       1. Function
       2. Sensory, motor, both?
9. Spinal nerves. Be familiar with and able to locate
   1. Ventral roots
   2. Dorsal roots
   3. Dorsal root ganglia
   4. Spinal nerve
10. What is a plexus?
11. What nerves come off of the cervical plexus?
12. What nerves come off of the brachial plexus?
13. What nerves come off of the lumbar plexus?
14. What nerves come off of the sacral plexus?
15. What are the components of the reflex arc?
16. What is the function of the muscle spindle? How does it differ from the function of the Golgi Tendon organs?
17. What steps are involved with the patellar reflex? Be specific
18. What steps are involved with a withdrawal reflex?
19. How does a stretch reflex differ from a withdrawal reflex?
20. What are the superficial reflexes mentioned?
21. What type of neurons (sensory or motor) are in the autonomic nervous system?
22. What are the effectors of the autonomic nervous system?
23. Compare the autonomic nervous system to the somatic nervous system.
    1. What is the difference between somatic nervous system and autonomic nervous system in terms of
       1. Location
       2. Ganglia
       3. Effectors
       4. Function
24. What is the difference between the sympathetic nervous system and parasympathetic nervous system in terms of
    1. Origins
    2. Location of ganglia
    3. Types of fibers
    4. Lengths of fibers
    5. Types of neurotransmitters
    6. Function
25. Which cranial nerves have parasympathetic fibers?
26. What is the function of a white rami?
27. What is the function of a gray rami?
28. Are white and gray rami associated with sympathetic, parasympathetic, or both?
29. Where are the paravertebral ganglia located? Which system are they associated with?
30. What are the three options regarding pathways through the paravertebral ganglion?
31. What are the splanchnic nerves?
32. How do visceral reflexes differ from somatic reflexes?
33. Compare cholinergic fibers and adrenergic fibers
34. Compare nicotinic receptors and muscarinic receptors. Are they triggered by the same neurotransmitter?
35. Functions of adrenergic receptors?
36. Which functions are related to the sympathetic nervous system alone?
37. What does “vasomotor” mean?
38. Why do the sympathetic system functions last longer than the parasympathetic system functions?
39. What levels of controls are there for the ANS?















