Spinal Cord and Peripheral Nervous System-Motor Exam Review

1. Know the functions of the spinal cord.

2. Know the parts of the spinal cord (cervical and lumbar enlargements, cauda equina, filum terminale, conus medularis) and the meninges.

3. Identify the anterior, posterior and lateral horns of gray matter and know the cell bodies found in these areas.

4. Locate the anterior, posterior and lateral funiculi.

5. Identify the different tracts found in the white matter of the spinal cord.
   a. Is it a sensory or motor tract?
   b. If it is sensory, what type of sensation is being carried?
   c. What is the source and destination of each tract?

6. Structure of a nerve.
   a. What neuron processes are in the nerve and know the 3 layers of connective tissue wrapping?

7. Cranial nerves:
   a. What do the 12 cranial nerves supply?
   b. Which ones supply skeletal muscles for the somatic nervous system?
   c. Which 4 carry preganglionic neurons for the parasympathetic nervous system? What do they supply?

8. Spinal nerves:
   a. What 2 roots form spinal nerves and what types of neurons do they carry?
   b. What neurons are carried within a spinal nerve?
   c. What are the 5 branches that come off a spinal nerve? What neurons do they carry? What portion of the body do they supply?
   d. Of the 5 branches, which one forms intercostal nerves and plexuses?
   e. What do the 4 plexuses supply?

9. Nerve names:
   a. Cranial nerves, Spinal nerves, Splanchnic nerves, Autonomic nerves
   b. Where are they? What neurons do they carry? What are they supplying?

10. Somatic pathway:
    a. What are the 2 neurons in the pathway?
    b. Where are their cell bodies located?
    c. What tract does the upper motor neuron use?
    d. What root does the lower motor neuron use?
    e. If it supplies the back which branch? The front or an appendage? If it’s an appendage which plexuses?
f. What neurotransmitter is released and what is the receptor on the muscle?

11. Somatic reflexes:
   a. Know the types of reflexes (stretch, flexor/withdrawal, tendon) and whether they are mono- or polysynaptic.
   b. What does their pathway look like?
   c. What was the stimulus for this reflex?

12. Parasympathetic pathways:
   a. Know the neurons in the pathway.
   b. Where are their cell bodies located?
   c. What nerves do they use?
   d. What are the ganglion called? What is the neurotransmitter and receptor here?
   e. What specifically do the nerves supply?
   f. What neurotransmitter is released by the postganglionic neuron? What is the receptor on the organ?

13. Sympathetic pathways:
   a. Know the same things as the parasympathetic.

14. What parts of the brain are involved in controlling the Autonomic nervous system?

15. The 25 point fill in the blank will include:
   a. Somatic motor pathway
   b. Parasympathetic pathway
   c. Sympathetic pathway