**Neuroscience Review Sheet**

List the three basic neuroeffector tissues innervated by GVE neurons.

List the divisions of the ANS.

What is a ganglion?

Where do I find preganglionic neuron cell bodies of the ANS?

Where do I find efferent neuron cell bodies of the somatic division of the peripheral nervous system?

Where do I find postganglionic neuron cell bodies of the ANS?

What is the primary function of the ANS?

What are the three types of autonomic ganglia and which divisions of the ANS is each associated with?

Where are the various autonomic ganglia located and know the names of the major autonomic ganglia?

What are splanchnic nerves?

Know the specific locations of sympathetic preganglionic GVE neuron cell bodies in the CSN.

Sympathetic GVE neurons emerge from the spinal cord in the \_\_\_\_\_ roots of the spinal nerves from spinal segments \_\_\_\_\_ to \_\_\_\_\_.

Sympathetic preganglionic neuron fibers exit the spinal nerve via the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ to enter the \_\_\_\_\_\_\_\_\_\_ ganglia.

Once the sympathetic GVE neuron exits the spinal nerve and enters the paravertebral ganglia, one of four things can happen. List them.

Sympathetic neurons, which exit the paravertebral ganglia to rejoin the spinal, do so via what structure?

Which spinal nerves have white rami communicantes associated with them and which spinal nerves have gray rami communicantes associated with them? Explain the differences.

What neurotransmitter is released from preganglionic sympathetic neurons?

What enzyme inactivates the neurotransmitter released from preganglionic sympathetic neurons?

What neurotransmitter is released from the majority of postganglionic sympathetic neurons?

Give me the names and locations of the enzymes, which inactivate the neurotransmitters, released from the majority of sympathetic postganglionic neurons.

Know the types and locations of adrenergic receptors.

List the three catecholamines.

What tissue releases epinephrine?

Is epinephrine released from sympathetic postganglionic neurons?

Which postganglionic sympathetic postganglionic neurons release Acetylcholine?

What tissues are innervated by postganglionic cholinergic neurons?

Where, specifically, is the preganglionic parasympathetic neuron cell bodies located in the CNS?

The cranial portion of the parasympathetic nervous system innervates structures located where?

The sacral portion of the parasympathetic nervous system innervates structures located where?

Which cranial nerves transmit GVE fibers?

Which spinal nerves carry parasympathetic GVE fibers?

Where are the nuclei, which give rise to GVE parasympathetic fibers located in the CNS?

Preganglionic fibers from cell bodies located in the \_\_\_\_\_\_\_\_ are conveyed by the oculomotor never and synapse in the \_\_\_\_\_\_\_\_\_ ganglion.

Postganglionic neurons of the oculomotor nerve innervate what structures and have what effect upon these tissues?

Preganglionic fibers from cell bodies located in the \_\_\_\_\_\_ \_\_\_\_ are conveyed by the facial nerve and synapse in the \_\_\_\_\_\_\_\_\_\_ ganglion.

Postganglionic neurons of the facial nerve innervate what structures and have what effect upon these tissues?

Preganglionic fibers from cell bodies located in the \_\_\_\_\_\_\_\_\_\_\_ are conveyed by the glossopharyngeal nerve and synapse in the \_\_\_\_\_\_\_\_\_ ganglion.

Postganglionic neurons of the glossopharyngeal nerve innervate what structures and have what effect upon these tissues?

Preganglionic fibers from cell bodies located in the \_\_\_\_\_\_\_\_\_ are conveyed by the vagus nerve and synapse in the \_\_\_\_\_\_\_\_\_\_\_\_ ganglia.

Postganglionic neurons of the vagal nerve innervate what structures and have what effect upon these tissues?

What neurotransmitter is released from preganglionic parasympathetic neurons?

What enzyme inactivates the neurotransmitter released from preganglionic parasympathetic neurons?

What neurotransmitter is released from postganglionic parasympathetic neurons?

What enzyme inactivates the neurotransmitter released from postganglionic parasympathetic neurons?

Define cholinergic.

Define adrenergic.

Where is the location of nicotinic receptors?

Where is the location of muscarinic receptors?

What effect does stimulation of nicotinic receptors have?

What effect does stimulation of muscarinic have?

Define anticholinergic and parasympatholytic.

What effect would a muscarinic blocker, like atropine, have upon heart rate, pupillary diameter, gut motility, GIT secretions, bronchial secretions, etc.

What effect would a sympathomimetic drug have upon heart rate, pupillary diameter, gut motility, GIT secretions, blood vessel diameter, etc?

Why are you unable to focus on objects up close after your eyes have been dilated at the ophthalmologist's office with an anticholinergic drug such as tropicamide (Mydriacyl)?

58. Are there any parasympathetic fibers to the upper and lower limbs, and if so where are the preganglionic neuron cell bodies located?

What is the difference in the ratio of pre to postganglionic fibers in the sympathetic nervous system verses the parasympathetic nervous system?

What effect does autonomic nervous system input have upon skeletal muscle fibers, does it cause them to contract, relax, or have no effect.

What effect would bilaterally cutting the vagus nerve have upon heart rate, gut motility, and GIT secretions?

Why is epinephrine given to a patient in status asthmaticus or during anaphylactic shock?

What is meant by dual autonomic innervation of a tissue and how is this used to control various bodily functions?