Review Sheet – Exam 2

Directions: Prepare a word-processed (TYPED) document containing answers to the following questions. Documents that are not typed will not be accepted for any reason. You must turn this in before you take the exam on Thursday March 25th. Late submissions will not be accepted for any reason. You can always turn it in early!

PART I

Define any 25 of the following terms (you should be familiar with all of them!)
epithelium, endocrine gland, exocrine gland, skeletal muscle, smooth muscle, cardiac muscle, neuron, fibroblast, chondrocyte, collagen, elastin, tendon, ligament, cartilage, lacunae, CNS, PNS, presynaptic neuron, postsynaptic neuron, acetylcholine, norepinephrine, parasympathetic NS, sympathetic NS, autonomic division, somatic division, meninges, cerebrospinal fluid, blood-brain barrier, cerebellum, cerebrum, thalamus, hypothalamus, medulla, corpus callosum, pons, limbic lobe, frontal lobe, parietal lobe, occipital lobe, temporal lobe, action potential, axon, dendrite, polarization, neuroglial cell, neurotransmitter, gray matter, white matter, myelin, Schwann cell, tight junction, gap junction, adhesion junction, squamous epithelium, cuboidal epithelium, columnar epithelium, simple and stratified epithelium, hormone, steroid hormone, non-steroid hormone, pituitary gland, pineal gland, pancreas, parathyroid glands, thyroid glands, adrenal glands, neuroendocrine cells, glucagon, insulin, aldosterone, cortisol, calcitonin, thymus gland, androgens, testosterone, target cell, tympanic membrane, tectorial membrane, vestibular apparatus, photoreceptor, fast pain, slow pain, cone, rod, cochlea, basilar membrane, lens, iris, aqueous humor, optic nerve, cornea, sclera, choroid

PART II

Answer any 4 of these questions:

1. After a period of dramatic weight loss, why is it so difficult to keep weight off?

2. Describe the function of the two hormones from the thymus gland.

3. Define when you would call norepinephrine a neurotransmitter and when you would call it a hormone.

4. Compare/contrast fast pain, slow pain, and referred pain.

5. What causes glaucoma? What causes cataracts?

PART III

Answer any 4 of the following questions:

1. Explain why an injection of epinephrine to combat an acute immune reaction (such as an allergic response to a bee sting) has an almost immediate effect, whereas injection of a steroid hormone can take several hours to have an effect.

2. Describe the structural and functional differences between skeletal, cardiac and smooth muscle.

3. Using a figure (graph), show the three stages of an action potential. Describe what’s occurring (at the level of the plasma membrane) each phase.

4. An action potential arrives at the axon bulb (terminal end) of a presynaptic neuron; describe what occurs next to relay the action potential to the next neuron?

5. Describe the pathway of the sense of smell. Start with an airborne odorant and end with the partial integration of information and passage to higher brain centers.

6. Describe the overall function of the three bones (the incus, the stapes, the malleus) of the middle ear.

Additional Studying – not required for review sheet, but information may appear on the exam.

You should be able to label a figure of the structure of the human ear (Fig 12.9) and the human eye (Fig 12.13).

You should be able to label a figure of the human brain.

You should be able to label a figure of the human endocrine system (Fig 13.1).

Be able to describe a negative feedback loop (Fig 13.4).