# Chapter 22: Nerves and Senses; Endocrine System

## 22A

1. What two body systems coordinate your body’s activities? The nervous and endocrine systems
2. What structures make up the Central Nervous System? Brain and spinal cord The Peripheral Nervous System? The sense organs and nerves connected
3. How does a nerve impulse cross a synapse? The electrical impulse jumps the synaptic gap by releasing chemicals inside floating vesicles that float across and trigger the next dendrite
4. What type of neuron is usually attached to a muscle? Motor neuron
5. If someone suffers temporary blindness in a car accident, what part of the brain was damaged? The occipital lobe

## 22B

1. Why aren’t sensory neurons sensitive to all stimuli? They can only be specific to one special stimulus (pain, light, etc)
2. What is the main problem in glaucoma? A buildup of fluid that puts pressure on the retina Cataracts? Substances accumulating on the lens that block vision
3. What do the muscles of the iris do? Controls the size/dilation of the pupil
4. What is the function of the Eustachian tubes? They control air pressure in the middle ear
5. Name the two major structures and two major functions the inner ear accomplishes. The cochlea is responsible for hearing, and the semicircular canals are responsible for balance
6. How does saliva aid the sense of taste? It dissolves food particles, allowing them to enter the taste buds and be tasted

## 22C

1. How do endocrine glands work if they are ductless? They secrete chemicals/hormones
2. How to the chemicals produced by endocrine glands get to other parts of the body? They travel in the bloodstream
3. How are the endocrine and nervous systems similar? They help control the body’s activities Different? The endocrine system works slowly by sending messages through the bloodstream, whereas the nervous system works quickly through nerve impulses; it is also more controllable by a person’s will
4. What are 3 ways hormone secretions can be controlled? By control by the nervous system, by responses to changes in the body, and by feedback mechanisms
5. Why aren’t endocrine glands vestigial, as some evolutionists have claimed in the past? All glands have very important functions by which normal activities (i.e. metabolism, reproduction) could not occur
6. What are the two primary functions of ovaries and testes? Which is part of the endocrine system? Ovaries and testes produce eggs and sperm for reproduction, but also produce/secrete male and female reproductive hormones which mature the body and make it ready for reproduction—these are part of the endocrine system

## Vocab 22

Parts of Central Nervous System

Parts of Peripheral Nervous System

Neurons and their parts: Dendrites, Axons, Synapse

Reflex

Parts of the brain with their primary functions: Cerebrum, Cerebellum, Brain stem, Frontal, Parietal, Temporal, Occipital lobes

Spinal cord

Parts of the Eye: cornea, iris, pupil, retina, lens

Rods and Cones

Parts of the Ear: tympanic membrane, Eustachian tubes, cochlea, ear canal, middle ear

Tongue, taste buds, papilla

Parts of the Endocrine System and their major functions: Pituitary, Adrenals, Pancreas, Thyroid

Hormones

Negative feedback system

Epinephrine v. Norepinephrine