

accomodation
mechanoreceptors
crista ampullaris
rectus muscles
round window

ciliary body
auditory tube
bony labyrinth
fovea centralis
endolymph

blind spot
cochlea
vestibule
pupil
taste buds

ear ossicles
refraction
conjunctiva
convergence
chemoreceptors

Lecture Study Objectives: Exam III

BIOL 2404: Introductory ANATOMY AND PHYSIOLOGY

(Ziser, 2016)

The following is an outline of the core knowledge in BIOL 2404. After completing each topic below you should be able to:

The Nervous System

1. List and describe the basic functions of the nervous system.
2. Describe the structural and functional organization of the nervous system.
3. Define central nervous system and peripheral nervous system and the major parts of each.
4. List four types of neuroglia cells and describe the functions of each.
5. Describe the main parts of a neuron.
6. Classify neurons according to structure and according to function
7. Describe how an action potential is created and the difference between the action potential and a nerve impulse.
8. Describe the synapse and what occurs there.
9. Diagram, describe, and explain the function of a reflex arc.
10. Distinguish between a nerve and a tract and between a ganglion and a nucleus.
11. Name the major subdivisions of the brain and the major sections of each.
12. Describe the structure and function of the meninges.
13. Identify the major structures involved in the formation and circulation of CSF.
14. Describe the structure and function of the spinal cord.
15. Give two examples of cranial nerves that are sensory, that are motor, and that are mixed nerves.
16. Describe the origin and fiber composition of the ventral and dorsal roots of a spinal nerve.
17. Define plexus and name the major plexuses, where they originate and the major nerves arising from each.
18. Compare and contrast the structure functions of the somatic and the autonomic branches of the nervous system.
19. Compare and contrast the structure and function of the sympathetic and parasympathetic divisions of the autonomic nervous system.
20. Define or describe the relevant terms from your text, including:

afferent neuron	resting potential	axon	ganglion	cerebral hemispheres
gray matter	depolarization	interneurons	meninges	nerve plexus
nodes of Ranvier	choroid plexus	reflex	synapse	sympathetic fibers
acetylcholine	action potential	prefrontal lobe	nerve tract	reticular formation
hypothalamus	nuclei	gyrus	arachnoid villi	

Senses

1. Classify the different kinds of simple sensory receptors according to the source of the stimulus that affects them
2. Classify the different kinds of sensory receptors in terms of the kinds of signal they transduce.
3. Explain the difference between a phasic and a tonic receptor and give two examples of each
4. List and describe the functions of each of the accessory structures of the eye.
5. Identify the layers of the eyeball and the major functions features associated with each.
6. Identify and describe the structural components of the eye.
7. Compare and contrast the roles of rods and cones in producing a visual image.
8. Describe the major structures and functions of the external, middle and inner ear.
9. Compare and contrast the senses of smell and taste, as to location, structure, and function.
10. Distinguish between static and dynamic equilibrium and the sensory organs responsible.
11. Define or describe the relevant terms from your text including: