

Chapter 17 – Study Guide

For all regions / structures that are listed below as **bold, italicized, and underlined**
– you should be able to identify them in a picture.

In addition for all regions / structures (whether bold, italicized, and underlined or not)
- you should know their functions as discussed in lecture and the textbook

OLFACTION

olfactory epithelium – in superior nasal cavity
CN I = olfactory nerve

GUSTATION

papillae with taste buds

vallate – large circular elevations
V-shaped row at back of tongue
100-300 taste buds / papillae

fungiform – mushroom shaped elevations
scattered all over tongue
5 taste buds / papillae

papillae without taste buds

filiform – contain tactile receptors
increase friction between tongue & food
make it easier for tongue to move food

VISION

upper eyelid (upper palpebra)

lower eyelid (lower palpebra)

palpebral conjunctiva

bulbar conjunctiva

lacrimal glands

lacrimal sac

cornea

sclera

ciliary body

ciliary muscle

iris

bright light – pupil constricts – parasympathetic
dim light – pupil dilates – sympathetic

retina

optic disc

photoreceptors

rods – low light threshold - allow dim light vision
shades of gray
120 million rods / retina

cones – high light threshold - allow bright light vision
color vision
6 million cones / retina

central fovea

blind spot

lens

anterior chamber

posterior chamber

aqueous humor

vitreous chamber

vitreous body

aging – lens loses elasticity – ability to accommodate decreases

myopia – nearsightedness
hyperopia – farsightedness

rhodopsin – photopigment found in rods
retinal – derivative of vitamin A
 cis-retinal in darkness converts to
 trans-retinal when light absorbed
cone pigments – 3 types differ in the wavelength of light that is most effectively absorbed
color blindness – absence or deficiency of one of the three cone pigments
 causing an inherited inability to distinguish between certain colors

HEARING

auricle (pinna)
external auditory canal
eardrum or tympanic membrane
middle ear
auditory ossicles
 malleus – hammer
 incus – anvil
 stapes – stirrup
eustachian tube
inner ear
cochlea
basilar membrane
spiral organ – organ of Corti

sound waves

 frequency – pitch
 Hertz (Hz)
 size or amplitude - intensity
 decibels (dB)

if given the steps in the hearing pathway be able to arrange them in sequence

EQUILIBRIUM

static equilibrium
dynamic equilibrium

vestibular apparatus
 utricle
 sacculle
 semicircular canals
 ampulla

maculae – located in utricle and sacculle
 receptors for static equilibrium and linear acceleration and deceleration

crista – located in ampulla of semicircular ducts
 receptors for rotational acceleration or deceleration