

A. Nervous Multiple Choice

1. Lipofuscin

- A. Increases in old neurons
- B. Decreases in old neurons
- C. Accumulates around the nucleus
- D. Is produced by ribosomes

2. Cold receptors in skin are likely

- A. Multipolar
- B. Bipolar
- C. Unipolar
- D. Anaxonic

3. Which glial cell is affected by multiple sclerosis?

- A. Satellite cells
- B. Oligodendrocytes
- C. Schwann cells
- D. Astroglia

4. The posterior column at T7 is made of

- A. Gracile fasciculus only
- B. Gracile and cuneate fasciculus
- C. Posterior spinocerebellar tract
- D. Tectospinal tract

5. The external abdominal oblique is innervated by

- A. Iliohypogastric nerve
- B. Ilioinguinal nerve
- C. Pectoabdominal nerve
- D. Musculocutaneous nerve

6. The soma of a mature neuron lacks

- A. Endoplasmic reticulum
- B. Lipofuscin
- C. Lysosomes
- D. Centrioles

7. Circle where the dura mater attaches to the skull (Multiple answers, 2pts)

- A. Foramen ovale
- B. Hypoglossal canal
- C. Sella turcica
- D. Foramen magnum
- E. Perpendicular plate
- F. Zygomatic suture
- G. Crista galli

B. Nervous T/F

_____ 1. Centripital myelination occurs in the peripheral nervous system

_____ 2. Unmyelinated nerve fibers contact Schwann Cells in the PNS

_____ 3. Myelin increases conduction speed up to 100x

_____ 4. The central nervous system contains endoneurium

_____ 5. Damaged PNS nerves can't regenerate

C. Nervous free response

1. What are Nissl bodies and how are they useful?

2. How do virus get to the soma?

3. Describe the regeneration of a damaged nerve

4. Contrast the structure of the sympathetic and parasympathetic divisions of the nervous system, 5 differences.

5. Why do people see flashes of light when rubbing their eyes?

6. ALS likely results from a buildup of?

7. Describe the 5 neurotransmitter categories and give one example of each.

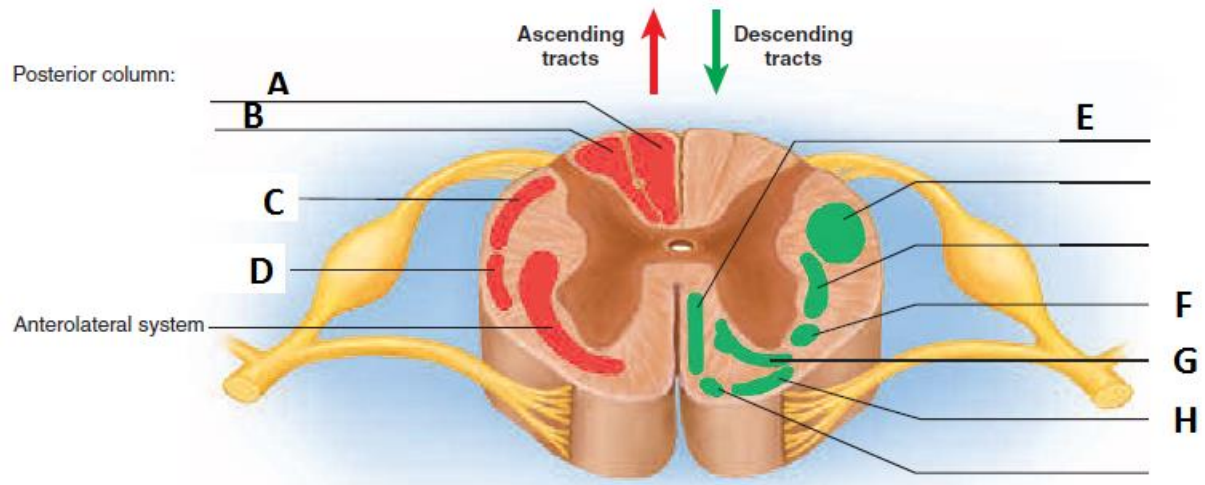
8. What is anomic aphasia?

9. Describe the 5 stages of sleep

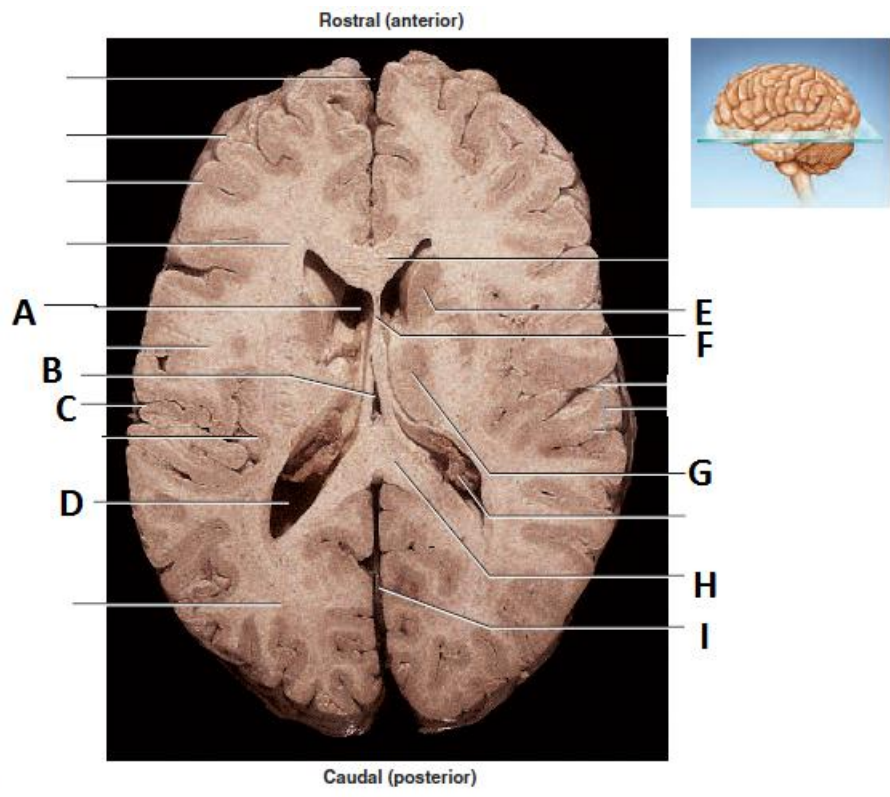
10. Give 3 functions of the reticular formation

11. Describe the generic neuronal path from sensation to movement.

D. Nervous Diagrams



- A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____
- G. _____
- H. _____



- A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____
- G. _____
- H. _____
- I. _____

E. Sense organ T/F

- _____ 1. A receptor doesn't have to be a sense organ
- _____ 2. Proprioceptors are phasic receptors
- _____ 3. Receptive fields are smallest in the back
- _____ 4. Hair receptors are phasic receptors
- _____ 5. Merkel discs exist in the stratum basale

F. Sense organ free response

1. Contrast the functions of primary and secondary afferent muscle spindle fibers

2. Why do heart attack patients feel pain in both the skin and the heart?

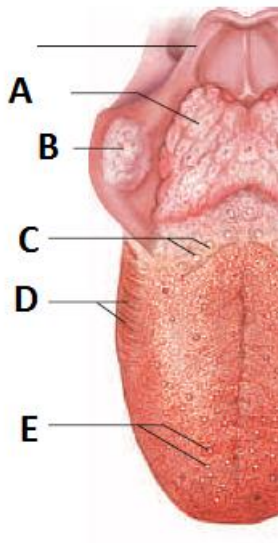
3. What bone and what parts of it does the olfactory mucosa cover?

4. Differentiate the outer and inner hair cells. Describe how inner hair cells function.

5. Describe how glaucoma leads to blindness

6. What is the purpose of pupil constriction?

G. Sense organ diagrams



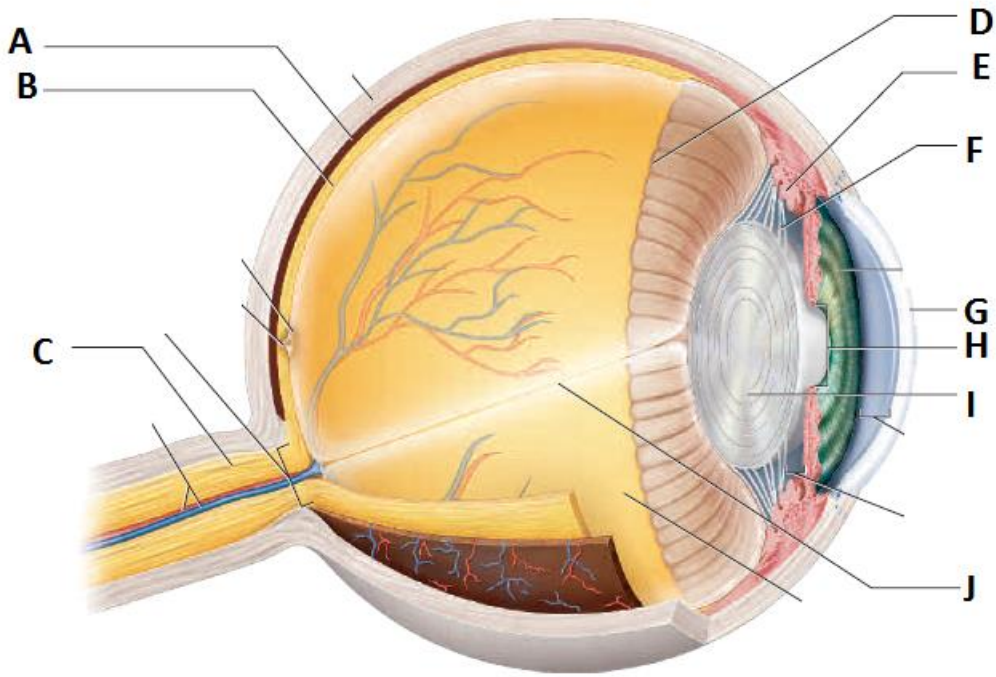
A. _____

B. _____

C. _____

D. _____

E. _____



- A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____
- G. _____
- H. _____
- I. _____
- J. _____

H. Endocrine multiple choice

1. Which one promotes secretion of growth hormone?

- A. Gonadotropin
- B. GH-releasing hormone
- C. Somatostatin
- D. Somatotropin

2. The thymus mainly regulates the

- A. Immune system
- B. Reproductive system
- C. Endocrine system
- D. Nervous system

3. What does the adrenal medulla not secrete?

- A. Norepinephrine
- B. Dopamine
- C. Acetylcholine
- D. Serotonin

4. Hepcidin functions in

- A. Liver cell proliferation
- B. Iron homeostasis
- C. Vitamin E regulation
- D. Vasodilation

5. Most monoamines are made of

- A. Phenylalanine
- B. Arginine
- C. Tyrosine
- D. Tryptophan

6. Hyperparathyroidism causes (multiple answers)

- A. Kidney stone formation
- B. Excess sodium retention
- C. Soft, fragile bones
- D. Increased heat production
- E. Increased blood calcium level
- F. Increased blood glucose levels

I. Endocrine T/F

- _____ 1. The hypodermis has endocrine functions
- _____ 2. The posterior lobe does not synthesize oxytocin
- _____ 3. Thyrotropin promotes secretion of pentaiodothyronine
- _____ 4. The pituitary gland produces mostly growth hormone
- _____ 5. Humans use melanocyte-stimulating hormone to darken skin color

J. Endocrine Free Response

1. What does the thyroid secrete mainly and what effect does the hormone have?

2. Give an example of neuroendocrine cells.

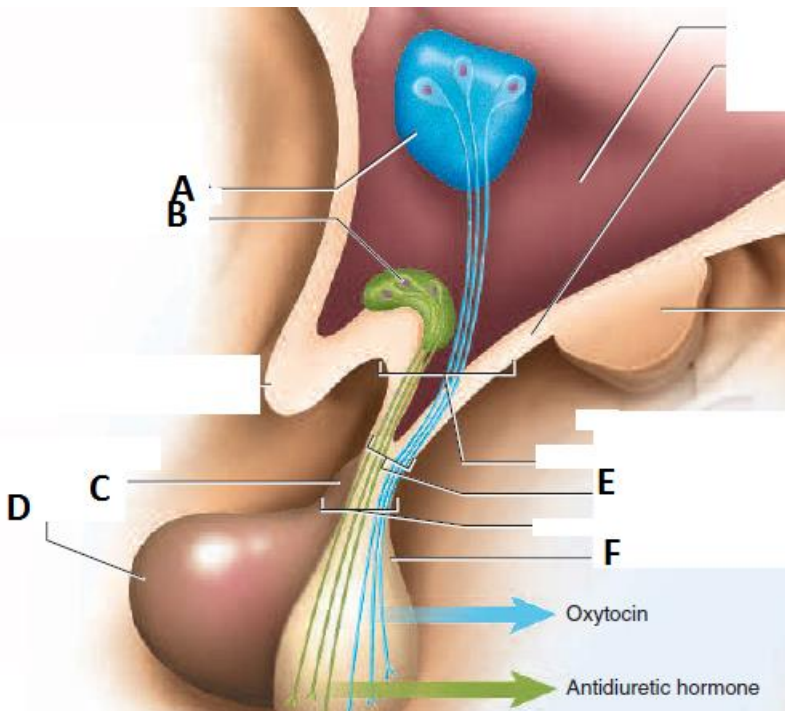
3. Describe the three chemical classes of hormones

4. List the 3 classes of corticosteroids and their respective functions.

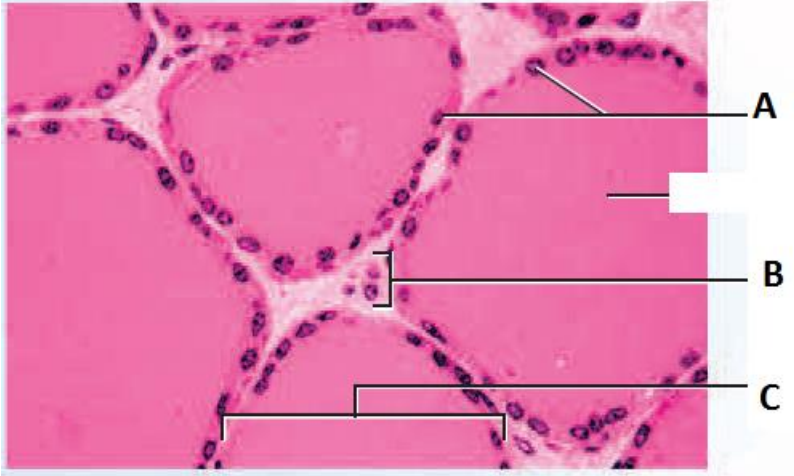
5. What is Graves Disease caused by?

6. Pseudohypoaldosteronism is a genetic disorder caused by ineffective aldosterone receptors. What symptoms might a patient with this disorder show?

K. Endocrine Diagrams



- A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____



Histology of thyroid

- A. _____
- B. _____
- C. _____