

Anatomy & Physiology Final Exam Study Guide Semester 2

The Endocrine System:

- 1) List the major processes controlled by hormones.
- 2) Under normal conditions, how are hormone concentrations in the blood usually regulated?
- 3) What hormone triggers the ovulation of an egg from the female ovary?
- 4) What is a Goiter?
- 5) What are the functions of oxytocin?
- 6) What hormones are produced by the hypothalamus?
- 7) Explain the following:
 - a. Acromegaly
 - b. Gigantism
 - c. Dwarfism
 - d. Cretinism
- 8) What 2 hormones work antagonistically to each other to regulate blood glucose levels?
- 9) What hormones are produced by the anterior lobe of the pituitary gland?
- 10) What is the function of estrogen?

Blood:

- 11) What type of body tissue is blood?
- 12) List the physical characteristics of blood.
- 13) Which formed element is the most abundant?
- 14) Describe blood plasma.
- 15) What multinucleate cells are platelets a fragment of?
- 16) List the sequence for homeostasis.
- 17) Define the following:
 - a. Hemostasis
 - b. Agglutination
 - c. Coagulation
 - d. Hemolysis
- 18) Which blood type is the universal recipient?
- 19) What are ABO blood groups based on?
- 20) Explain the following:
 - a. Embolus
 - b. Thrombus

Cardiovascular System:

- 21) Which chamber of the heart receives blood from the systemic veins?
- 22) What is the right AV valve also called?
- 23) What type of blood (oxygenated or deoxygenated) does the superior vena cava carry, and what chamber of the heart does it empty into?

- 24) List the pathway for the transmission of an impulse in the intrinsic conduction system of the heart.
- 25) List the path of blood flow within the systemic vascular system.
- 26) List the sequence going from the outermost to innermost layer of a blood vessel wall.
- 27) Where do the left and right renal veins empty blood into?
- 28) Where is the carotid artery located?
- 29) Which blood vessel has the highest blood pressure?
- 30) What causes varicose veins?

Lymphatic System:

- 31) What is the fluid that is forced out of the capillary beds by hydrostatic and osmotic pressures and into the tissue spaces called?
- 32) Where does lymph flow?
- 33) List the mechanisms that help in lymph return.
- 34) Which lymphatic organ's major job is to destroy worn out red blood cells and return the products to the liver?
- 35) What lymph organ programs T cells and functions at peak levels only during youth?
- 36) What is the body's first line of defense against the invasion of disease-causing microorganisms?
- 37) What are the 3 most common indicators of the inflammatory response?
- 38) Where is the body's temperature regulator/thermostat located?
- 39) List the antibody classes.
- 40) Explain the following:
 - a. AIDS
 - b. Multiple Sclerosis
 - c. Grave's Disease
 - d. Rheumatoid Arthritis

Respiratory System:

- 41) List the conducting passageways of the respiratory system.
- 42) What are the functions of the respiratory conducting passageways?
- 43) What is the name of the flap of elastic cartilage that protects food from entering the larynx when swallowing?
- 44) What is the name of the serous membrane covering the surface of the lungs?
- 45) What type of tissue are the walls of the alveoli composed largely of?
- 46) How does the exchange of both oxygen and carbon dioxide through the respiratory membrane occur?
- 47) Define/Explain the following:
 - a. Tidal volume
 - b. Inspiratory reserve volume
 - c. Expiratory reserve volume
 - d. Vital capacity

48) How is most carbon dioxide transported in blood plasma?

49) Define/Explain the following:

- a. Apnea
- b. Dyspnea
- c. Eupnea
- d. Hyperpnea

Digestive System:

50) List the organs of the alimentary canal.

51) List the order through which food passes in the alimentary canal.

52) Where does protein digestion begin?

53) What is the main function of the small intestine?

54) What organ is responsible for drying out indigestible food residue through water absorption and the elimination of feces?

55) What is amylase able to digest?

56) Where is Bile produced?

57) Where is Bile stored?

58) What is the sequence of steps by which large food molecules are broken down into their respective building blocks by catalytic enzymes within hydrolysis reactions?

59) Define/Explain the following:

- a. Ingestion
- b. Peristalsis
- c. Chemical digestion
- d. Mastication

60) What is the main role of the liver?

Urinary System

61) What are the functions of the kidneys?

62) List the organs of the urinary system.

63) What helps the kidneys in the excretion of fluids?

64) How many nephrons does each kidney contain?

65) List the order of the renal tubule region starting from the glomerular capsule.

66) Where in the kidney are most nephrons located?

67) Explain/Define:

- a. Absorption
- b. Secretion
- c. Filtration
- d. Tubular reabsorption

68) What is the name of the tube that connects the renal hilus of the kidney to the bladder?

69) What is the name of the voluntary controlled sphincter fashioned of skeletal muscle at the point where the urethra passes through the pelvic floor?

70) What is another name for the process of emptying the bladder, also called voiding?

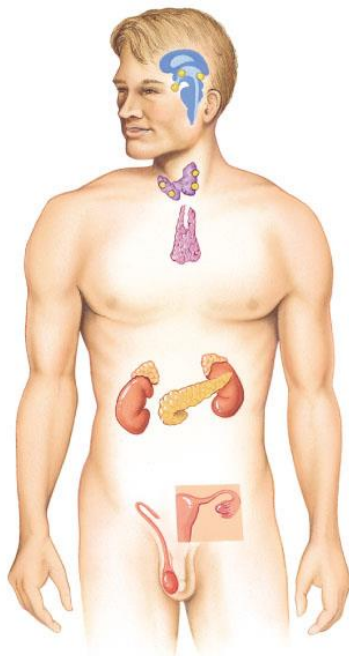
Reproductive System:

- 71) What is the name of the male gonads that have both sperm-producing and testosterone-producing functions?
- 72) List the correct descending order of the male duct system (inside to outside).
- 73) If you have a sperm count under 20 million, is pregnancy possible?
- 74) When does spermatogenesis begin?
- 75) Where does fertilization usually occur?
- 76) What is the name for the narrow outlet of the uterus that projects into the vagina?
- 77) What is the name of the inner mucosal layer of the uterus that is sloughed off approximately every 28 days?
- 78) What is the name of the glands that produce milk when a woman is lactating?
- 79) What is parturition?
- 80) What is menarche?

Diagrams & Labeling:

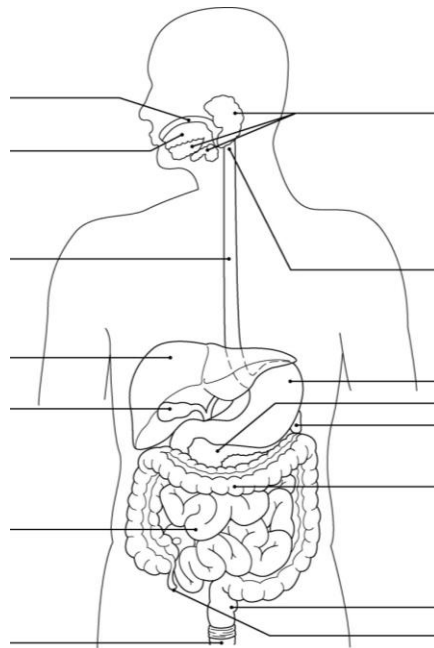
On the diagram below, label the following:

- A) The gland that produces thymosin
- B) The gland that produces testosterone
- C) The gland that produces steroids and catecholamines
- D) The gland that is responsible for body metabolism
- E) The gland that has both glandular and nervous tissue associated with it



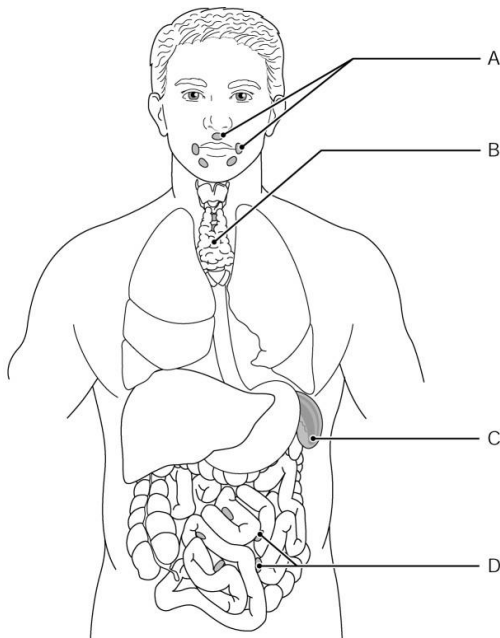
On the diagram below, label the following:

- A) The mouth
- B) The large intestine
- C) The gall bladder
- D) The esophagus
- E) The stomach



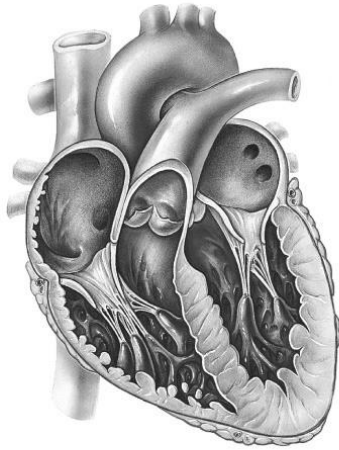
On the diagram below, label the following:

- A) The spleen
- B) The tonsils
- C) The thymus gland
- D) Peyer's patches
- E) The lymphoid tissues that trap and remove bacteria that enter the throat



On the diagram below, label the following:

- A) Intraventricular septum
- B) Aorta
- C) Left ventricle
- D) Right atrium
- E) Right and Left atrioventricular valves



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