



Anatomy & Physiology Lesson 5 Exam

Please read these instructions before you begin to answer the questions that follow.

You are welcome to work your answers on this paper examination for your convenience. You will submit your final answers through an uploaded file through our app. When you are satisfied that your answers are correct, use the app to download an instruction file for the corresponding lesson. This will open the lesson, so you are able to add your work for grading. Complete this file upload for grading. Only the answers on the submitted file will be considered for grading.

You have reached the end of Lesson 5 and are ready for your Lesson 5 Examination. After you complete it, log in and submit through the app. Good luck!

Instructions:

Follow the instructions for each question. Show your work in the space provided and write the answer on the line. You will need to show your work on the file submitted to your teacher for grading.

Multiple Choice (worth 2 points each): Enter your selected answer into the blank space provided.

- ___**B**___1. How does the lymphatic system differ from the cardiovascular system?
- A. extends throughout the body
 - B. is an open loop system
 - C. made of a network of vessels
 - D. made of small capillaries to large vessels
- ___**D**___2. When lymph is found inside blood vessels it is called _____ and when it is found outside in-between cells it is called _____.
A. interstitial fluid, blood plasma
B. blood plasma, interstitial fluid
C. hematocrit, lymphatic fluid
D. lymphatic fluid, hematocrit
- ___**A**___3. True or False: The left lymphatic duct drains only the left side of the head, left arm, and left torso.
A. True
B. False

- ___**D**___4. Which of the following is a function of the lymph nodes?
- A. produce lymph
 - B. recirculate interstitial fluid back to the lungs
 - C. drain lymph from most of the body
 - D. trap pathogens to be destroyed by white blood cells
- ___**A**___5. What lines the walls of the lymphatic capillaries?
- A. epithelial cells
 - B. lymphocytes
 - C. endothelial cells
 - D. macrophages
- ___**D**___6. Physical barriers include which of the following?
- A. Hair
 - B. Skin
 - C. Sweat
 - D. All of the above
- ___**A**___7. During phagocytosis, **Lysosomes**_____ bring enzymes and acids to digest the pathogen.
- A. lysosomes
 - B. leukocytes
 - C. monocytes
 - D. neutrophils
- ___**A**___8. True or False: Interferons will help cells already infected with viral DNA.
- A. True
 - B. False
- ___**B**___9. Interferons work by interfering with which of the following?
- A. cellular respiration
 - B. viral DNA replication
 - C. protein synthesis
 - D. blood flow
- ___**B**___10. **Monocytes**__develop into macrophages when they leave the bloodstream and enter tissues.
- A. Neutrophils
 - B. Monocytes
 - C. Lysosome
 - D. Peroxisome
- ___**A**___11. Where can lymphocytes be found?
- A. lymph nodes
 - B. spleen
 - C. blood
 - D. all of the above

- ___**B**___12. What eliminates the threat of an antigen?
A. occupy the binding site on the target cell
B. treatment with antibiotics
C. formation of the antigen-antibody complex
D. both A and C
- ___**A**___13. What type of immune response are memory cells involved in?
A. secondary immune response
B. lymphocytic immunity
C. passive immunity
D. primary immune response
- ___**B**___14. Where do T lymphocytes go to complete maturation?
A. bone
B. thymus
C. thyroid
D. hypothalamus
- ___**C**___15. A programmed process of cell-death is called **Apoptosis**_____.
A. differentiation
B. clonal selectin
C. apoptosis
D. metastasis
- ___**B**___16. What influences a person's basal metabolic rate?
A. geographical location
B. age
C. race
D. both A and C
- ___**B**___17. Which vitamin is needed for bone growth? **VITAMIN D**
A. A
B. D
C. E
D. K
- ___**A**___18. What mineral(s) is (are) involved in muscle contraction?
A. potassium
B. sodium
C. iron
D. both A and B
- ___**C**___19. The mineral **Iron**_____ helps the blood transport oxygen.
A. fluoride
B. iodine
C. iron
D. calcium

- ___A___20. You get your supply of amino acids by eating what foods?
- A. proteins
 - B. carbohydrates
 - C. lipids
 - D. vitamins
- ___A___21. True or false: The gastrointestinal tract begins at the mouth and ends at the anus.
- A. True
 - B. False
- ___D___22. Mechanical breakdown is to chewing as chemical breakdown is to **Digestion**.
- A. absorption
 - B. propulsion
 - C. stomach churning
 - D. digestion
- ___A___23. Absorption in the GI tract takes place between the blood and the **small Intestine**.
- A. Small intestine
 - B. Large intestine
 - C. Stomach
 - D. Both A and B
- ___A___24. Which of the following lists the correct order of the digestion process?
- A. Ingestion, mechanical breakdown, propulsion chemical breakdown, absorption, defecation**
 - B. Ingestion, propulsion, mechanical breakdown, chemical breakdown, absorption, defecation
 - C. Ingestion, propulsion, mechanical breakdown, absorption, chemical breakdown, defecation
 - D. Ingestion, mechanical breakdown, chemical breakdown, propulsion, absorption, defecation
- ___C___25. Which organ is responsible for moving chewed food to the back of the throat?
- A. cheeks
 - B. teeth
 - C. tongue
 - D. gums
- ___D___26. What structure prevents food from entering the nasal passageways?
- A. uvula
 - B. hard palate
 - C. tongue
 - D. epiglottis
- ___C___27. Saliva is made of water, enzymes, mucous, and **antibodies**.
- A. sweat
 - B. enamel
 - C. antibodies
 - D. lipids

___C___ 28. What does the enzyme amylase break down in the mouth?

- A. lipids
- B. proteins
- C. carbohydrates
- D. nucleic acids

___B___ 29. True or False: The stomach is a location for mechanical and chemical breakdown of food before it enters the large intestine.

- A. True
- B. False

___C___ 30. Food mixed with acids from the stomach makes ___Chyme___.

- A. bile
- B. hydrochloric acid
- C. chyme
- D. amylase

___B___ 31. What structure separates the stomach and duodenum?

- A. anal sphincter
- B. pyloric sphincter
- C. sphincter papillae
- D. ileocecal sphincter

___A___ 32. True or False: The folds in the wall of the stomach are called the rugae.

- A. True
- B. False

___B___ 33. The three segments of the small intestine, beginning with the segment closest to the stomach are the ___duodenum, jejunum and ileum____.

- A. ileum, jejunum and cecum
- B. duodenum, jejunum, and ileum
- C. cecum, colon, and ileum
- D. jejunum, ileum, and duodenum

___D___ 34. In addition to insulin, what hormone does the pancreas secrete?

- A. lipase
- B. lipoprotein
- C. glucose
- D. glucagon

___A___ 35. What organ is responsible for water, electrolyte and some vitamin absorption?

- A. small intestine
- B. stomach
- C. gall bladder
- D. colon

Matching (worth 10 points, 1 point each)

36. Match the terms in Column I with the descriptions in Column II.

ColumnI	ColumnII
<u>h</u> ___ allergies	a. inflammation of the stomach or intestine
<u>e</u> ___ gingivitis	b. immune system is open to opportunistic infections
<u>b</u> ___ AIDS	c. lining of lower esophagus to duodenum breaks down
<u>i</u> ___ GERD	d. solid crystals form from substances in bile
<u>i</u> ___ ulcer	e. inflammation of the gums
<u>a</u> ___ gastroenteritis	f. inflammation of the pancreases
<u>g</u> ___ constipation	g. difficulty with defecation
<u>c</u> ___ Crohn's disease	h. an inappropriately strong immune system response
<u>f</u> ___ pancreatitis	i. affects all four layers of digestive tract wall
<u>d</u> ___ gall stones	j. movement of chyme from stomach to lower esophagus

Essays (worth 20 points, 10 points each)

37. *Trace the pathway of a piece of bread as it enters the mouth all the way through to defecation. Make sure to include key organs' roles as the food is processed through the gastrointestinal tract.*

The digestive tract is the route or pathway that food takes from the mouth all the way until someone visits the washroom.

When the bread enters through the mouth down to the esophagus down to the stomach where it is stored, the stomach produces acids that helps in digestion of the piece of bread, it is the pushed down to the small intestine.

At the small intestine, it is mixed with digestive fluids that break down the bread into smaller particles. Some of the food nutrients are absorbed at the small intestine before it moves further down into the ileum where more food nutrients and water are absorbed into the blood stream. Undigested materials keep moving down the tract into the large intestine where it is stored.

In the large intestines, un-digested materials are stored and pushed down to the rectum where they are defecated in the washroom. (Care, 2020)

38. *Explain how the immune system uses vaccines to build a defense through the primary and secondary immune responses.*

The immune system uses complex response system to provide immunity to the body. First the immune system recognizes bacteria and virus in form of antigens. The antigens trigger production of antibodies and lymphocytes that marks the antigens for destruction

During primary immune response, the pathogens are encountered with lymphocytes called memory cells to offer long lasting immunity. These memory cells detect the pathogens that they have encountered before thus triggering the system to respond speedy and faster with high effectiveness than the first exposure.

Secondary immune response occurs during the third, fourth and fifth encounter of the body with same pathogens or antigen. During this time body immunology memory is more established and able to produce more antibodies immediately and hence protecting the body fast enough

Vaccines play a major role in both primary and secondary immune system of the body. They act as training ground for the body such that the body is able to respond faster to pathogens and produce antibodies to counter the pathogens