

Names: _____

Team # _____



SSSS 2017 Anatomy & Physiology Practice Test

Digestive, Respiratory, Immune

Written By: Cherrie_Lan



Section 1 - Multiple Choice

Section 2 - Short Answer

Section 3 - Matching

Section 4 - True/False

Section 5 - Labelling

Take your time and pace yourself. Good luck!

Section 1 - Multiple Choice: Each correct answer earns one point.

1. A person, while lying on bed, experiences labored breathing and shortness of breath. Which of the following terms BEST describes this breathing pattern?

- a) Tachypnea
- b) Dyspnea
- c) Orthopnea
- d) Apnea

2. Which law states that that the total pressure of a gas mixture is the sum of the partial pressures of the individual gases?

- a) Charles' Law
- b) Dalton's Law
- c) Boyle's Law
- d) Henry's Law

3. Which of the following isn't a part of the small intestine?

- a) Ileum
- b) Cecenum
- c) Duodenum
- d) Jejunum

4. Which of the following has little effect on respiration?

- a) Hydrogen ion concentration
- b) Carbon dioxide ion concentration
- c) Oxygen ion concentration
- d) Nitrogen ion concentration

5. How many teeth does a normal adult human have? (Excluding wisdom teeth)

- a) 28 teeth
- b) 30 teeth
- c) 32 teeth
- d) 34 teeth

6. Which of the following is an enzyme that digests starch?

- a) Maltase
- b) Catalase
- c) Rennin
- d) Amylase

7. Which one of the following isn't an accessory muscle of inspiration?

- a) Quadratus lumborum
- b) Scalene Muscles
- c) Sternocleidomastoid
- d) Pectoralis minor

8. Which one of the following is the largest of the larynx cartilages?

- a) Thyroid cartilage
- b) Cricoid cartilage
- c) Cuneiform cartilage
- d) Corniculate cartilage

9. Which of the following is the largest of the volumes of lung capacity?

- a) Residual Volume
- b) Tidal Volume
- c) Expiratory Reserve Volume
- d) Inspiratory Reserve Volume

10. Where does chemical digestion start?

- a) Stomach
- b) Small Intestine
- c) Mouth
- d) Large Intestine

11. Which of the following isn't an accessory organ?

- a) Gallbladder
- b) Pancreas
- c) Liver
- d) Stomach

12. Which of the following isn't a function of the colon?

- a) Absorbing water
- b) Collects undigested waste
- c) Feces are formed
- d) Bacterial fermentation takes place

13. Which of the following structures of the respiratory systems is lined by by ciliated pseudostratified columnar epithelial tissue?

- a) Nasopharynx
- b) Oropharynx
- c) Laryngopharynx
- d) Pharynx

14. Which type of cartilage are the C-rings of the trachea made from?

- a) Fibrous cartilage
- b) Hyaline cartilage
- c) Elastic cartilage
- d) Annulus cartilage

15. Which of the following hormones makes up a big portion of the mucous secretions of the submandibular and sublingual glands that gives a lubricating quality to the secretions of the glands?

- a) Lecithin
- b) Motilin
- c) Mucin
- d) Secretin

16. After ingestion, the first type of macromolecule to be worked on by enzymes in the human digestive system is?

- a) Protein
- b) Carbohydrate
- c) Lipid
- d) Nucleic Acid

17. Which of the following organs of the digestive system has the lowest pH?

- a) Small intestine
- b) Large intestine
- c) Stomach
- d) Liver

18. Which of the following is the outer layer of the intestines is the?

- a) Mucosa
- b) Serosa
- c) Submucosa
- d) Muscularis

19. Which of the following places are lymph nodes not found in?

- a) Brain
- b) Small intestine
- c) Liver
- d) Pancreas

20. Which of the following types of white blood cells are the phagocytes in tissues that are in contact with the external environment?

- a) Neutrophils
- b) Dendritic cells
- c) Basophils
- d) Macrophages

Section 2 - Short Answer: All or nothing, no partial credit unless specified.

1. Describe Boyle's Law (2 pts)

2. Define and write out the equation that calculates inspiratory capacity. Abbreviations are allowed. (2 pts)

3. State and list the percentages of the forms of carbon dioxide when it's transported. (2 pts)

4. List the following from most specific to least specific: Bronchi, alveoli, bronchiole, bronchus (2 pts)

5. Explain why the C-rings of the trachea are incomplete. (2 pts)

6. Describe the components of both red pulp and white pulp. (2 pts, 1 pt for each)

Red pulp -

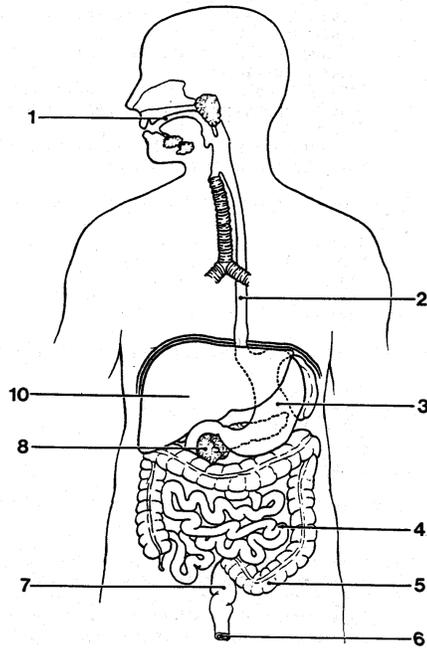
White pulp -

7. Name the 3 groups of nodules within the body. (1 pt for each correct group listed, 3 pts in total)

8. State the function of surfactant in the lungs. (2 pts)

9. Explain what compliance measures in the lungs. (2 pts)

10. State the function of cytotoxic cells in the immune system. (2 pts)



11. State the name and function of 2. (1 pt for name, 1 pt for function)

12. State the name and function of 4. (1 pt for name, 1 pt for function)

13. State the name and function of 8. (1 pt for name, 1 pt for function)

14. State the name and function of 1. (1 pt for name, 1 pt for function)

15. State the name and function of 10. (1 pt for name, 1 pt for function)

16. What are the 4 common signs of inflammation? (2 pts, .5 points for each correct sign)

17. What are the five types of pathogens? (2.5 pts, .5 points for each correct type)

18. Explain difference between passive and active immunity - give an example of each. (2 pts, 1 pt for each)

Active -

Passive -

19. A person with type AB blood contains what antigens? (2 pts)

20. Name the hormone produced by the medulla of the thymus thought to help T-cells mature. (2 pts)

Section 3 - Matching Section: Each correct answer earns one point.

Match the antibody to the details of that antibody.

- | | |
|------------|--|
| 1. IgA ___ | a) Capable of crossing placenta to fetus, makes up about 75% of all human antibodies, has 4 forms |
| 2. IgD ___ | b) Binds to allergens and triggers histamine release from mast cells and basophils |
| 3. IgG ___ | c) Prevents colonization by pathogens before reaching bloodstream - most important antibody in local immunity |
| 4. IgE ___ | d) Expressed on the surface of B cells and in a secreted form with very high avidity |
| 5. IgM ___ | e) Antigen receptor on B cells that have not been exposed to antigens |

Match the description to the disease/disorder. Not all descriptions may be used.

- | | |
|-------------------------------------|--|
| 1. Systemic Lupus Erythematosus ___ | a) A long-term, progressive disease of the lungs that primarily causes shortness of breath due to over-inflation of the alveoli |
| 2. Grave's Disease ___ | b) Uncontrolled growth of abnormal cells that start off in one or both lungs; usually in the cells that line the air passages |
| 3. Emphysema ___ | c) An inflammation of the lining of your bronchial tubes |
| 4. Contact Dermatitis ___ | d) A condition in which a membrane consisting of a layer of tissue that lines the inner side of the chest cavity and a layer of tissue that surrounds the lungs becomes inflamed |
| 5. Hepatitis ___ | e) A type of inflammatory bowel disease that may affect any part of the gastrointestinal tract from mouth to anus |
| 6. Crohn's Disease ___ | |
| 7. Cystic Fibrosis ___ | |
| 8. Acute Rhinitis ___ | |

9. Pleurisy ___
10. AIDS ___
11. Tuberculosis ___
12. Bronchitis ___
13. Pneumonia ___
14. Rheumatoid Arthritis ___
15. Pulmonary Edema ___
- f) An autoimmune disease in which the body's immune system mistakenly attacks healthy tissue in many parts of the body
- g) A condition caused by excess fluid in the lungs, which collects in the numerous air sacs in the lungs, making it difficult to breathe
- h) A red, itchy rash caused by direct contact with a substance or an allergic reaction to it
- i) Abnormal enlargement of the butterfly-shaped gland below the Adam's apple
- j) Inflammation of the liver
- k) A disease in which there is a severe loss of the body's cellular immunity, greatly lowering the resistance to infection
- l) A progressive, genetic disease that causes persistent lung infections and limits the ability to breathe over time because of a thick, sticky buildup of mucus in the lungs, pancreas, and other organs.
- m) Chronic liver damage from a variety of causes leading to scarring and liver failure.
- n) Lung inflammation caused by bacterial or viral infection, in which the air sacs fill with pus and may become solid.
- o) Irritation and inflammation of the mucous membrane inside nose
- p) A type of autoimmune problem that causes the thyroid gland to produce too much thyroid hormone
- q) An infectious bacterial disease characterized by the growth of nodules (tubercles) in the tissues, especially the lungs
- r) Complete or partial collapse of a lung or a lobe of a lung
- s) An autoimmune disease that causes chronic inflammation of the joints and other areas of the body

Section 4 - True/False: Each correct answer earns one point.

1. The hyoid bone is part of the larynx. (T/F) __
2. Exterior of lobule (in the thymus) secretes thymosin thought to aid T cells to mature. (T/F) __
3. The vestibular folds of the larynx have no function in speech. (T/F) __
4. Another word for swallowing is deglutition. (T/F) __
5. Mass contractions are mixing contractions that occur in the small intestine. (T/F) __
6. Teeth are distributed in two dental arches. One is called the maxillary arch and the other is called the mandibular arch. (T/F) __
7. Type O blood is considered the universal recipient. (T/F) __
8. Monocytes circulate in the blood for 1-2 days before being called macrophages once they reach organs. (T/F) __
9. Natural flora in the intestine cause pathogens to grow. (T/F) __
10. SALT (skin-associated lymphatic tissue) is associated with the hypodermis of the skin. (T/F) __

Section 5 - Labelling: Each correct answer earns one point.

