Mnstrviola's Anatomy Practice Test- v 2.0

Section I: Multiple Choice- worth 1 point each. ¼ point penalty for each wrong answer

1. Which is NOT a function of the respiratory system?
    a. Olfaction
    b. Voice production
    c. Regulation of blood pH
    d. **Production of carbon dioxide**

2. Which is NOT a part of the lower respiratory tract?
    a. Bronchi
    b. Lungs
    c. **Pharynx**
    d. Larynx

3. The nostrils...
    a. are also known as the nasal septum
    b. **are the external openings of the nose**
    c. are the site of gas exchange
    d. are the openings into the pharynx

4. How many conchae are located in the nasal cavity?
    a. 0
    b. 1
    c. 2
    d. **3**

5. Which of these is NOT a region of the pharynx?
    a. Orophaynyx
    b. Nasopharynx
    c. **Gastropharynx**
    d. Laryngopharynx

6. Which of these is NOT a part of the larynx?
    a. **Hyoid cartilage**
    b. Thyroid cartilage
    c. Cuneiforn cartilage
    d. Cricoid cartilage

7. The uvula...
    a. is located in the lungs
    b. **is part of the soft palate**
    c. is microscopic
    d. is located in the laryngopharynx

8. The alveoli...
    a. **are the site of gas exchange**
    b. are larger than the bronchi
    c. are located in the bronchus
    d. are covered in cartilage

9. The visceral pleura...
    a. lines the walls of the thorax
    b. is a cartilage covering the diaphragm
    c. is larger than the parietal pleura
    d. **covers the surface of the lung**

10. The diaphragm...
    a. is made of smooth muscle
    b. is not necessary for respiration
    c. **is controlled by the phrenic nerve**
    d. is the only muscle associated with respiration

11. Which is NOT a function of the digestive system?
    a. **Elimination of urine**
    b. Breaking down food
    c. Providing nutrients
    d. Taking in food

12. What is mastication?
    a. **chewing**
    b. swallowing
    c. digestion
    d. absorbation

13. How many teeth are in the normal adult mouth?
    a. 20
    b. 16
    c. **32**
    d. 24

14. Which of these is NOT a salivary gland?
    a. **subpharyngeal**
    b. submandibluar
    c. parotid
    d. sublingual

15. During deglutition...
    a. the stomach breaks down carbohydrates
    b. the cardiac sphincter closes
    c. saliva is secreted into the mouth
    d. **food bolus is transported from the mouth**

16. What is chyme?
    a. the wall of the stomach
    b. the folds of the stomach
    c. **bolus that has been digest further**
    d. the hormone which activates pepsinogen

17. Which is NOT a part of the small intestine?
    a. ileum
    b. **caecum**
    c. jejunum
    d. duodenum

18. What produces bile?.
    a. duodenum
    b. stomach
    c. **liver**
    d. pancreas

19. Which is NOT part of the large intestine?
    a. Ascending colon
    b. Transverse colon
    c. Descending colon
    d. **Arytenoid colon**

20. The large intestine absorbs...
    a. proteins
    b. **water**
    c. carbohydrates

d. sugars

Section II: Fill in the Blanks- worth two points for each blank. No penalty for wrong answer

1. Food is prevented from entering the trachea by the epiglottis and the **vestibular folds**.
2. The **vocal cords** vibrate to produce sounds when air flows through the larynx.
3. During forceful inspiration, the diaphragm **contracts** and the external intercoastals **elevates** the rib cage, increasing the volume of the thoracic cavity.
4. Inspiration is usually a(n) **active** process, while expiration is usually a(n) **passive** process.
5. The lungs do not normally collapse because **surfactant** reduces the surface tension of the fluid lining the alveoli, and pleural pressure is **less** than alveolar pressure.
6. The right lung has **3** lobes while the left lung has **2** lobes.
7. Oxygen and carbon dioxide pass from the alveoli to the capillary by the process of **diffusion**.
8. **Spirometry** is the process of measuring volumes of air that move throughout the respiratory system.
9. The diaphragm is located **under** the lungs.
10. The Hering-Breuer reflex limits the extent of **inspiration**.
11. The body wall of the abdominal cavity and the abdominal organs are covered with **peritoneum or mesentery**.
12. The appendix is a **vestigial** organ, its function was probably lost through evolution.
13. The oral vestibule is the space between the teeth and the **cheeks**.
14. The large folds on the inner stomach walls are called **rugae**.
15. Approximately 2 liters of gastric secretions is produced in a day.
16. The **Ileocecal** Valve allows materials to move from the ileum to the large intestine, but not back.
17. Mucus is produced by **goblet** cells.
18. The three longitudal strips of muscle that are on the outer walls of the colon are called **teniae coli**.
19. The large intestine is the main site of **water** absorption.
20. It takes food about **18** hours to travel through the alimentary canal.

Section III: Short Answer (1-3 sentences)- worth three points each. No penalty for wrong answer
- Be as specific as you can!

1. Describe the advantages and/or disadvantages of breathing through your mouth.
   When you breathe in through your mouth, air is not filtered, warmed, or humidified like it is when you breathe through your nose.

2. Which bronchus is a foreign object most likely to be lodged in? Why?
   The right bronchus is the location where a foreign object is most likely to be lodged in. It is wider than the left bronchus as well as more vertically oriented.

3. Explain the purpose of villi and microvilli.
   Villi and microvilli increase the surface area of the small intestine. Because nutrient absorption only occurs on the inner surface of the small intestine, it is important that the small intestine has the greatest amount of surface area possible.
4. What are long and short-term effects of exercise on the respiratory system?
   During exercise, respiration becomes an active process and more muscles are involved in it as diffusing capacity increases. This is because there is a greater demand for gas exchange. In the long run, the lungs become more resilient and efficient.
5. Describe the components of the palate.
   The palate consists of the soft palate and the hard palate. The hard palate is more towards the front and is the roof of the mouth. The soft palate is towards the back.

6. Describe the differences between a carbohydrate, lipid, and protein in relation to the digestive system.
   Carbohydrates are broken down into saccharides and then converted into stuff like glucose. Lipids are first emulsified, broken down, and then mostly converted into chylomicrons. Proteins are broken down into amino acids and then transported to cells for energy.
7. Describe the function of the large intestine.
   The large intestine converts material from the large intestine into feces by absorbing water. It also absorbs some salts and potassium.

8. What are long and short-term effects of exercise on the digestive system?
   Exercise that doesn't produce discomfort quickens digestion while exercise that produces discomfort prolongs digestion. In the long run, strenuous exercise inhibits both secretory and motor functions of the stomach.
9. Is the "sinus" the same thing as the "nasal cavity"? Explain.
   No, they are not the same. Sinuses are air-filled cavities located in bone. The nasal cavity is much larger and is vital to the transport of air. The nasal cavity has features sinuses don't such as cilia.

Section IV: Digestive Secretion Chart- fill in the blanks. 1 point for each blank. No penalties
- Be as specific as you can!

Name	Function	Production Site	Secretion Site
Peptidases	Digests polypeptides	**Small Intestine**	**Small Intestine**
Lipase	Digests Lipids	Salivary Glands	Mouth
Hydrochloric Acid	**Kills Bacteria, activates pepsin**	**Gastric Glands**	**Stomach**
Pepsin(ogen)	Digests Protein	Gastric Glands	**Stomach**
Nuclease	Digests Nucleic Acids	**Pancreas**	Duodenum
Sucrase	Digests Sucrose	**Small Intestine**	Small Intestine
Lactase	**Digests Lactose**	**Small Intestine**	**Small Intestine**
Bile	**Emulsifies Fats**	**Liver**	**Duodenum**
Secretin	Stimulates Bicarbonate Secretion To Counter Acidity	Duodenum	Duodenum
Salivary Amylase	**Digests Starch**	**Salivary Glands**	**Mouth**
Maltase	**Digests Maltose**	**Small Intestine**	**Small Intestine**
Mucus	Protects from stomach acid	Duodenum (Goblet Cells)	Duodenum

Section V: Pulmonary Volumes and Capacities- 2 points for each question, no penalties

Average pulmonary volumes for young adult male

1. TV- **500**mL
2. IRV- **3000**mL
3. ERV- **1100**mL
4. RV- **1200**mL

Pulmonary Capacity equations

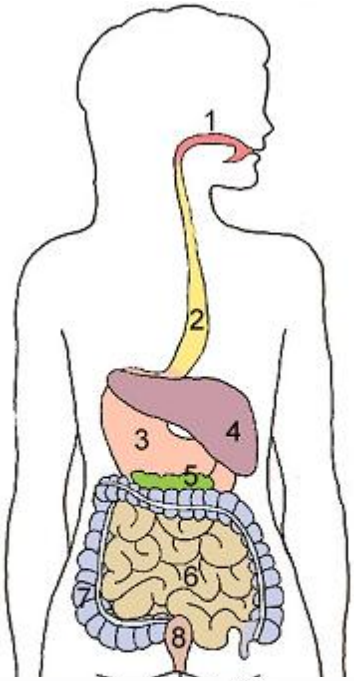
1. Functional Residual Capacity= **RV** + **ERV**
2. Inspiratory Capacity= **TV**+ **IRV**
3. Vital Capacity= **ERV**+ **TV** + **IRV**

4. Total Lung Capacity= **TV** + **IRV** + **ERV** + **RV**

Section VI: Labeling Diagrams- worth 2 points each. No penalty for wrong answer.

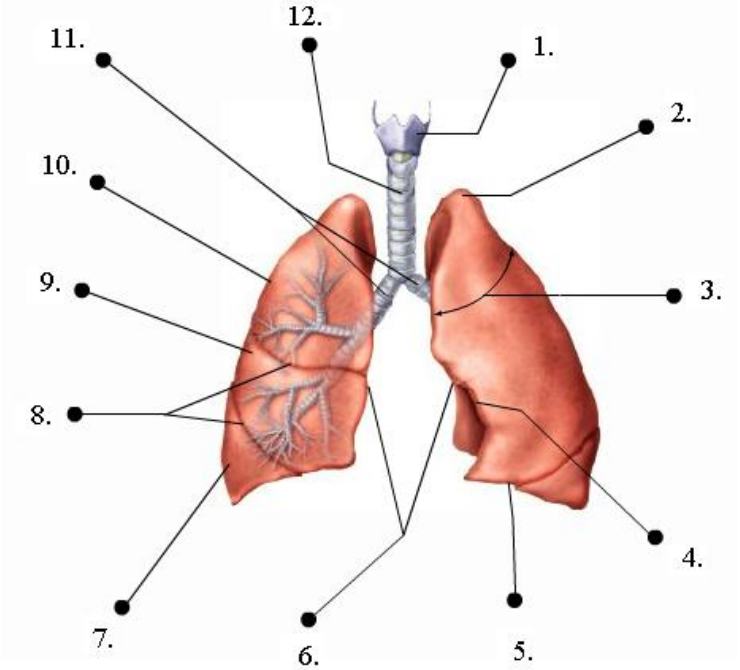
- Be as specific as you can!

Diagram I: Fill In the Blank



Mouth, Oral Cavity
Esophagus
Stomach
Liver
Gall Bladder
Small Intestine
Large Intestine
Anus, Rectum

Diagram II: Use words from the word list



Word List

1.	**f**	a. Trachea
2.	**g**	b. Primary Bronchi
3.	**j**	c. Superior Lobe
4.	**l**	d. Middle Lobe
5.	**h**	e. Inferior Lobe
6.	**i**	f. Larynx
7.	**e**	g. Apex
8.	**k**	h. Base
9.	**d**	i. Mediastinal Surfaces
10.	**c**	j. Costal Surfaces
11.	**b**	k. Fissures
12.	**a**	l. Cardiac Impression

Section VII: Diseases Identification- 6 points each

You're a doctor in this section. Diagnose each patient with the most specific and most likely condition(s), and identify ways the patient could treat his/her symptoms or disease(s). Be as descriptive as you can.

1. Mike Garcia is an avid golfer and an avid smoker. He has labored breathing. Using a spirometer, you see he has an expiratory reserve volume of 600mL. His chest is also larger than usual, and his lungs are less elastic.
   Emphysema- quit smoking, medications, antibiotics, supplemental oxygen

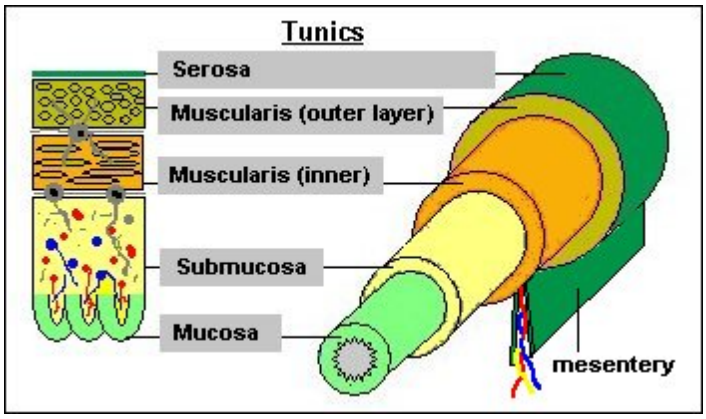
2. Dave Jones has been feeling nauseous and has no appetite. He refuses to eat even his favorite food, macaroni and cheese. He also started to vomit. He came to you because he felt pain in his lower right abdomen. You apply pressure to his McBurney's point and it is tender.
   Appendicitis- an appendectomy

3. Ellen Chin loves to go scuba diving. She also loves spending time with her pet Spots, the dog. One day, she has a convulsion, faints, and is rushed to the hospital. When she wakes up, she experiences pain in her eye and when she breathes.
   Oxygen toxicity- oxygen therapy

4. Thomas Green is a 50 year old man whose favorite dinner is pizza and milk. However, whenever his wife makes him pizza and milk for dinner he has a stomach ache. He describes it as having "a burning sensation in my stomach that lasts for an hour or so". He has recently traveled to Paris. Also, he often takes aspirin to help relieve stress from work. He says that he does not experience much flatulence or diarrhea.
   Stomach Ulcer/Peptic Ulcer/Gastric Ulcer- Medicines including antibiotics, avoiding stress and spicy foods as well as not smoking and avoiding alcohol.

5. Patricia Gomez is back to your office. You have diagnosed her with hepatitis before. She says she experiences pain on the right side of her abdomen and has diarrhea. She also has pain around her joints. You notice her skin is yellower than usual, but she says that it's just a tan. Patricia also looks skinnier than usual. Looking at her past medical history, you notice she had a low weight at birth and was also diagnosed with cirrhosis before. Her parents and grandparents were diagnosed with Crohn's disease. You touch her forehead and it's hotter than usual. (Hint: There are two diseases)
   Crohn's Disease- Medicines, nutrient supplements, healthy diet, surgery

Section VIII: Digestive Layers- Label the diagram, and describe each layer. 4 points each



1. **Serosa- Lubricated to allow movement against adjacent structures**

2. **Muscularis- Longitudinal: Moves material throughout small intestine**

3. **Musclularis- Moves material throughout small intestine**

4. **Submucosa- Contains nerves, blood vessels, glands**

5. **Mucosa- resists abrasion, absorbs and secretes**

Scoring:

Section I: _____ out of 20 points

Section II: _____ out of 40 points

Section III: _____ out of 27 points

Section IV: _____ out of 25 points

Section V: _____ out of 16 points

Section VI: _____ out of 40 points

Section VII: _____ out of 30 points

Section VIII: _____ out of 20 points

+ 5 free points

= _____ **out of 223 total points**

Ties:
Ties are based on the scores on the sections starting from the first to the last. If two teams are tied, Section I is looked at first. If one has a higher score in Section I, that team wins the tie. If not, it goes to Section II and etc. until the tie is broken.