

# Bio 100 Exam 2

Student: \_\_\_\_\_

1. The major function(s) of the blood include/includes \_\_\_\_\_.
  - A. transporting oxygen, hormones, and nutrients
  - B. carrying waste products
  - C. regulating body temperatures and pH
  - D. fighting pathogens
  - E. all of the above
  
2. The two major components of blood are:
  - A. red blood cells and white blood cells
  - B. plasma and serum
  - C. plasma and red blood cells
  - D. formed elements and plasma
  - E. platelets and plasma
  
3. Choose the following substances that you do NOT normally find in blood plasma.
  - A. dissolved  $O_2$ ,  $CO_2$ , ions
  - B. glucose, amino acids
  - C. urea
  - D. plasma proteins
  - E. All of the choices are found in blood plasma.
  
4. Which of the following are actually cell fragments and not whole cells?
  - A. RBCs
  - B. WBCs
  - C. platelets
  - D. albumens
  - E. globulins
  
5. RBC's are better known as \_\_\_\_\_ and WBC's are better known as \_\_\_\_\_.
  - A. lymphocytes, monocytes
  - B. erythrocytes, eosinophils
  - C. leukocytes, erythrocytes
  - D. erythrocytes, leukocytes
  - E. macrophages, neutrophils

6. The pH of Karl's blood was 7.6. The normal pH of blood is about 7.4. As a result, he was suffering from \_\_\_\_\_.
- A. acidosis
  - B. alkalosis
  - C. hemophilia
  - D. leukemia
  - E. erythroblastosis fetalis
7. Mature human red blood cells:
- A. have a nucleus
  - B. are biconcave discs without a nucleus
  - C. are rare in the bloodstream
  - D. carry plasma
  - E. fight pathogens
8. The combination of oxygen and hemoglobin in the lungs forms the bright red molecule:
- A. myoglobin
  - B. oxyhemoglobin
  - C. deoxyhemoglobin
  - D. hydroxyhemoglobin
  - E. None of the choices are correct.
9. The hormone \_\_\_\_\_ produced in the kidneys stimulates production of red blood cells.
- A. carbonic anhydrase
  - B. prolactin
  - C. erythropoietin
  - D. Adrenalin
  - E. Lipase
10. The newborn exhibited jaundice as the result of \_\_\_\_.
- A. the kidneys secreting too little urine
  - B. the blood being too thick
  - C. a heart valve disorder
  - D. failure of the liver to excrete heme
  - E. low levels of iron in the blood
11. \_\_\_\_\_ are organisms such as viruses and bacteria that are capable of causing disease.
- A. Symbionts
  - B. Teratogens
  - C. Carcinogens
  - D. Mutagens
  - E. Pathogens

12. \_\_\_\_\_ exist in some bacteria and prevent them from being destroyed by phagocytic white blood cells and certain one-celled organisms.
- A. Pili
  - B. Fimbriae
  - C. Flagella
  - D. Plasmids
  - E. Capsules
13. Unfortunately many people think that all bacteria are bad, identify the positive contributions of some bacteria.
- A. bacteria can serve as decomposers in the environment
  - B. bacteria are important in the wine, cheese and bread industry
  - C. bacteria are important in biotechnology
  - D. some bacteria are beneficial residents of the digestive tract
  - E. All of the above
14. An additional ring of DNA found in some bacteria is called a:
- A. fimbriae
  - B. plasmid
  - C. prion
  - D. cytokine
  - E. pili
15. Choose the following statement that most accurately describes viruses.
- A. They contain a protein coat called a capsid.
  - B. They may contain genomic DNA or RNA.
  - C. They are acellular.
  - D. They are obligate intracellular parasites.
  - E. All of the choices are correct.
16. Prions cause degenerative diseases of the \_\_\_\_\_ system.
- A. cardiovascular
  - B. digestive
  - C. urinary
  - D. lymphatic
  - E. nervous
17. Lymphatic capillaries called \_\_\_\_\_ are located in the small intestines.
- A. tonsils
  - B. nodes
  - C. polyps
  - D. adenoids
  - E. lacteals

18. Red bone marrow and the \_\_\_\_\_ are considered primary lymphatic organs and lymph nodes and the \_\_\_\_\_ are considered secondary lymphatic organs.
- A. spleen, liver
  - B. thymus, liver
  - C. tonsils, thymus
  - D. thymus, spleen
  - E. spleen, tonsils
19. \_\_\_\_\_ is known as programmed cell death.
- A. Apoptosis
  - B. Cytokinesis
  - C. Necrosis
  - D. Synthesis
  - E. None of the above
20. Before working at the hospital, Beth was given a Mantoux skin test to detect tuberculosis. If it were positive, the site of the test would become hardened and red. This test uses the \_\_\_\_\_ response.  
Responses:
- A. anaphylactic
  - B. histamine
  - C. immediate allergic
  - D. delayed allergic
  - E. none of the above
21. When you hold a piece of bread in your mouth, what enzyme initiates the process of starch digestion?
- A. salivary lipase
  - B. salivary protease
  - C. salivary sucrase
  - D. salivary amylase
  - E. salivary lactase
22. The rhythmic contractions of the digestive tract that allow movement of foodstuffs are called:
- A. peritoneum
  - B. periosteum
  - C. peristalsis
  - D. perineum
  - E. none of the above

23. Muscles that encircle tubes and act as circular valves are called:
- A. frenula
  - B. sphincters
  - C. cannula
  - D. anastomoses
  - E. buccinators
24. The \_\_\_\_\_ is a muscular tube that passes foodstuffs from the mouth to the stomach.
- A. epiglottis
  - B. trachea
  - C. nasopharynx
  - D. esophagus
  - E. pharynx
25. What is the role of HCL in the stomach?
- A. It is a symptom of indigestion.
  - B. It contributes only to stomach ulcers.
  - C. It is a digestive enzyme.
  - D. It aids digestion of starch.
  - E. It increases the effectiveness of pepsin.
26. \_\_\_\_\_ is an enzyme secreted by the pancreas that works in the small intestines in order to begin the digestion of proteins.
- A. Nuclease
  - B. Lipase
  - C. Pepsis
  - D. Amylase
  - E. Trypsin
27. In the small intestines, \_\_\_\_\_ serves as an emulsifying agent.
- A. lipase
  - B. bile
  - C. amylase
  - D. pepsin
  - E. maltase
28. Pancreatic juice does not contain \_\_\_\_\_.
- A. sodium bicarbonate
  - B. trypsin
  - C. pancreatic amylase
  - D. maltase
  - E. none of the above

29. Patients with cystic fibrosis have to take supplemental enzymes to help them digest fats, thus their \_\_\_\_\_ is malfunctioning.
- A. liver
  - B. stomach
  - C. large intestines
  - D. pancreas
  - E. gallbladder
30. Mike was concerned because he was exhibiting loss of appetite, muscle cramps, and general lethargy. This could be a sign of too little \_\_\_\_\_ in his diet.
- A. calcium
  - B. iron
  - C. magnesium
  - D. sodium
  - E. sulfur
31. Which of the following is not considered a part of the upper respiratory tract?
- A. larynx
  - B. bronchus
  - C. nasal cavity
  - D. glottis
  - E. pharynx
32. Which of the following is not considered a part of the lower respiratory tract?
- A. lungs
  - B. bronchioles
  - C. bronchus
  - D. glottis
  - E. diaphragm
33. The process of breathing in is called \_\_\_\_\_ and the process of breathing out is called \_\_\_\_\_.
- A. inspiration, ventilation
  - B. expiration, ventilation
  - C. ventilation, moistening
  - D. inspiration, expiration
  - E. none of the above
34. The respiratory gases diffuse through \_\_\_\_\_.
- A. small arteries
  - B. small veins
  - C. arterioles
  - D. capillaries
  - E. lymph system

35. The nasal cavities empty into the \_\_\_\_\_.
- A. eustachian tubes
  - B. lacrimal glands
  - C. larynx
  - D. vibrissae
  - E. nasopharynx
36. The \_\_\_\_\_ tubes lead from the nasopharynx to the middle ears.
- A. bronchial
  - B. eustachian or auditory
  - C. fallopian or auditory
  - D. tracheal
  - E. none of the above
37. Manny choked because a morsel of food slipped by his \_\_\_\_\_ that normally guards the superior opening of the larynx.
- A. oropharynx
  - B. epiglottis
  - C. auditory tube
  - D. endothelium
  - E. tonsils
38. The \_\_\_\_\_ houses the vocal cords.
- A. larynx
  - B. epiglottis
  - C. bronchus
  - D. pharynx
  - E. esophagus
39. The open part of the C-shaped rings of tracheal cartilage allows the \_\_\_\_\_ to expand when swallowing.
- A. uvula
  - B. esophagus
  - C. stomach
  - D. pharynx
  - E. bronchial tree
40. The windpipe is more accurately called the \_\_\_\_\_.
- A. pharynx
  - B. larynx
  - C. trachea
  - D. epiglottis
  - E. bronchial tree

41. The site of gas exchange in the lungs is called \_\_\_\_\_.
- A. alveoli
  - B. bronchi
  - C. villi
  - D. cristae
  - E. lobules
42. Melissa was involved in an automobile accident. Because of the trauma she was diagnosed with a floating kidney. In this condition, the protective \_\_\_\_\_ was damaged.
- A. Bowman's capsule
  - B. ureter
  - C. Loop of Henle
  - D. renal capsule
  - E. None of the above
43. The function of the urethra is to connect the urinary bladder to the:
- A. kidney
  - B. ureter
  - C. liver
  - D. exterior of the body
  - E. lobules
44. The tube that transports urine from the kidney to the urinary bladder is the:
- A. Loop of Henle
  - B. ureter
  - C. collecting duct
  - D. proximal convoluted tubule
  - E. urethra
45. \_\_\_\_\_ is the primary nitrogenous end product of humans.
- A. Ammonia
  - B. Uric acid
  - C. Urea
  - D. Creatine phosphate
  - E. ATP
46. To stimulate red blood cell production, the kidneys will secrete the hormone \_\_\_\_\_.
- A. aldosterone
  - B. renin
  - C. erythropoietin
  - D. atrial natriuretic hormone
  - E. calcitrol



47. How do the urinary and reproductive tract come into direct contact?
- A. In females the urethra joins with the vagina internally before exiting the body.
  - B. In males, semen and urine are transported through the urethra.
  - C. In females, the urethra empties directly into the uterus.
  - D. There is no direct contact between the urinary and reproductive tracts.
  - E. none of the above
48. Jennifer asked her anatomy teacher why were females more prone to urinary bladder infections. Her reply was:
- A. In males the urethra is longer.
  - B. In females the urethra is absent.
  - C. In females the urethra is longer.
  - D. In females the urethra is shorter.
  - E. In females the urinary bladder is smaller.
49. In the kidneys, \_\_\_\_\_ serve to filter blood and produce urine.
- A. utricles
  - B. nephrons
  - C. glomerulus
  - D. lobules
  - E. pyramids
50. The \_\_\_\_\_ is very important in the reabsorption of water in the kidneys.
- A. distal convoluted tubule
  - B. glomerular capsule
  - C. proximal convoluted tubule
  - D. loop of the nephron or loop of Henle
  - E. none of the above
51. The \_\_\_\_\_ is a cuplike structure that is part of the closed end of a nephron.
- A. glomerular capsule (Bowman's capsule)
  - B. convoluted tubule
  - C. Loop of Henle
  - D. renal vein
  - E. renal artery
52. Antidiuretic hormone (ADH) is released by the \_\_\_\_\_.
- A. anterior lobe of the pituitary gland
  - B. posterior lobe of the pituitary gland
  - C. hypothalamus
  - D. adrenal glands
  - E. thymus

53. The major function/functions of the skeletal system includes the following:
- A. storing essential minerals
  - B. protecting vital organs
  - C. producing of blood
  - D. giving the body support and shape
  - E. All of the choices are correct.
54. The shaft of a long bone is called the \_\_\_\_\_.
- A. diaphysis
  - B. endostium
  - C. epiphysis
  - D. periosteum
  - E. medullary cavity
55. \_\_\_\_\_ are tubular units that make up compact bone.
- A. Struts
  - B. Lamellae
  - C. Lacunae
  - D. Osteons
  - E. Trabeculae
56. Fibrocartilage composes which of the following:
- A. the ends of long bones
  - B. the external ear
  - C. the intervertebral disks
  - D. the skull
  - E. the tarsals
57. Cartilage that is firm but somewhat flexible, contains abundant collagen, and is found at the ends of long bones is known as \_\_\_\_\_.
- A. hyaline cartilage
  - B. fibrocartilage
  - C. elastic cartilage
  - D. ligamental cartilage
  - E. none of the above
58. \_\_\_\_\_ connect bone to muscle and \_\_\_\_\_ connect bone to bone.
- A. Ligaments, tendons
  - B. Tendons, ligaments
  - C. Bursae, menisci
  - D. Bursae, tendons
  - E. Menisci, ligaments

59. The layers of the epiphyseal plate include:
- A. Resting zone
  - B. Proliferating zone
  - C. Degenerating zone
  - D. Ossification zone
  - E. all of the above
60. Choose the correct pairing concerning the appendicular skeleton
- A. shoulder blade; clavicle
  - B. collar bone; scapula
  - C. arm bone; humerus
  - D. tarsal bones; hands
  - E. carpal bones; foot

## Bio 100 Exam 2 Key

1. The major function(s) of the blood include/includes \_\_\_\_\_.
- A. transporting oxygen, hormones, and nutrients
  - B. carrying waste products
  - C. regulating body temperatures and pH
  - D. fighting pathogens
  - E.** all of the above

The major functions of the blood include: transporting oxygen, hormones, and nutrients, carrying waste products, regulating body temperatures and pH, and fighting pathogens.

*Chapter reference: 6*  
*Figure/section reference: 6.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 06 #1*  
*Question type: missing word sentence*  
*Topic Area: Cardiovascular System: Blood*

2. The two major components of blood are:
- A. red blood cells and white blood cells
  - B. plasma and serum
  - C. plasma and red blood cells
  - D.** formed elements and plasma
  - E. platelets and plasma

Formed elements and plasma are the two major components of the blood.

*Chapter reference: 6*  
*Figure/section reference: 6.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 06 #2*  
*Question type: multiple choice*  
*Topic Area: Cardiovascular System: Blood*

3. Choose the following substances that you do NOT normally find in blood plasma.

- A. dissolved O<sub>2</sub>, CO<sub>2</sub>, ions
- B. glucose, amino acids
- C. urea
- D. plasma proteins
- E.** All of the choices are found in blood plasma.

Dissolved oxygen and carbon dioxide, ions. Glucose, amino acids, urea, and plasma proteins are found in the blood plasma

*Chapter reference: 6*  
*Figure/section reference: 6.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 06 #6*  
*Question type: missing word sentence*  
*Topic Area: Cardiovascular System: Blood*

4. Which of the following are actually cell fragments and not whole cells?

- A. RBCs
- B. WBCs
- C.** platelets
- D. albumens
- E. globulins

Platelets are cell fragments of whole cells.

*Chapter reference: 6*  
*Figure/section reference: 6.4*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 06 #7*  
*Question type: multiple choice*  
*Topic Area: Cardiovascular System: Blood*

5. RBC's are better known as \_\_\_\_\_ and WBC's are better known as \_\_\_\_\_.

- A. lymphocytes, monocytes
- B. erythrocytes, eosinophils
- C. leukocytes, erythrocytes
- D.** erythrocytes, leukocytes
- E. macrophages, neutrophils

RBC's are better known as erythrocytes and WBC's are better known as leukocytes.

*Chapter reference: 6*  
*Figure/section reference: 6.2 and 6.3*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 06 #8*  
*Question type: missing word sentence*  
*Topic Area: Cardiovascular System: Blood*

6. The pH of Karl's blood was 7.6. The normal pH of blood is about 7.4. As a result, he was suffering from \_\_\_\_\_.
- A. acidosis
  - B. alkalosis**
  - C. hemophilia
  - D. leukemia
  - E. erythroblastosis fetalis

The pH of Karl's blood was 7.6. The normal pH of blood is about 7.4. As a result, he was suffering from alkalosis.

*Chapter reference: 6*  
*Figure/section reference: 6.2*  
*Level of difficulty: Apply/Analyze*  
*Mader - Chapter 06 #10*  
*Question type: missing word sentence*  
*Topic Area: Cardiovascular System: Blood*

7. Mature human red blood cells:
- A. have a nucleus
  - B. are biconcave discs without a nucleus**
  - C. are rare in the bloodstream
  - D. carry plasma
  - E. fight pathogens

Mature human red blood cells are biconcave discs without a nucleus.

*Chapter reference: 6*  
*Figure/section reference: 6.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 06 #11*  
*Question type: missing word sentence*  
*Topic Area: Cardiovascular System: Blood*

8. The combination of oxygen and hemoglobin in the lungs forms the bright red molecule:
- A. myoglobin
  - B. oxyhemoglobin**
  - C. deoxyhemoglobin
  - D. hydroxyhemoglobin
  - E. None of the choices are correct.

Oxyhemoglobin is the combination of oxygen and hemoglobin in the lungs that forms the bright red molecule.

*Chapter reference: 6*  
*Figure/section reference: 6.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 06 #15*  
*Question type: multiple choice*  
*Topic Area: Cardiovascular System: Blood*

9. The hormone \_\_\_\_\_ produced in the kidneys stimulates production of red blood cells.
- A. carbonic anhydrase
  - B. prolactin
  - C. erythropoietin**
  - D. Adrenalin
  - E. Lipase

The hormone erythropoietin produced in the kidneys stimulates production of red blood cells.

*Chapter reference: 6*  
*Figure/section reference: 6.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 06 #18*  
*Question type: missing word sentence*  
*Topic Area: Cardiovascular System: Blood*

10. The newborn exhibited jaundice as the result of \_\_\_\_.
- A. the kidneys secreting too little urine
  - B. the blood being too thick
  - C. a heart valve disorder
  - D. failure of the liver to excrete heme**
  - E. low levels of iron in the blood

Jaundice indicates that the liver is failing to excrete heme.

*Chapter reference: 6*  
*Figure/section reference: 6.2*  
*Level of difficulty: Apply/Analyze*  
*Mader - Chapter 06 #20*  
*Question type: missing word sentence*  
*Topic Area: Cardiovascular System: Blood*

11. \_\_\_\_\_ are organisms such as viruses and bacteria that are capable of causing disease.

- A. Symbionts
- B. Teratogens
- C. Carcinogens
- D. Mutagens
- E.** Pathogens

Pathogens are organisms such as viruses and bacteria that are capable of causing disease.

*Chapter reference: 7*  
*Figure/section reference: 7.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 07 #1*  
*Question type: missing word sentence*  
*Topic Area: Lymphatic System and Immunity*

12. \_\_\_\_\_ exist in some bacteria and prevent them from being destroyed by phagocytic white blood cells and certain one-celled organisms.

- A. Pili
- B. Fimbriae
- C. Flagella
- D. Plasmids
- E.** Capsules

Capsules exist in some bacteria and prevent them from being destroyed by phagocytic white blood cells and certain one-celled organisms.

*Chapter reference: 7*  
*Figure/section reference: 7.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 07 #4*  
*Question type: missing word sentence*  
*Topic Area: Lymphatic System and Immunity*



13. Unfortunately many people think that all bacteria are bad, identify the positive contributions of some bacteria.
- A. bacteria can serve as decomposers in the environment
  - B. bacteria are important in the wine, cheese and bread industry
  - C. bacteria are important in biotechnology
  - D. some bacteria are beneficial residents of the digestive tract
  - E.** All of the above

Bacteria are important because they can serve as decomposers in the environment, are important in the wine, cheese and bread industry, are important in biotechnology, and some bacteria are beneficial residents of the digestive tract.

*Chapter reference: 7*  
*Figure/section reference: 7.1*  
*Level of difficulty: Apply/Analyze*  
*Mader - Chapter 07 #7*  
*Question type: missing word sentence*  
*Topic Area: Lymphatic System and Immunity*

14. An additional ring of DNA found in some bacteria is called a:
- A. fimbriae
  - B.** plasmid
  - C. prion
  - D. cytokine
  - E. pili

An additional ring of DNA found in some bacteria is called a plasmid.

*Chapter reference: 7*  
*Figure/section reference: 7.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 07 #8*  
*Question type: multiple choice*  
*Topic Area: Lymphatic System and Immunity*

15. Choose the following statement that most accurately describes viruses.
- A. They contain a protein coat called a capsid.
  - B. They may contain genomic DNA or RNA.
  - C. They are acellular.
  - D. They are obligate intracellular parasites.
  - E.** All of the choices are correct.

Viruses are acellular, obligate parasites that contain a protein coat called a capsid. Viruses may contain either DNA or RNA as their genetic material.

*Chapter reference: 7*  
*Figure/section reference: 7.1*  
*Level of difficulty: Apply/Analyze*  
*Mader - Chapter 07 #9*  
*Question type: multiple choice*  
*Topic Area: Lymphatic System and Immunity*

16. Prions cause degenerative diseases of the \_\_\_\_\_ system.
- A. cardiovascular
  - B. digestive
  - C. urinary
  - D. lymphatic
  - E.** nervous

Prions cause degenerative diseases of the nervous system.

*Chapter reference: 7*  
*Figure/section reference: 7.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 07 #13*  
*Question type: missing word sentence*  
*Topic Area: Lymphatic System and Immunity*

17. Lymphatic capillaries called \_\_\_\_\_ are located in the small intestines.
- A. tonsils
  - B. nodes
  - C. polyps
  - D. adenoids
  - E.** lacteals

Lymphatic capillaries called lacteals are located in the small intestines.

*Chapter reference: 7*  
*Figure/section reference: 7.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 07 #17*  
*Question type: missing word sentence*  
*Topic Area: Lymphatic System and Immunity*

18. Red bone marrow and the \_\_\_\_\_ are considered primary lymphatic organs and lymph nodes and the \_\_\_\_\_ are considered secondary lymphatic organs.
- A. spleen, liver
  - B. thymus, liver
  - C. tonsils, thymus
  - D. thymus, spleen**
  - E. spleen, tonsils

Red bone marrow and the thymus are considered primary lymphatic organs and lymph nodes and the spleen are considered secondary lymphatic organs.

*Chapter reference: 7*  
*Figure/section reference: 7.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 07 #20*  
*Question type: missing word sentence*  
*Topic Area: Lymphatic System and Immunity*

19. \_\_\_\_\_ is known as programmed cell death.
- A. Apoptosis**
  - B. Cytokinesis
  - C. Necrosis
  - D. Synthesis
  - E. None of the above

Apoptosis is known as programmed cell death.

*Chapter reference: 7*  
*Figure/section reference: Figure 7.4*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 07 #39*  
*Question type: missing word sentence*  
*Topic Area: Lymphatic System and Immunity*

20. Before working at the hospital, Beth was given a Mantoux skin test to detect tuberculosis. If it were positive, the site of the test would become hardened and red. This test uses the \_\_\_\_\_ response.  
Responses:
- A. anaphylactic
  - B. histamine
  - C. immediate allergic
  - D. delayed allergic**
  - E. none of the above

The Mantoux skin test is used to detect tuberculosis. If it is positive, the site of the test becomes hardened and red. This test uses the delayed allergic response.

*Chapter reference: 7*  
*Figure/section reference: Figure 7.6*  
*Level of difficulty: Apply/Analyze*  
*Mader - Chapter 07 #50*  
*Question type: missing word sentence*  
*Topic Area: Lymphatic System and Immunity*

21. When you hold a piece of bread in your mouth, what enzyme initiates the process of starch digestion?
- A. salivary lipase
  - B. salivary protease
  - C. salivary sucrase
  - D. salivary amylase**
  - E. salivary lactase

Salivary amylase initiates the process of starch digestion.

*Chapter reference: 8*  
*Figure/section reference: 8.2*  
*Level of difficulty: Apply/Analyze*  
*Mader - Chapter 08 #13*  
*Question type: Missing word sentence*  
*Topic Area: Digestive System and Nutrition*

22. The rhythmic contractions of the digestive tract that allow movement of foodstuffs are called:

- A. peritoneum
- B. periosteum
- C. peristalsis**
- D. perineum
- E. none of the above

The rhythmic contractions of the digestive tract that allow movement of foodstuffs are called peristalsis.

*Chapter reference: 8*  
*Figure/section reference: 8.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 08 #15*  
*Question type: Multiple choice*  
*Topic Area: Digestive System and Nutrition*

23. Muscles that encircle tubes and act as circular valves are called:

- A. frenula
- B. sphincters**
- C. cannula
- D. anastomoses
- E. buccinators

Muscles that encircle tubes and act as circular valves are called sphincters.

*Chapter reference: 8*  
*Figure/section reference: 8.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 08 #16*  
*Question type: Multiple choice*  
*Topic Area: Digestive System and Nutrition*

24. The \_\_\_\_\_ is a muscular tube that passes foodstuffs from the mouth to the stomach.

- A. epiglottis
- B. trachea
- C. nasopharynx
- D. esophagus**
- E. pharynx

The esophagus is a muscular tube that passes foodstuffs from the mouth to the stomach.

*Chapter reference: 8*  
*Figure/section reference: 8.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 08 #17*  
*Question type: Missing word sentence*  
*Topic Area: Digestive System and Nutrition*

25. What is the role of HCL in the stomach?
- A. It is a symptom of indigestion.
  - B. It contributes only to stomach ulcers.
  - C. It is a digestive enzyme.
  - D. It aids digestion of starch.
  - E.** It increases the effectiveness of pepsin.

In the stomach, HCL increases the effectiveness of pepsin.

*Chapter reference: 8*  
*Figure/section reference: 8.3*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 08 #24*  
*Question type: Multiple choice*  
*Topic Area: Digestive System and Nutrition*

26. \_\_\_\_\_ is an enzyme secreted by the pancreas that works in the small intestines in order to begin the digestion of proteins.
- A. Nuclease
  - B. Lipase
  - C. Pepsis
  - D. Amylase
  - E.** Trypsin

Trypsin is an enzyme secreted by the pancreas that works in the small intestines in order to begin the digestion of proteins.

*Chapter reference: 8*  
*Figure/section reference: table 8.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 08 #27*  
*Question type: Missing word sentence*  
*Topic Area: Digestive System and Nutrition*

27. In the small intestines, \_\_\_\_ serves as an emulsifying agent.
- A. lipase
  - B. bile**
  - C. amylase
  - D. pepsin
  - E. maltase

In the small intestines, bile serves as an emulsifying agent.

*Chapter reference: 8*  
*Figure/section reference: table 8.3*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 08 #28*  
*Question type: Missing word sentence*  
*Topic Area: Digestive System and Nutrition*

28. Pancreatic juice does not contain \_\_\_\_.
- A. sodium bicarbonate
  - B. trypsin
  - C. pancreatic amylase
  - D. maltase**
  - E. none of the above

Pancreatic juice does not contain maltase.

*Chapter reference: 8*  
*Figure/section reference: Figure 8.4*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 08 #33*  
*Question type: Missing word sentence*  
*Topic Area: Digestive System and Nutrition*

29. Patients with cystic fibrosis have to take supplemental enzymes to help them digest fats, thus their \_\_\_\_\_ is malfunctioning.
- A. liver
  - B. stomach
  - C. large intestines
  - D. pancreas**
  - E. gallbladder

Patients with cystic fibrosis have to take supplemental enzymes to help them digest fats, thus their pancreas is malfunctioning.

*Chapter reference: 8*  
*Figure/section reference: Figure 8.4*  
*Level of difficulty: Evaluate/Create*  
*Mader - Chapter 08 #34*  
*Question type: Missing word sentence*  
*Topic Area: Digestive System and Nutrition*

30. Mike was concerned because he was exhibiting loss of appetite, muscle cramps, and general lethargy. This could be a sign of too little \_\_\_\_\_ in his diet.
- A. calcium**
  - B. iron
  - C. magnesium
  - D. sodium
  - E. sulfur

Loss of appetite, muscle cramps, and general lethargy could be a sign of too little calcium in the diet.

*Chapter reference: 8*  
*Figure/section reference: Table 8.5*  
*Level of difficulty: Apply/Analyze*  
*Mader - Chapter 08 #49*  
*Question type: Missing word sentence*  
*Topic Area: Digestive System and Nutrition*



31. Which of the following is not considered a part of the upper respiratory tract?

- A. larynx
- B. bronchus**
- C. nasal cavity
- D. glottis
- E. pharynx

The bronchus is not considered a part of the upper respiratory tract.

*Chapter reference: 9*  
*Figure/section reference: Figure 9.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 09 #1*  
*Question type: Multiple choice*  
*Topic Area: Respiratory System*

32. Which of the following is not considered a part of the lower respiratory tract?

- A. lungs
- B. bronchioles
- C. bronchus
- D. glottis**
- E. diaphragm

The glottis is not considered a part of the lower respiratory tract.

*Chapter reference: 9*  
*Figure/section reference: Figure 9.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 09 #2*  
*Question type: Multiple choice*  
*Topic Area: Respiratory System*

33. The process of breathing in is called \_\_\_\_\_ and the process of breathing out is called \_\_\_\_\_.

- A. inspiration, ventilation
- B. expiration, ventilation
- C. ventilation, moistening
- D. inspiration, expiration**
- E. none of the above

The process of breathing in is called inspiration and the process of breathing out is called expiration.

*Chapter reference: 9*  
*Figure/section reference: 9.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 09 #3*  
*Question type: Missing word sentence*  
*Topic Area: Respiratory System*

34. The respiratory gases diffuse through \_\_\_\_\_.

- A. small arteries
- B. small veins
- C. arterioles
- D. capillaries**
- E. lymph system

The respiratory gases diffuse through capillaries.

*Chapter reference: 9*  
*Figure/section reference: 9.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 09 #7*  
*Question type: Missing word sentence*  
*Topic Area: Respiratory System*

35. The nasal cavities empty into the \_\_\_\_\_.

- A. eustachian tubes
- B. lacrimal glands
- C. larynx
- D. vibrissae
- E. nasopharynx**

The nasal cavity empties into the nasopharynx.

*Chapter reference: 9*  
*Figure/section reference: 9.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 09 #10*  
*Question type: Missing word sentence*  
*Topic Area: Respiratory System*

36. The \_\_\_\_\_ tubes lead from the nasopharynx to the middle ears.

- A. bronchial
- B. eustachian or auditory**
- C. fallopian or auditory
- D. tracheal
- E. none of the above

The Eustachian or auditory tubes lead from the nasopharynx to the middle ears.

*Chapter reference: 9*  
*Figure/section reference: 9.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 09 #11*  
*Question type: Missing word sentence*  
*Topic Area: Respiratory System*

37. Manny choked because a morsel of food slipped by his \_\_\_\_\_ that normally guards the superior opening of the larynx.
- A. oropharynx
  - B. epiglottis**
  - C. auditory tube
  - D. endothelium
  - E. tonsils

The epiglottis guards the superior opening of the larynx.

*Chapter reference: 9*  
*Figure/section reference: 9.2*  
*Level of difficulty: Apply/Analyze*  
*Mader - Chapter 09 #17*  
*Question type: Missing word sentence*  
*Topic Area: Respiratory System*

38. The \_\_\_\_\_ houses the vocal cords.
- A. larynx**
  - B. epiglottis
  - C. bronchus
  - D. pharynx
  - E. esophagus

The larynx houses the vocal cords.

*Chapter reference: 9*  
*Figure/section reference: 9.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 09 #19*  
*Question type: Missing word sentence*  
*Topic Area: Respiratory System*

39. The open part of the C-shaped rings of tracheal cartilage allows the \_\_\_\_\_ to expand when swallowing.
- A. uvula
  - B. esophagus**
  - C. stomach
  - D. pharynx
  - E. bronchial tree

The open part of the C-shaped rings of tracheal cartilage allows the esophagus to expand when swallowing.

*Chapter reference: 9*  
*Figure/section reference: 9.2*  
*Level of difficulty: Apply/Analyze*  
*Mader - Chapter 09 #22*  
*Question type: Missing word sentence*  
*Topic Area: Respiratory System*

40. The windpipe is more accurately called the \_\_\_\_\_.
- A. pharynx
  - B. larynx
  - C. trachea**
  - D. epiglottis
  - E. bronchial tree

The windpipe is more accurately called the trachea.

*Chapter reference: 9*  
*Figure/section reference: 9.3*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 09 #24*  
*Question type: Missing word sentence*  
*Topic Area: Respiratory System*

41. The site of gas exchange in the lungs is called \_\_\_\_\_.

- A.** alveoli
- B. bronchi
- C. villi
- D. cristae
- E. lobules

The site of gas exchange in the lungs is called alveoli.

*Chapter reference: 9*  
*Figure/section reference: 9.3*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 09 #32*  
*Question type: Missing word sentence*  
*Topic Area: Respiratory System*

42. Melissa was involved in an automobile accident. Because of the trauma she was diagnosed with a floating kidney. In this condition, the protective \_\_\_\_\_ was damaged.

- A. Bowman's capsule
- B. ureter
- C. Loop of Henle
- D.** renal capsule
- E. None of the above

Melissa was involved in an automobile accident. Because of the trauma she was diagnosed with a floating kidney. In this condition, the protective renal capsule was damaged.

*Chapter reference: 10*  
*Figure/section reference: 10.1*  
*Level of difficulty: Apply/Analyze*  
*Mader - Chapter 10 #5*  
*Question type: Missing word sentence*  
*Topic Area: Urinary System and Excretion*

43. The function of the urethra is to connect the urinary bladder to the:

- A. kidney
- B. ureter
- C. liver
- D.** exterior of the body
- E. lobules

The function of the urethra is to connect the urinary bladder to the outside of the body.

*Chapter reference: 10*  
*Figure/section reference: 10.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 10 #6*  
*Question type: Multiple choice*  
*Topic Area: Urinary System and Excretion*

44. The tube that transports urine from the kidney to the urinary bladder is the:

- A. Loop of Henle
- B.** ureter
- C. collecting duct
- D. proximal convoluted tubule
- E. urethra

The tube that transports urine from the kidney to the urinary bladder is the ureter.

*Chapter reference: 10*  
*Figure/section reference: 10.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 10 #7*  
*Question type: Multiple choice*  
*Topic Area: Urinary System and Excretion*

45. \_\_\_\_\_ is the primary nitrogenous end product of humans.

- A. Ammonia
- B. Uric acid
- C.** Urea
- D. Creatine phosphate
- E. ATP

Urea is the primary nitrogenous end product of humans.

*Chapter reference: 10*  
*Figure/section reference: 10.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 10 #8*  
*Question type: Missing word sentence*  
*Topic Area: Urinary System and Excretion*

46. To stimulate red blood cell production, the kidneys will secrete the hormone \_\_\_\_\_.
- A. aldosterone
  - B. renin
  - C. erythropoietin**
  - D. atrial natriuretic hormone
  - E. calcitrol

To stimulate red blood cell production, the kidneys will secrete the hormone erythropoietin.

*Chapter reference: 10*  
*Figure/section reference: 10.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 10 #10*  
*Question type: Missing word sentence*  
*Topic Area: Urinary System and Excretion*

47. How do the urinary and reproductive tract come into direct contact?
- A. In females the urethra joins with the vagina internally before exiting the body.
  - B. In males, semen and urine are transported through the urethra.**
  - C. In females, the urethra empties directly into the uterus.
  - D. There is no direct contact between the urinary and reproductive tracts.
  - E. none of the above

In males, semen and urine are transported through the urethra.

*Chapter reference: 10*  
*Figure/section reference: 10.1*  
*Level of difficulty: Apply/Analyze*  
*Mader - Chapter 10 #13*  
*Question type: Missing word sentence*  
*Topic Area: Urinary System and Excretion*

48. Jennifer asked her anatomy teacher why were females more prone to urinary bladder infections. Her reply was:
- A. In males the urethra is longer.
  - B. In females the urethra is absent.
  - C. In females the urethra is longer.
  - D. In females the urethra is shorter.**
  - E. In females the urinary bladder is smaller.

Females are more prone to urinary bladder infections because the urethra is shorter.

*Chapter reference: 10*  
*Figure/section reference: 10.1*  
*Level of difficulty: Apply/Analyze*  
*Mader - Chapter 10 #15*  
*Question type: Multiple choice*  
*Topic Area: Urinary System and Excretion*

49. In the kidneys, \_\_\_\_\_ serve to filter blood and produce urine.
- A. utricles
  - B. nephrons**
  - C. glomerulus
  - D. lobules
  - E. pyramids

In the kidneys, nephrons serve to filter blood and produce urine.

*Chapter reference: 10*  
*Figure/section reference: 10.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 10 #22*  
*Question type: Missing word sentence*  
*Topic Area: Urinary System and Excretion*

50. The \_\_\_\_\_ is very important in the reabsorption of water in the kidneys.
- A. distal convoluted tubule
  - B. glomerular capsule
  - C. proximal convoluted tubule
  - D. loop of the nephron or loop of Henle**
  - E. none of the above

The loop of the nephron or loop of Henle is very important in the reabsorption of water in the kidneys.

*Chapter reference: 10*  
*Figure/section reference: 10.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 10 #24*  
*Question type: Missing word sentence*  
*Topic Area: Urinary System and Excretion*



51. The \_\_\_\_\_ is a cuplike structure that is part of the closed end of a nephron.

- A.** glomerular capsule (Bowman's capsule)
- B. convoluted tubule
- C. Loop of Henle
- D. renal vein
- E. renal artery

The glomerular capsule (Bowman's capsule) is a cuplike structure that is part of the closed end of a nephron.

*Chapter reference: 10*  
*Figure/section reference: 10.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 10 #23*  
*Question type: Missing word sentence*  
*Topic Area: Urinary System and Excretion*

52. Antidiuretic hormone (ADH) is released by the \_\_\_\_\_.

- A. anterior lobe of the pituitary gland
- B.** posterior lobe of the pituitary gland
- C. hypothalamus
- D. adrenal glands
- E. thymus

Antidiuretic hormone (ADH) is released by the posterior lobe of the pituitary gland.

*Chapter reference: 10*  
*Figure/section reference: 10.4*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 10 #33*  
*Question type: Missing word sentence*  
*Topic Area: Urinary System and Excretion*

53. The major function/functions of the skeletal system includes the following:

- A. storing essential minerals
- B. protecting vital organs
- C. producing of blood
- D. giving the body support and shape
- E.** All of the choices are correct.

The major function/functions of the skeletal system includes the following: storing essential minerals; protecting vital organs; producing blood; and giving the body support and shape.

*Chapter reference: 11*  
*Figure/section reference: 11.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 11 #1*  
*Question type: Multiple choice*  
*Topic Area: Skeletal System*

54. The shaft of a long bone is called the \_\_\_\_\_.

- A.** diaphysis
- B. endostium
- C. epiphysis
- D. periosteum
- E. medullary cavity

The shaft of a long bone is called the diaphysis.

*Chapter reference: 11*  
*Figure/section reference: 11.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 11 #2*  
*Question type: Missing word sentence*  
*Topic Area: Skeletal System*

55. \_\_\_\_\_ are tubular units that make up compact bone.

- A. Struts
- B. Lamellae
- C. Lacunae
- D.** Osteons
- E. Trabeculae

Osteons are tubular units that make up compact bone.

*Chapter reference: 11*  
*Figure/section reference: 11.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 11 #3*  
*Question type: Missing word sentence*  
*Topic Area: Skeletal System*

56. Fibrocartilage composes which of the following:

- A. the ends of long bones
- B. the external ear
- C. the intervertebral disks**
- D. the skull
- E. the tarsals

Fibrocartilage composes the intervertebral disks.

*Chapter reference: 11*  
*Figure/section reference: 11.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 11 #11*  
*Question type: Missing word sentence*  
*Topic Area: Skeletal System*

57. Cartilage that is firm but somewhat flexible, contains abundant collagen, and is found at the ends of long bones is known as \_\_\_\_\_.

- A. hyaline cartilage**
- B. fibrocartilage
- C. elastic cartilage
- D. ligamental cartilage
- E. none of the above

Cartilage that is firm but somewhat flexible, contains abundant collagen, and is found at the ends of long bones is known as hyaline cartilage.

*Chapter reference: 11*  
*Figure/section reference: 11.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 11 #12*  
*Question type: Missing word sentence*  
*Topic Area: Skeletal System*

58. \_\_\_\_\_ connect bone to muscle and \_\_\_\_\_ connect bone to bone.

- A. Ligaments, tendons
- B. Tendons, ligaments**
- C. Bursae, menisci
- D. Bursae, tendons
- E. Menisci, ligaments

Tendons connect bone to muscle and ligaments connect bone to bone.

*Chapter reference: 11*  
*Figure/section reference: 11.1*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 11 #13*  
*Question type: Missing word sentence*  
*Topic Area: Skeletal System*

59. The layers of the epiphyseal plate include:

- A. Resting zone
- B. Proliferating zone
- C. Degenerating zone
- D. Ossification zone
- E. all of the above**

The layers of the epiphyseal plate include: the resting zone, the proliferating zone, the degenerating zone, and the ossification zone.

*Chapter reference: 11*  
*Figure/section reference: 11.2*  
*Level of difficulty: Remember/Understand*  
*Mader - Chapter 11 #22*  
*Question type: Multiple choice*  
*Topic Area: Skeletal System*

60. Choose the correct pairing concerning the appendicular skeleton

- A. shoulder blade; clavicle
- B. collar bone; scapula
- C. arm bone; humerus**
- D. tarsal bones; hands
- E. carpal bones; foot

The arm bone is correctly paired with the humerus.

*Chapter reference: 11*  
*Figure/section reference: 11.4*  
*Level of difficulty: Apply/Analyze*  
*Mader - Chapter 11 #43*  
*Question type: Multiple choice*  
*Topic Area: Skeletal System*



# Bio 100 Exam 2 Summary

<i>Category</i>	<i># of Questions</i>
Chapter reference: 10	11
Chapter reference: 11	8
Chapter reference: 6	10
Chapter reference: 7	10
Chapter reference: 8	10
Chapter reference: 9	11
Figure/section reference: 10.1	7
Figure/section reference: 10.2	3
Figure/section reference: 10.4	1
Figure/section reference: 11.1	6
Figure/section reference: 11.2	1
Figure/section reference: 11.4	1
Figure/section reference: 6.1	2
Figure/section reference: 6.2	6
Figure/section reference: 6.2 and 6.3	1
Figure/section reference: 6.4	1
Figure/section reference: 7.1	6
Figure/section reference: 7.2	2
Figure/section reference: 8.2	4
Figure/section reference: 8.3	1
Figure/section reference: 9.1	1
Figure/section reference: 9.2	6
Figure/section reference: 9.3	2
Figure/section reference: Figure 7.4	1
Figure/section reference: Figure 7.6	1
Figure/section reference: Figure 8.4	2
Figure/section reference: Figure 9.1	2
Figure/section reference: table 8.1	1
Figure/section reference: table 8.3	1
Figure/section reference: Table 8.5	1
Level of difficulty: Apply/Analyze	13
Level of difficulty: Evaluate/Create	1
Level of difficulty: Remember/Understand	46
Mader - Chapter 06	10
Mader - Chapter 07	10
Mader - Chapter 08	10
Mader - Chapter 09	11
Mader - Chapter 10	11
Mader - Chapter 11	8
Question type: missing word sentence	15

Question type: Missing word sentence	29
Question type: multiple choice	5
Question type: Multiple choice	10
Question type: Mutiple choice	1
Topic Area: Cardiovascular System: Blood	10
Topic Area: Digestive System and Nutrition	10
Topic Area: Lymphatic System and Immunity	10
Topic Area: Respiratory System	11
Topic Area: Skeletal System	8
Topic Area: Urinary System and Excretion	11