Bio 100 Exam 2

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 O₂, CO₂, 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. Fimbrae  
   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 $O_2$, $CO_2$ 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.

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.

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.
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.

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.
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.

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.

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.
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.

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

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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.

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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.
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.

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.

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.
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.

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.
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.

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.
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.

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.
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.

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.

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.
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.

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.

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.
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.

38. The _________ houses the vocal cords.

A. larynx
B. epiglottis
C. bronchus
D. pharynx
E. esophagus

The larynx houses the vocal cords.
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

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

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.

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.
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.

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.

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.
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.

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.

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.
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.

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.
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.

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.
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: 1.1**  
**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: 1.1**  
**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: 1.1**  
**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.

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.
58. __________ connection bone to muscle and __________ connection 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.

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.

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.
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