Import Settings:

Base Settings: Brownstone Default

Information Field: Complexity

Information Field: Ahead

Information Field: Subject

Information Field: Feedback

Information Field: Taxonomy

Information Field: Objective

Highest Answer Letter: D

Multiple Keywords in Same Paragraph: No

**Chapter: Anatomy and Physiology - Anatomy and Physiology- TBNK**

**Multiple Choice**

1. Which of the following structures comprise different types of tissues that work together to perform a particular function?

A) Cells

B) Organs

C) Organisms

D) Body systems

Ans: B

Complexity: Moderate

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 240

Feedback: Cellular Level, page 240

2. The osmotic pressure of a solution, or the ability to affect the movement of water, is:

A) osmosis.

B) osmolality.

C) osmolarity.

D) diffusion.

Ans: B

Complexity:

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 249

Feedback: Cellular Level, page 249

3. Substances that release ions when dissolved in water are called:

A) neutrons.

B) exocytes.

C) endocytes.

D) electrolytes.

Ans: D

Complexity: Easy

Ahead: Chemical Level

Subject: Anatomy and Physiology

Page: 293

Feedback: Chemical Level, page 293

4. If too much water enters a cell during osmosis, it will burst. This process is called:

A) diffusion.

B) crenation.

C) lysis.

D) viscosity.

Ans: C

Complexity: Easy

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 250

Feedback: Cellular Level, page 250

5. Any cell that ingests microorganisms or other cells is called a(n):

A) phagocyte.

B) endocyte.

C) exocyte.

D) pinocyte.

Ans: A

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 301–302

Feedback: The Nervous System, page 301–302

6. The substance that contains all the cellular contents between the cell membrane and the nucleus is called the:

A) protoplasm.

B) cytoplasm.

C) Golgi apparatus.

D) endoplasmic reticulum.

Ans: B

Complexity: Moderate

Ahead: Chemical Level

Subject: Anatomy and Physiology

Page: 241

Feedback Chemical Level, page 241

7. When oxygen levels are low or absent, the cells revert to a process of:

A) aerobic metabolism.

B) anaerobic metabolism.

C) anaerobic anabolism.

D) aerobic catabolism.

Ans: B

Complexity: Easy

Ahead: Cellular Level

Subject: Anatomy and Physiology

Pages: 247–248

Feedback: Cellular Level, pages 247–248

8. What type of tissue covers and lines internal organs?

A) Connective

B) Muscle

C) Epithelial

D) Striated

Ans: C

Complexity: Easy

Ahead: Tissue Level

Subject: Anatomy and Physiology

Page: 253

Feedback: Tissue Level, page 253

9. All of the following are voluntary muscles, EXCEPT:

A) skeletal muscle.

B) smooth muscle.

C) striated muscle.

D) somatic muscle.

Ans: B

Complexity: Easy

Ahead: Tissue Level

Subject: Anatomy and Physiology

Pages: 258–259

Feedback: Tissue Level, pages 258–259

10. The projection of the neurons that receives electrical impulses from other neurons is called a(n):

A) dendrite.

B) axon.

C) neuroglia.

D) motor fiber.

Ans: A

Complexity: Moderate

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 293

Feedback: The Nervous System, page 293

11. The integumentary system includes all of the following structures, EXCEPT:

A) the epidermis.

B) sweat glands.

C) hair follicles.

D) blood vessels.

Ans: D

Complexity: Easy

Ahead: The Integumentary System

Subject: Anatomy and Physiology

Page: 262

Feedback: The Integumentary System, page 262

12. The average total body water content of a healthy adult is approximately \_\_\_\_% of his or her body weight.

A) 50

B) 60

C) 70

D) 80

Ans: B

Complexity: Easy

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 248

Feedback: Cellular Level, page 248

13. The base of the epidermis, which continuously produces new cells that rise to the skin's surface, is called the:

A) corneal layer.

B) sebaceous layer.

C) germinal layer.

D) melanin layer.

Ans: C

Complexity: Easy

Ahead: The Integumentary System

Subject: Anatomy and Physiology

Page: 264

Feedback: The Integumentary System, page 264

14. The brain and spinal cord are connected through a large opening at the base of the skull called the:

A) foramen magnum.

B) lamboid suture.

C) vertebral foramen.

D) mastoid process.

Ans: A

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 274

Feedback: The Skeletal System, page 274

15. What is the cribriform plate?

A) Superior surface of the cranial vault that protects the cerebrum

B) Saddle-shaped depression in the middle of the sphenoid bone

C) Opening through which the brainstem passes from the cerebrum

D) Horizontal bone through which the olfactory nerve filaments pass

Ans: D

Complexity: Moderate

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 275

Feedback: The Skeletal System, page 275

16. All of the following are facial bones, EXCEPT the:

A) maxilla.

B) parietal.

C) palatine.

D) lacrimal.

Ans: B

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Pages: 275–276

Feedback: The Skeletal System, pages 275–276

17. Which of the following statements regarding the thyroid cartilage is correct?

A) It is the anterior part of the larynx.

B) It is inferior to the cricoid cartilage.

C) It is not easily seen in most people.

D) It lies directly posterior to the larynx.

Ans: A

Complexity: Moderate

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 277

Feedback: The Skeletal System, page 277

18. Which portion of the spinal column articulates with the pelvis?

A) Thoracic

B) Sacral

C) Lumbar

D) Coccyx

Ans: B

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 279

Feedback: The Skeletal System, page 279

19. The point where the first cervical vertebra (C1) articulates with the base of the skull is called the:

A) atlanto-occipital joint.

B) odontoid process.

C) vertebral foramen.

D) vertebra prominens.

Ans: A

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 278

Feedback: The Skeletal System, page 278

20. The upper section of the sternum is called the:

A) jugular notch.

B) xiphoid process.

C) angle of Louis.

D) manubrium.

Ans: D

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 280

Feedback: The Skeletal System, page 280

21. The first and second cervical vertebrae are called the:

A) axis and dens.

B) atlas and axis.

C) dens and atlas.

D) odontoid and axis.

Ans: B

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 278

Feedback: The Skeletal System, page 278

22. Which of the following organs/structures lie(s) in the retroperitoneal space of the abdomen?

A) Liver

B) Spleen

C) Kidneys

D) Superior vena cava

Ans: C

Complexity: Easy

Ahead: The Digestive System

Subject: Anatomy and Physiology

Page: 376

Feedback: The Digestive System, page 376

23. The shoulder joint is a ball-and-socket joint where the humeral head articulates with the:

A) acromion process.

B) glenoid fossa.

C) acetabulum.

D) popliteal fossa.

Ans: B

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 281

Feedback: The Skeletal System, page 281

24. The shoulders and hips are examples of \_\_\_\_\_\_\_\_\_\_ joints.

A) biaxial

B) diarthrotic

C) synarthrotic

D) amphiarthrotic

Ans: B

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Pages: 270–271

Feedback: The Skeletal System, pages 270–271

25. The midbrain, pons, and medulla oblongata collectively form the:

A) cerebellum.

B) cerebral cortex.

C) diencephalon.

D) brainstem.

Ans: D

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 302

Feedback: The Nervous System, page 302

26. The reticular activating system is located in the \_\_\_\_\_\_\_\_\_\_ and regulates \_\_\_\_\_\_\_\_\_\_:

A) occipital lobe, sight.

B) brainstem, breathing.

C) midbrain, consciousness.

D) cerebellum, motor function.

Ans: C

Complexity: Moderate

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 302

Feedback: The Nervous System, page 302

27. The Broca region of the left frontal lobe is responsible for the muscular actions that are associated with:

A) sight.

B) speech.

C) reflexes

D) eye movement.

Ans: B

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 300

Feedback: The Nervous System, page 300

28. Cerebrospinal fluid is manufactured in the:

A) subarachnoid space.

B) ventricles of the brain.

C) posterior pituitary gland.

D) anterior pituitary gland.

Ans: B

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 296

Feedback: The Nervous System, page 296

29. Small units of an element that vary in size and weight are called:

A) atoms.

B) electrons.

C) isotopes.

D) molecules.

Ans: A

Complexity: Easy

Ahead: Chemical Level

Subject: Anatomy and Physiology

Page: 232

Feedback: Chemical Level, page 232

30. The most important nerve of the cervical plexus, which innervates the diaphragm, is the:

A) vagus nerve.

B) trochlear nerve.

C) abducens nerve.

D) phrenic nerve.

Ans: D

Complexity: Easy

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Page: 365

Feedback: The Respiratory System, page 365

31. The olfactory nerve (CN I) is responsible for:

A) vision.

B) sight.

C) smell.

D) hearing.

Ans: C

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Pages: 309, 318

Feedback: The Nervous System, pages 309, 318

32. The sympathetic and parasympathetic nerves arise from the:

A) somatic nervous system.

B) autonomic nervous system.

C) voluntary nervous system.

D) adrenal nervous system.

Ans: B

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 310

Feedback: The Nervous System, page 310

33. The peripheral nervous system consists of the:

A) somatic nervous system only.

B) autonomic nervous system only.

C) somatic and autonomic nervous systems.

D) brain, spinal cord, and cranial nerves

Ans: C

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 292

Feedback: The Nervous System, page 292

34. Stimulation of alpha-1 receptors of the sympathetic nervous system results in:

A) tachycardia.

B) bronchodilation.

C) peripheral vasodilation.

D) peripheral vasoconstriction.

Ans: D

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 313

Feedback: The Nervous System, page 313

35. The catecholamine epinephrine (adrenaline) has an affinity for:

A) alpha and beta receptors.

B) alpha-1 receptors only.

C) beta-1 receptors only.

D) alpha-1 and beta-2 receptors.

Ans: A

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 315

Feedback: The Nervous System, page 315

36. All of the following are endocrine glands, EXCEPT the:

A) adrenal glands.

B) thymus gland.

C) sweat glands.

D) pituitary gland.

Ans: C

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 323

Feedback: The Endocrine System, page 323

37. Thromboxane A2 is a short-lived compound that causes:

A) platelet clumping.

B) sodium reabsorption.

C) small vessel dilation.

D) anti-inflammatory effects.

Ans: A

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 325

Feedback: The Endocrine System, page 325

38. Decreased levels of antidiuretic hormone (ADH) result in:

A) oliguria and dehydration.

B) anuria and diabetes mellitus.

C) polyuria and diabetes insipidus.

D) increased fluid retention.

Ans: C

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 327

Feedback: The Endocrine System, page 327

39. In the pregnant patient, the secretion of oxytocin causes:

A) uterine smooth muscle contraction.

B) uterine smooth muscle relaxation.

C) decreased milk production in the breasts.

D) thickening of the uterine wall for implantation.

Ans: A

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 327

Feedback: The Endocrine System, page 327

40. The thyroid gland is responsible for the:

A) release of TSH.

B) breakdown of glycogen.

C) production of glucose.

D) metabolic rate.

Ans: D

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 327

Feedback: The Endocrine System, page 327

41. Insulin and glucagon are produced in specialized groups of cells in the pancreas known as the:

A) adrenal islets.

B) islets of Langerhans.

C) medullary cortex.

D) adrenal medulla.

Ans: B

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 328

Feedback: The Endocrine System, page 328

42. A patient is found to have a high blood sugar level (hyperglycemia). What is a cause of this?

A) Excessive insulin levels in the blood

B) Decreased production of glucagon

C) Deficient insulin levels in the blood

D) Hyperactivity of the pancreatic beta cells

Ans: C

Complexity: Moderate

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 329

Feedback: The Endocrine System, page 329

43. The superior portion of the brainstem that contains reflex centers for pupillary reflexes and eye movements is the:

A) pons.

B) medulla.

C) midbrain.

D) diencephalon.

Ans: C

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 302

Feedback: The Nervous System, page 302

44. All of the following are formed components of the blood, EXCEPT:

A) plasma.

B) platelets.

C) red blood cells.

D) white blood cells.

Ans: A

Complexity: Moderate

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 333

Feedback: The Circulatory System, page 333

45. What is the total blood volume for a man who weighs 75 kg?

A) 4.8 L

B) 5.3 L

C) 6.1 L

D) 6.6 L

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 333

Feedback: The Circulatory System, page 333

46. The ongoing process by which red blood cells are made is called:

A) diapedesis.

B) phagocytosis.

C) hematopoiesis.

D) erythropoiesis.

Ans: D

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 335

Feedback: The Circulatory System, page 335

47. Which white blood cell is formed in the thymus and works to rid the body of viruses and bacteria by direction invasion?

A) Basophil

B) Neutrophil

C) T lymphocyte

D) B lymphocyte

Ans: C

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 335

Feedback: The Circulatory System, page 335

48. Which of the following statements regarding type O blood is correct?

A) It contains no surface antigens.

B) It contains type A surface antigens.

C) It contains type B surface antigens.

D) It contains both type A and B surface antigens.

Ans: A

Complexity: Moderate

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 337

Feedback: The Circulatory System, page 337

49. A protein of the immune system that recognizes foreign substances is called a(n):

A) bilirubin.

B) antigen.

C) pathogen.

D) antibody.

Ans: D

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 333

Feedback: The Circulatory System, page 333

50. Which of the following is NOT a type of white blood cell?

A) Eosinophil

B) Neutrophil

C) Granulocyte

D) Histamine

Ans: D

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 335

Feedback: The Circulatory System, page 335

51. Phagocytosis is the process by which:

A) phagocytes are produced.

B) phagocytes are destroyed.

C) monocytes digest microbes.

D) microbes destroy monocytes.

Ans: C

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 335

Feedback: The Circulatory System, page 335

52. The body's ability to spontaneously cease bleeding is called:

A) fibrinolysis.

B) hemostasis.

C) homeostasis.

D) thrombolysis.

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 335–336

Feedback: The Circulatory System, pages 335–336

53. The heart muscle lies within a space in the thoracic cavity called the:

A) mediastinum.

B) hemithorax.

C) pericardium.

D) endocardium.

Ans: A

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Pages: 280–281

Feedback: The Skeletal System, pages 280–281

54. The thick fibrous membrane that surrounds the heart is called the:

A) pericardium.

B) myocardium.

C) epicardium.

D) endocardium.

Ans: A

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 337

Feedback: The Circulatory System, page 337

55. Blood enters the right atrium of the heart from the:

A) vena cava and aorta.

B) aorta and coronary sinus.

C) pulmonary vein and aorta.

D) vena cavae and coronary sinus.

Ans: D

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 340

Feedback: The Circulatory System, page 340

56. What type of valves are the aortic and pulmonic valves?

A) Papillary

B) Chordis

C) Semilunar

D) Atrioventricular

Ans: C

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 339

Feedback: The Circulatory System, page 339

57. Freshly oxygenated blood is returned to the left atrium through the:

A) pulmonary veins.

B) pulmonary arteries.

C) superior vena cava.

D) inferior vena cava.

Ans: A

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 340

Feedback: The Circulatory System, page 340

58. The second heart sound (S2) represents:

A) opening of the pulmonic valve.

B) closure of the atrioventricular valves.

C) opening of the aortic valve.

D) closure of the semilunar valves.

Ans: D

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 340–341

Feedback: The Circulatory System, pages 340–341

59. The myocardium is the only muscle that can generate its own electrical impulses. This process is called:

A) automaticity.

B) excitability.

C) conductivity.

D) dromotropy.

Ans: A

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 343

Feedback: The Circulatory System, page 343

60. Dysfunction of the mitral valve may cause backflow of blood into the:

A) right ventricle.

B) right atrium.

C) left atrium.

D) left ventricle.

Ans: C

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 339

Feedback: The Circulatory System, page 339

61. Nicotinic receptors are found:

A) inside bronchioles.

B) on skeletal muscle.

C) inside blood vessels.

D) on the surface of the liver.

Ans: B

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 316

Feedback: The Nervous System, page 316

62. Afterload is defined as the:

A) volume of blood returned to the left and right atrium.

B) amount of blood pumped from the heart per contraction.

C) degree of pressure against which the left ventricle pumps.

D) volume of blood pumped ejected from the heart per minute.

Ans: C

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 342

Feedback: The Circulatory System, page 342

63. Ventricular muscle contraction and the pumping of blood throughout the body occur during:

A) systole.

B) diastole.

C) asystole.

D) the cardiac cycle.

Ans: A

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 340

Feedback: The Circulatory System, page 340

64. Cardiac output is equal to:

A) systole minus diastole.

B) blood pressure multiplied by heart rate.

C) heart rate minus systolic blood pressure.

D) stroke volume multiplied by heart rate.

Ans: D

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 341

Feedback: The Circulatory System, page 341

65. Increased myocardial contractility secondary to stretching of the myocardial walls is called the:

A) Ernest-Henry effect.

B) Frank-Starling mechanism.

C) Beck-Cushing's reflex.

D) Frank-Beck mechanism.

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 342

Feedback: The Circulatory System, page 342

66. An abnormal whooshing sound that is heard over a main vessel and indicates turbulent blood flow is called a:

A) rub.

B) bruit.

C) murmur.

D) friction rub.

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 341

Feedback: The Circulatory System, page 341

67. The pulmonary circulation is responsible for:

A) sending deoxygenated blood to the atria.

B) perfusing the vital organs of the body.

C) ensuring that blood gets reoxygenated.

D) filtering the blood of toxic chemicals.

Ans: C

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 332

Feedback: The Circulatory System, page 332

68. Which of the following vessels or structures is NOT part of the pulmonary circulation?

A) Pulmonary artery

B) Descending aorta

C) Alveolar capillary

D) Pulmonic valve

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 332

Feedback: The Circulatory System, page 332

69. The first artery to branch from the aortic arch is the:

A) brachiocephalic artery.

B) internal carotid artery.

C) external carotid artery.

D) common iliac artery.

Ans: A

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 346–347

Feedback: The Circulatory System, pages 346–347

70. A slight dilation at the carotid bifurcation, called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, contains structures that are important in regulating blood pressure.

A) foramen ovale

B) circle of Willis

C) fossa ovalis

D) carotid sinus

Ans: D

Complexity: Moderate

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 348

Feedback: The Circulatory System, page 348

71. The subclavian artery gives rise to the:

A) popliteal arteries.

B) femoral arteries.

C) vertebral arteries.

D) carotid arteries.

Ans: C

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 348

Feedback: The Circulatory System, page 348

72. The two major veins that drain the head and neck of blood are the:

A) vertebral veins.

B) jugular veins.

C) cerebral veins.

D) cephalic veins.

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 350

Feedback: The Circulatory System, page 350

73. The longest portion of the aorta, which subdivides into the thoracic and abdominal aorta, is the:

A) ascending aorta

B) innominate artery.

C) aortic arch.

D) descending aorta.

Ans: D

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 345, 347

Feedback: The Circulatory System, pages 345, 347

74. End-diastolic volume is primarily a reflection of:

A) venous return to the heart.

B) contraction of the ventricles.

C) arterial blood pressure.

D) systemic vascular resistance.

Ans: A

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 342

Feedback: The Circulatory System, page 342

75. First pass metabolism occurs in the:

A) liver.

B) stomach.

C) intestine.

D) kidneys.

Ans: A

Complexity: Easy

Ahead: The Digestive System

Subject: Anatomy and Physiology

Page: 381

Feedback: The Digestive System, page 381

76. The main pacemaker for breathing that is responsible for initiating respiration is called the:

A) apneustic center.

B) pneumotaxic center.

C) dorsal respiratory group.

D) ventral respiratory group.

Ans: C

Complexity: Easy

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Page: 371

Feedback: The Respiratory System, page 371

77. Approximately 97% of the oxygen that diffuses out of the alveoli:

A) is dissolved in plasma.

B) binds to hemoglobin.

C) binds to bicarbonate.

D) is exhaled from the body.

Ans: B

Complexity: Easy

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Page: 369

Feedback: The Respiratory System, page 369

78. Tidal volume is defined as the volume of air that:

A) remains in the lungs following maximum exhalation.

B) is moved into or out of the lungs during a single breath.

C) is moved in and out of the lungs with maximal expiration.

D) is exhaled from the lungs following a forceful exhalation.

Ans: B

Complexity: Easy

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Page: 364

Feedback: The Respiratory System, page 364

79. Decreases in the PaCO2 result in \_\_\_\_\_\_\_\_\_\_\_\_\_ pH levels in the respiratory center and a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_ in ventilation.

A) decreased, decrease

B) increased, increase

C) decreased, increase

D) increased, decrease

Ans: D

Complexity: Easy

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Pages: 371–373

Feedback: The Respiratory System, pages 371–373

80. The respiratory center of the brain is located in the:

A) medulla.

B) cerebrum.

C) cerebellum.

D) hypothalamus.

Ans: A

Complexity: Easy

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Page: 370

Feedback: The Respiratory System, page 370

81. The hypoxic drive, a backup system to control breathing, is stimulated when:

A) arterial PaO2 levels decrease.

B) arterial PaCO2 levels increase.

C) arterial PaO2 levels increase.

D) arterial PaCO2 levels decrease.

Ans: A

Complexity: Easy

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Page: 372

Feedback: The Respiratory System, page 372

82. Normal inhalation is the result of:

A) diaphragmatic relaxation.

B) air passively entering the lungs.

C) negative pressure in the thoracic cavity.

D) positive pressure in the thoracic cavity.

Ans: C

Complexity: Easy

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Pages: 365–366

Feedback: The Respiratory System, pages 365–366

83. The formation of glucose in the liver is called:

A) glycolysis.

B) glycogenolysis.

C) gluconeogenesis.

D) glucagon synthesis.

Ans: C

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 329

Feedback: The Endocrine System, page 329

84. The first portion of the small intestine that receives food from the stomach is the:

A) duodenum.

B) jejunum.

C) ilium.

D) ileum.

Ans: A

Complexity: Easy

Ahead: The Digestive System

Subject: Anatomy and Physiology

Page: 379

Feedback: The Digestive System, page 379

85. A newborn's total body water content is approximately:

A) 40% of total body weight.

B) 50% of total body weight.

C) 60% of total body weight.

D) 80% of total body weight.

Ans: D

Complexity: Difficult

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 248

Feedback: Cellular Level, page 248

86. Extracellular fluid accounts for what percentage of the total body water?

A) 19%

B) 24%

C) 37%

D) 63%

Ans: C

Complexity: Difficult

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 248

Feedback: Cellular Level, page 248

87. A(n) \_\_\_\_\_\_\_\_\_\_\_ is a substance that can absorb or donate hydrogen ions.

A) acid

B) buffer

C) base

D) ion

Ans: B

Complexity: Easy

Aheads: Chemical Level, The Respiratory System

Subject: Anatomy and Physiology

Pages: 240, 372

Feedback: Chemical Level, The Respiratory System, pages 240, 372

88. Which of the following physiologic responses would you expect to see in a patient with a pH of 7.50?

A) Bicarbonate retention

B) Increased respirations

C) Decreased respirations

D) Hydrogen ion excretion

Ans: C

Complexity: Easy

Ahead: Chemical Level

Subject: Anatomy and Physiology

Pages: 239–240

Feedback: Chemical Level, pages 239–240

89. An organism will be biologically male if the 23rd chromosome pair in the zygote is:

A) X.

B) Y.

C) XX.

D) XY.

Ans: D

Complexity: Easy

Ahead: The Reproductive System

Subject: Anatomy and Physiology

Page: 388

Feedback: The Reproductive System, page 388

90. The process in which glucose is broken down to yield pyruvic acid is called:

A) crenation.

B) gluconeogenesis.

C) glycogenolysis.

D) glycolysis.

Ans: D

Complexity: Easy

Ahead: The Musculoskeletal System

Subject: Anatomy and Physiology

Page: 291

Feedback: The Musculoskeletal System, page 291

91. Which of the following are typically found in the muscle cells, and provide cell movement and contraction via interaction with actin and myosin?

A) Mitochondria

B) Microfilaments

C) Peroxisomes

D) Lysosomes

Ans: B

Complexity: Moderate

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 243

Feedback: Cellular Level, page 243

92. Antibodies made by the liver that make up about 36% of the plasma proteins are called:

A) albumins.

B) neutrophils.

C) lysosomes.

D) globulins.

Ans: D

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 334

Feedback: The Circulatory System, page 334

93. The process in which malignant cells travel to other organs or tissue and establish secondary tumors is called:

A) dysplasia.

B) metastasis.

C) hemostasis.

D) cancer in situ.

Ans: B

Complexity: Easy

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 246

Feedback: Cellular Level, page 246

94. Which of the following is a function performed by all cells?

A) Secretion

B) Respiration

C) Conductivity

D) Absorption

Ans: B

Complexity: Easy

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 240

Feedback: Cellular Level, page 240

95. The cell membrane is selectively permeable, which means that it:

A) allows only certain substances to pass through it.

B) will allow any substance to readily pass through it.

C) only allows potassium and calcium to pass through it.

D) only allows sodium and chloride to pass through it.

Ans: A

Complexity: Easy

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 241

Feedback: Cellular Level, page 241

96. The movement of particles from an area of higher concentration to an area of lower concentration is called:

A) osmosis.

B) endocytosis.

C) exocytosis.

D) diffusion.

Ans: D

Complexity: Easy

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 249

Feedback: Cellular Level, page 249

97. The separation of the intracellular and extracellular areas by a selectively permeable membrane helps to maintain:

A) endocytosis.

B) homeostasis.

C) hemostasis.

D) exocytosis.

Ans: B

Complexity: Easy

Ahead: Cellular Level

Subject: Anatomy and Physiology

Pages: 248–249

Feedback: Cellular Level, pages 248–249

98. Osmosis is the movement of a:

A) solvent from an area of low solute concentration to one of high concentration.

B) solvent from an area of high solute concentration to one of low concentration.

C) solute from an area of high solvent concentration to one of low concentration.

D) solute from an area of low solvent concentration to one of high concentration.

Ans: A

Complexity: Easy

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 250

Feedback: Cellular Level, page 250

99. The movement of a substance against a concentration or gradient that requires energy is called:

A) endocytosis.

B) osmotic pressure.

C) active transport.

D) facilitated diffusion.

Ans: C

Complexity: Easy

Ahead: Cellular Level

Subject: Anatomy and Physiology

Pages: 250–251

Feedback: Cellular Level, pages 250–251

100. If too much water moves out of a cell, the cell shrinks abnormally. This process is called:

A) lysis.

B) crenation.

C) pinocytosis.

D) endocytosis.

Ans: B

Complexity: Easy

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 250

Feedback: Cellular Level, page 250

101. The metabolic breakdown of stored carbohydrates, fats, or proteins in order to provide energy is called:

A) metabolism.

B) hydrolysis.

C) anabolism.

D) catabolism.

Ans: D

Complexity: Easy

Ahead: Chemical Level

Subject: Anatomy and Physiology

Page: 239

Feedback: Chemical Level, page 239

102. What type of tissue fills body spaces, stores fat, and produces blood cells?

A) Connective

B) Muscle

C) Nerve

D) Epithelial

Ans: A

Complexity: Easy

Ahead: Tissue Level

Subject: Anatomy and Physiology

Pages: 253, 255

Feedback: Tissue Level, pages 253, 255

103. Cardiac muscle comprises the heart. This muscle is:

A) smooth and involuntary.

B) smooth and voluntary.

C) striated and involuntary.

D) striated and voluntary.

Ans: C

Complexity: Easy

Ahead: Tissue Level

Subject: Anatomy and Physiology

Page: 259

Feedback: Tissue Level, page 259

104. The basic structure of nervous tissue that responds to environmental changes by transmitting impulses is the:

A) axon.

B) neuron.

C) dendrite.

D) neuroglia.

Ans: B

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 294

Feedback: The Nervous System, page 294

105. Which type of nerve cells conduct electrical impulses toward the cell body?

A) Axons

B) Neurons

C) Dendrites

D) Neurocytes

Ans: C

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 293

Feedback: The Nervous System, page 293

106. Which of the following is NOT a function of the skin?

A) Temperature regulation

B) Protection from the environment

C) Transmission of information to the brain

D) Production of antibodies to foreign organisms

Ans: D

Complexity: Easy

Ahead: Organ Systems

Subject: Anatomy and Physiology

Page: 262

Feedback: Organ Systems, page 262

107. How do the blood vessels of the skin respond to cold temperatures?

A) Dilation, which diverts blood away from the skin

B) Constriction, which diverts blood away from the skin

C) Dilation, which pulls blood to the skin's surface

D) Constriction, which pulls blood to the skin's surface

Ans: B

Complexity: Moderate

Ahead: Organ Systems

Subject: Anatomy and Physiology

Page: 262

Feedback: Organ Systems, page 262

108. Which of the following structures comprise the axial skeleton?

A) Skull, face, thoracic cage, vertebral column

B) Skull, shoulders, upper extremities, ribs

C) Pelvic girdle, vertebral column, skull

D) Ribs, shoulders, lower extremities, skull

Ans: A

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 266

Feedback: The Skeletal System, page 266

109. The three small bones in the middle ear are the:

A) malleus, anvil, and incus.

B) incus, malleus, and stapes.

C) stapes, anvil, and malleolus.

D) malleus, stapes, and foramina.

Ans: B

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 273

Feedback: The Skeletal System, page 273

110. Leakage of cerebrospinal fluid from the nose following severe head trauma suggests:

A) fracture of the basilar skull.

B) damage to the nasal sinuses.

C) fracture of the cribriform plate.

D) damage to the auditory canal.

Ans: C

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 275

Feedback: The Skeletal System, page 275

111. A fracture of the orbital bone is commonly referred to as a:

A) blowout fracture.

B) midface fracture.

C) LeFort fracture.

D) basilar fracture.

Ans: A

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 276

Feedback: The Skeletal System, page 276

112. The parathyroid glands produce and secrete a hormone that:

A) regulates the body's basil metabolic rate.

B) converts glycogen produced in the liver to glucose.

C) controls the function of all other endocrine glands.

D) maintains normal levels of calcium in the blood.

Ans: D

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 328

Feedback: The Endocrine System, page 328

113. The first two cervical vertebrae, in descending order, are called:

A) axis and dens.

B) atlas and axis.

C) dens and odontoid.

D) odontoid and atlas.

Ans: B

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 278

Feedback: The Skeletal System, page 278

114. A projection of the second cervical vertebra (C2) that fits into the vertebral foramen of the first cervical vertebra (C1) is called the:

A) vertebra prominens.

B) foramen magnum.

C) odontoid process.

D) spinous process.

Ans: C

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Pages: 278–279

Feedback: The Skeletal System, pages 278–279

115. Immediately inferior to the suprasternal (jugular) notch is the:

A) sternal body.

B) xiphoid process.

C) manubrium

D) angle of Louis.

Ans: C

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 280

Feedback: The Skeletal System, page 280

116. The aorta and pulmonary artery exit the heart just beneath the:

A) manubrium.

B) sternal body.

C) costal angle.

D) xiphoid process.

Ans: A

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 281

Feedback: The Skeletal System, page 281

117. Muscle relaxation is caused by decomposition of acetylcholine via the enzyme:

A) actin.

B) myosin.

C) myoglobin.

D) acetylcholinesterase.

Ans: D

Complexity: Easy

Ahead: The Musculoskeletal System

Subject: Anatomy and Physiology

Page: 291

Feedback: The Musculoskeletal System, page 291

118. The ilium is defined as the:

A) lower portion of the small intestine.

B) bony prominences of the pelvis.

C) structure that overlies the bladder.

D) ligament that overlies the femoral vessels.

Ans: B

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 283

Feedback: The Skeletal System, page 283

119. Which of the following is NOT part of the pelvis?

A) Trochanter

B) Iliac crest

C) Pubic symphysis

D) Sacroiliac joint

Ans: A

Complexity: Easy

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 283

Feedback: The Skeletal System, page 283

120. A 2-year-old child has experienced a proximal humeral fracture involving the growth plate. This plate is also called the:

A) diaphyseal plate.

B) metaphyseal plate.

C) epiphyseal plate.

D) endosteum plate.

Ans: C

Complexity: Moderate

Ahead: The Skeletal System

Subject: Anatomy and Physiology

Page: 268

Feedback: The Skeletal System, page 268

121. The diencephalon, a region of the brain, contains which of the following structures?

A) Pons and medulla

B) Cerebellum and pons

C) Medulla and thalamus

D) Thalamus and hypothalamus

Ans: D

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 298

Feedback: The Nervous System, page 298

122. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a deep ridge of nerve fibers, which is separated by a layer of dura mater and connects the two cerebral hemispheres.

A) cerebral cortex

B) corpus collosum

C) presynaptic terminal

D) coroid plexus

Ans: B

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 299

Feedback: The Nervous System, page 299

123. The limbic system, a portion of the cerebrum and diencephalon, contains structures that:

A) regulate sleeping and breathing.

B) influence emotions and mood.

C) control heart rate and blood pressure.

D) regulate a person's level of consciousness.

Ans: B

Complexity: Moderate

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 302

Feedback: The Nervous System, page 302

124. What portion of the brain is a relay center that filters important signals from routine signals?

A) Thalamus

B) Prefrontal area

C) Hypothalamus

D) Temporal lobe

Ans: A

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 318

Feedback: The Nervous System, page 318

125. Beginning with the outermost layer, the three meningeal layers of the central nervous system are the:

A) dura mater, pia mater, and arachnoid.

B) arachnoid, pia mater, and dura mater.

C) dura mater, arachnoid, and pia mater.

D) pia mater, dura mater, and arachnoid.

Ans: C

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 296

Feedback: The Nervous System, page 296

126. Efferent nerves of the peripheral nervous system are responsible for:

A) carrying impulses from the body to the brain.

B) sensations such as pain, temperature, and pressure.

C) involuntary functions such as breathing and heart rate.

D) carrying commands from the brain to the muscles.

Ans: D

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 306

Feedback: The Nervous System, page 306

127. Of the 12 pairs of cranial nerves, which two do NOT exit from the brainstem?

A) Phrenic and vagus

B) Olfactory and optic

C) Trochlear and abducens

D) Hypoglossal and oculomotor

Ans: B

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 308

Feedback: The Nervous System, page 308

128. Which of the following is a function of the oculomotor nerve (CN III)?

A) Provides the sense of vision via the optic tracts.

B) Innervates the muscles that cause motion of the eyeballs.

C) Innervates muscles of the eyeball that allows a downward gaze.

D) Carries sympathetic nerve fibers that cause dilation of the pupils.

Ans: B

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 309

Feedback: The Nervous System, page 309

129. In response to shock or stress, sympathetic nervous system stimulation causes:

A) vasoconstriction.

B) slowing of the heart rate.

C) increased gastrointestinal function.

D) shunting of blood to the body's periphery.

Ans: A

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Pages: 310, 313

Feedback: The Nervous System, pages 310, 313

130. All of the following are functions of the parasympathetic nervous system, EXCEPT:

A) constriction of the pupils.

B) lowering of the blood pressure.

C) decreased gastrointestinal function.

D) mediating arousal in males and females.

Ans: C

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Pages: 315–316

Feedback: The Nervous System, pages 315–316

131. The gap that lies between each nerve cell is called the:

A) cleft.

B) synapse.

C) terminal.

D) vesicle.

Ans: B

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 294

Feedback: The Nervous System, page 294

132. What body system is comprised of various glands located throughout the body?

A) Urinary system

B) Endocrine system

C) Respiratory system

D) Nervous system

Ans: B

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 323

Feedback: The Endocrine System, page 323

133. Examples of steroid hormones are:

A) epinephrine and prolactin.

B) cortisol and testosterone.

C) oxytocin and growth hormone.

D) norepinephrine and antidiuretic hormone.

Ans: B

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 325

Feedback: The Endocrine System, page 325

134. Molecules that bind to a receptor's cells and trigger a response by that cell, thereby resulting in some kind of action or biologic effect, are called:

A) steroids.

B) proteins.

C) agonists.

D) hormones.

Ans: C

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 324

Feedback: The Endocrine System, page 324

135. What is the action of adrenocorticotropic hormone (ACTH)?

A) Stimulates hormone secretion from the adrenal cortex.

B) Increases the size and division rate of body cells.

C) Develops egg-containing follicles in females.

D) Controls conservation of water in the kidneys.

Ans: A

Complexity: Moderate

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 327

Feedback: The Endocrine System, page 327

136. The hormones thyroxine and triiodothyronine are synthesized by the:

A) adrenal glands.

B) thyroid gland.

C) pituitary gland.

D) parathyroid glands.

Ans: B

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 327

Feedback: The Endocrine System, page 327

137. In addition to facilitating the uptake of sugar into the cells, insulin is responsible for:

A) the chemical conversion of glycogen to glucose.

B) stimulating the liver and kidneys to produce glucose.

C) the production of amino acids and carbohydrates.

D) the chemical conversion of glucose to glycogen.

Ans: D

Complexity: Moderate

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 329

Feedback: The Endocrine System, page 329

138. Glycogenolysis is the physiologic process in which:

A) the pancreas secretes glycogen.

B) glycogen is converted to glucose.

C) glucose is converted to glycogen.

D) the kidneys produce additional glucose.

Ans: B

Complexity: Moderate

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 329

Feedback: The Endocrine System, page 329

139. What physiologic reaction occurs when a person's blood sugar level falls?

A) The pancreas secretes more insulin.

B) More glycogen is stored in the liver.

C) Glucagon production is increased.

D) The pancreatic beta cells become hyperactive.

Ans: C

Complexity: Moderate

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Pages: 328–329

Feedback: The Endocrine System, pages 328–329

140. What hormone is secreted in response to a decrease in the sodium level or an increase in the potassium level?

A) Aldosterone

B) Epinephrine

C) Norepinephrine

D) Dopamine

Ans: A

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 330

Feedback: The Endocrine System, page 330

141. Which hormone prepares the uterus for implantation?

A) Estrogen

B) Progesterone

C) Aldosterone

D) Testosterone

Ans: B

Complexity: Easy

Ahead: The Endocrine System

Subject: Anatomy and Physiology

Page: 331

Feedback: The Endocrine System, page 331

142. Which of the following processes initiates urine formation?

A) Cortisol secretion

B) Tubular secretion

C) Tubular reabsorption

D) Glomerular filtration

Ans: D

Complexity: Easy

Ahead: The Urinary System

Subject: Anatomy and Physiology

Page: 386

Feedback: The Urinary System, page 386

143. In the bloodstream, \_\_\_\_\_\_\_\_\_\_\_\_\_ reacts with the plasma protein angiotensinogen to form angiotensin I.

A) renin

B) sodium

C) aldosterone

D) testosterone

Ans: A

Complexity: Easy

Ahead: The Urinary System

Subject: Anatomy and Physiology

Page: 384

Feedback: The Urinary System, page 384

144. When activated, fibrinogen is converted to:

A) fibrin.

B) plasmin.

C) thrombin.

D) thromboplastin.

Ans: A

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 336

Feedback: The Circulatory System, page 336

145. A person with type A+ blood could receive which of the following blood types?

A) A+

B) B–

C) AB–

D) A-

Ans: A

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 337

Feedback: The Circulatory System, page 337

146. During an allergic reaction, mast cells release histamines and heparin. What respective roles do these chemicals play?

A) Reduce inflammation and facilitate blood clotting.

B) Increase tissue inflammation and inhibit blood clotting.

C) Reduce inflammation and inhibit blood clotting.

D) Reduce tissue inflammation and inhibit blood clotting.

Ans: B

Complexity: Moderate

Ahead: Tissue Level

Subject: Anatomy and Physiology

Page: 256

Feedback: Tissue Level, page 256

147. What occurs during the *initial* phase of hemostasis?

A) Thrombin converts fibrinogen to fibrin.

B) Fibrin binds to a platelet plug and forms a clot.

C) Thromboplastin activates clotting proteins.

D) Local vasoconstriction and platelet activation occur.

Ans: D

Complexity: Moderate

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 335–336

Feedback: The Circulatory System, pages 335–336

148. The middle muscular layer of the heart is called the:

A) pericardium.

B) myocardium.

C) epicardium.

D) endocardium.

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 338

Feedback: The Circulatory System, page 338

149. Which layer of the heart would be penetrated during an emergent medical procedure in order to remove fluid?

A) Myocardium

B) Epicardium

C) Pericardium

D) Endocardium

Ans: C

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 337–338

Feedback: The Circulatory System, pages 337–338

150. The atrioventricular valves of the heart include the:

A) tricuspid and mitral valves.

B) mitral and aortic valves.

C) bicuspid and aortic valves.

D) tricuspid and pulmonic valves.

Ans: A

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 339

Feedback: The Circulatory System, page 339

151. The semilunar valves of the heart function by:

A) preventing backflow of blood into the atria.

B) minimizing the forward flow of blood.

C) attaching to the papillary muscles.

D) preventing backflow of blood into the ventricles.

Ans: D

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 339–340

Feedback: The Circulatory System, pages 339–340

152. Closure of the tricuspid and mitral valves occur during:

A) ventricular relaxation.

B) ventricular contraction.

C) the diastolic phase.

D) atrial contraction.

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 339–340

Feedback: The Circulatory System, pages 339–340

153. A bruit differs from a murmur in that a bruit:

A) represents widespread arteriosclerosis.

B) is a benign physiologic abnormality.

C) is auscultated over a main blood vessel.

D) indicates turbulent blood flow in the heart.

Ans: C

Complexity: Moderate

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 341

Feedback: The Circulatory System, page 341

154. The heart's primary pacemaker, which is located in the right atrium, is the:

A) AV node.

B) SA node.

C) AV junction.

D) bundle of His.

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 343

Feedback: The Circulatory System, page 343

155. As an electrical impulse travels down the electrical conduction system, it transiently slows at the:

A) AV node.

B) bundle of His.

C) sinoatrial node.

D) interatrial septum.

Ans: A

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 343–344

Feedback: The Circulatory System, pages 343–344

156. As electricity travels down the left and right bundle branches, it *first* stimulates the:

A) Purkinje fibers.

B) interatrial pathways.

C) ventricular myocardium.

D) intraventricular septum.

Ans: D

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 343–344

Feedback: The Circulatory System, pages 343–344

157. The term inotropy refers to the:

A) rate of cardiac contraction.

B) control of electrical conduction.

C) strength of myocardial contraction.

D) degree of ventricular irritability.

Ans: C

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 313

Feedback: The Nervous System, page 313

158. A medication that possesses a positive chronotropic effect is one that:

A) decreases heart rate.

B) increases heart rate.

C) decreases cardiac contractility.

D) increases the conduction of electricity.

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 342

Feedback: The Circulatory System, page 342

159. What is the function of a baroreceptor?

A) Monitoring changes in arterial pressure

B) Sensing changes in arterial oxygen levels

C) Monitoring the pH of cerebrospinal fluid

D) Sensing the arterial level of carbon dioxide

Ans: A

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 317

Feedback: The Nervous System, page 317

160. What happens when systemic vasoconstriction occurs?

A) Preload decreases.

B) Afterload increases.

C) Afterload and preload increase.

D) Afterload and preload decrease.

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 342

Feedback: The Circulatory System, page 342

161. What is the cardiac output of a person with a stroke volume of 60 mL and a heart rate of 90 beats/min?

A) 2.1 L

B) 4.2 L

C) 5.0 L

D) 5.4 L

Ans: D

Complexity: Difficult

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 341–342

Feedback: The Circulatory System, pages 341–342

162. With regard to the heart, ejection fraction is defined as the:

A) volume of blood that enters the lungs.

B) volume of blood ejected from both atria.

C) percentage of blood ejected from the heart.

D) percentage of blood returned to the heart.

Ans: C

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 341

Feedback: The Circulatory System, page 341

163. Which layer of the blood vessel wall is composed of elastic tissue and smooth muscle cells?

A) Lumen

B) Tunica media

C) Tunica intima

D) Tunica adventitia

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 344

Feedback: The Circulatory System, page 344

164. What are the three layers of the blood vessel, starting with the outer layer?

A) Tunica adventitia, tunica media, tunica intima

B) Tunica intima, tunica adventitia, tunica media

C) Tunica media, tunica intima, tunica adventitia

D) Tunica media, tunica adventitia, tunica intima

Ans: A

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 345

Feedback: The Circulatory System, page 345

165. The left main coronary artery rapidly divides into the:

A) posterior descending and left ventricular arteries.

B) left anterior descending and circumflex arteries.

C) left posterior descending and acute marginal arteries.

D) circumflex and right anterior descending arteries.

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 342–343

Feedback: The Circulatory System, pages 342–343

166. The right and left coronary arteries arise from the:

A) aortic arch.

B) abdominal aorta.

C) descending aorta.

D) ascending aorta.

Ans: D

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 346, 347

Feedback: The Circulatory System, pages 346, 347

167. The abdominal aorta begins at the level of the:

A) 3rd lumbar vertebra.

B) 5th lumbar vertebra.

C) 8th thoracic vertebra.

D) 12th thoracic vertebra.

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 348

Feedback: The Circulatory System, page 348

168. The femoral artery gives rise to all of the following arteries, EXCEPT the:

A) iliac arteries.

B) popliteal arteries.

C) dorsalis pedis arteries.

D) posterior tibial arteries.

Ans: A

Complexity: Moderate

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 346, 349

Feedback: The Circulatory System, pages 346, 349

169. A specialized part of the venous system that filters the blood and metabolizes various drugs is called the:

A) duodenal portal system.

B) splenic portal system.

C) renal portal system.

D) hepatic portal system.

Ans: D

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Pages: 351–352

Feedback: The Circulatory System, pages 351–352

170. The term perfusion is BEST defined as:

A) the production of waste products from metabolism.

B) effective exchange of O2 and CO2 in the lungs.

C) circulation of blood within an organ or tissue.

D) sufficient removal of waste products from the body.

Ans: C

Complexity: Easy

Ahead: The Nervous System

Subject: Anatomy and Physiology

Page: 297

Feedback: The Nervous System, page 297

171. Which is a function of the lymphatic system?

A) Prevention of viruses from entering the body

B) Filtration of debris and bacteria from the blood

C) Production of antibodies that destroy bacteria

D) Secretion of hormones to regulate other body functions

Ans: B

Complexity: Easy

Ahead: The Circulatory System

Subject: Anatomy and Physiology

Page: 354

Feedback: The Circulatory System, page 354

172. The epiglottis can be BEST described as:

A) a valve that covers the trachea during swallowing.

B) cartilage that closes the esophagus during breathing.

C) a ligament that attaches the vocal cords to the glottic opening.

D) cartilage that is inferior to the glottis and keeps the esophagus open.

Ans: A

Complexity: Easy

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Page: 359

Feedback: The Respiratory System, page 359

173. The layer of tissue that lines the inside of the chest cavity is called the:

A) visceral pleura.

B) pulmonary pleura.

C) parietal pleura.

D) thoracic pleura.

Ans: C

Complexity: Easy

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Pages: 363–364

Feedback: The Respiratory System, pages 363–364

174. The process of moving air into and out of the lungs is called:

A) respiration.

B) oxygenation.

C) tidal volume.

D) ventilation.

Ans: D

Complexity: Easy

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Page: 365

Feedback: The Respiratory System, page 365

175. The primary respiratory stimulus in a healthy adult is a(n):

A) decreased arterial oxygen level.

B) increased arterial carbon dioxide level.

C) increased pH level of the venous blood.

D) decreased venous level of carbon dioxide.

Ans: B

Complexity: Easy

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Pages: 370–372

Feedback: The Respiratory System, pages 370–372

176. Oxygen and carbon dioxide pass across the alveolar capillary membrane through a process called:

A) diffusion.

B) osmosis.

C) perfusion.

D) metabolism.

Ans: A

Complexity: Easy

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Page: 369

Feedback: The Respiratory System, page 369

177. What happens when the PaCO2 of the arterial blood increases?

A) pH increases and respirations increase.

B) pH decreases and respirations decrease.

C) pH increases and respirations decrease.

D) pH decreases and respirations increase.

Ans: D

Complexity: Moderate

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Pages: 370–372

Feedback: The Respiratory System, pages 370–372

178. What are the functions of the pancreas?

A) Production of renin and regulation of blood pressure

B) Storage and movement of food into the small intestine

C) Concentration and storage of bile until it is needed for digestion

D) Production of insulin and certain enzymes that aid in digestion

Ans: D

Complexity: Moderate

Ahead: The Digestive System

Subject: Anatomy and Physiology

Page: 381

Feedback: The Digestive System, page 381

179. Severe injuries to the liver are life threatening because it is:

A) avascular and relatively small.

B) poorly protected by the rib cage.

C) highly vascular and very fragile.

D) normally enlarged in most people.

Ans: C

Complexity: Moderate

Ahead: The Digestive System

Subject: Anatomy and Physiology

Page: 380

Feedback: The Digestive System, page 380

180. The majority of the body's total body water is contained within the:

A) extracellular space.

B) intracellular space.

C) intravascular fluid.

D) interstitial fluid.

Ans: B

Complexity: Easy

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 248

Feedback: Cellular Level, page 248

181. Which of the following statements regarding interstitial fluid is correct?

A) It is located in the extracellular space and between the cells.

B) It accounts for approximately 30% of total body weight.

C) It is located within the blood vessels in the form of plasma.

D) It is equal to approximately 15% to 20% of the total body weight.

Ans: A

Complexity: Moderate

Ahead: Cellular Level

Subject: Anatomy and Physiology

Page: 248

Feedback: Cellular Level, page 248

182. Urea is a result of:

A) sodium catabolism.

B) lactic acid metabolism.

C) amino acid catabolism.

D) phosphate metabolism.

Ans: C

Complexity: Easy

Ahead: The Urinary System

Subject: Anatomy and Physiology

Page: 386

Feedback: The Urinary System, page 386

183. A pH of 7.30 indicates:

A) a neutral pH.

B) a basic pH.

C) alkalosis.

D) acidosis.

Ans: D

Complexity: Easy

Ahead: Chemical Level

Subject: Anatomy and Physiology

Page: 240

Feedback: Chemical Level, page 240

184. During an acidotic state, the kidneys attempt to maintain a normal pH by:

A) excreting bicarbonate.

B) retaining bicarbonate.

C) retaining hydrogen ions.

D) secreting hydrogen ions.

Ans: B

Complexity: Moderate

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Page: 373

Feedback: The Respiratory System, page 373

185. Which of the following conditions would cause a left shift of the oxyhemoglobin dissociation curve?

A) Acidosis

B) Increased CO2

C) Decreased pH

D) Increased pH

Ans: D

Complexity: Difficult

Ahead: The Respiratory System

Subject: Anatomy and Physiology

Page: 368

Feedback: The Respiratory System, page 368