Import Settings:

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Information Field: Complexity

Information Field: Ahead

Information Field: Subject

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Information Field: Objective

Highest Answer Letter: D

Multiple Keywords in Same Paragraph: No

**Chapter: Pathophysiology – Pathophysiology - TBNK**

1. The study of the functioning of an organism in the presence of disease is called:

A) biology.

B) physiology.

C) pathophysiology.

D) biochemistry.

Ans: C

Complexity: Easy

Ahead: Introduction

Subject: Pathophysiology

Page: 420

Feedback: Introduction, page 420

2. The paramedic is in the BEST position to formulate an appropriate treatment plan for an ill patient if the paramedic:

A) is able to identify the origin of the patient's illness.

B) obtains a complete list of all the patient's medications.

C) performs a head-to-toe exam to detect all abnormalities.

D) gathers a reliable medical history from the patient's family.

Ans: A

Complexity: Moderate

Ahead: Introduction

Subject: Pathophysiology

Page: 420

Feedback: Introduction, page 420

3. When cells are exposed to adverse conditions, they go through a process called:

A) apoptosis.

B) crenation.

C) adaptation.

D) hypertrophy.

Ans: C

Complexity: Easy

Ahead: Adaptation in Cells and Tissues

Subject: Pathophysiology

Page: 420

Feedback: Adaptation in Cells and Tissues, page 420

4. An increase in the number of cells in an organ or tissue is called:

A) atrophy.

B) hypertrophy.

C) hyperplasia.

D) metaplasia.

Ans: C

Complexity: Easy

Ahead: Adaptation in Cells and Tissues

Subject: Pathophysiology

Page: 420

Feedback: Adaptation in Cells and Tissues, page 420

5. A woman is diagnosed with cervical dysplasia. This means that the cervical cells have:

A) been replaced by a different cell type.

B) undergone irregular, atypical changes.

C) increased in number due to inflammation.

D) increased in size, leading to tissue enlargement.

Ans: B

Complexity: Moderate

Ahead: Adaptation in Cells and Tissues

Subject: Pathophysiology

Page: 420

Feedback: Adaptation in Cells and Tissues, page 420

6. A patient with chronic hypertension is diagnosed with left ventricular hypertrophy. This means that:

A) an increase in the number of cells has caused an increase in the size of the ventricle.

B) an increase in the size of the cells has caused an increase in the size of the ventricle.

C) cells of the left ventricular myocardium have been replaced by another cell type.

D) cells of the left ventricular myocardium have undergone irregular, atypical changes.

Ans: B

Complexity: Moderate

Ahead: Adaptation in Cells and Tissues

Subject: Pathophysiology

Page: 420

Feedback: Adaptation in Cells and Tissues, page 420

7. In a small child, loss of as little as \_\_\_\_% of total body fluid can cause illness.

A) 3 to 5

B) 5 to 10

C) 10 to 15

D) 20 to 25

Ans: C

Complexity: Easy

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Pages: 420–421

Feedback: Disturbances in Fluid Balance, pages 420–421

8. Following a stroke, a man has atrophy of his left leg. This means that:

A) the number of cells in his thigh have decreased.

B) the shape of the cells in his thigh are irregular.

C) his left leg is smaller in size than his right leg.

D) overuse of his left leg has caused it to enlarge.

Ans: C

Complexity: Moderate

Ahead: Adaptation in Cells and Tissues

Subject: Pathophysiology

Page: 420

Feedback: Adaptation in Cells and Tissues, page 420

9. At birth, a healthy full-term neonate has a total body water of:

A) 60%.

B) 70%.

C) 80%.

D) 90%.

Ans: C

Complexity: Easy

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 421

Feedback: Disturbances in Fluid Balance, page 421

10. When administered to a patient with cerebral edema, hypertonic saline:

A) must be given in a dose of at least 3 liters in order to have an effect.

B) would have no effect because there is no fluid shift in either direction.

C) causes fluid to shift into the tissues and would worsen the edema.

D) causes excess fluid to drain from the tissues and into the blood.

Ans: D

Complexity: Moderate

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 421

Feedback: Disturbances in Fluid Balance, page 421

11. Which of the following conditions can cause edema secondary to decreased colloidal osmotic pressure in the capillaries?

A) Pregnancy

B) Liver disease

C) Prolonged standing

D) Environmental heat stress

Ans: B

Complexity: Moderate

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 421

Feedback: Disturbances in Fluid Balance, page 421

12. In healthy adults, a loss of more than \_\_\_\_% of total body fluid is required to alter homeostasis and cause illness.

A) 10

B) 15

C) 20

D) 30

Ans: D

Complexity: Easy

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 420

Feedback: Disturbances in Fluid Balance, page 420

13. Which of the following conditions would cause a proportionate gain in both water and sodium?

A) Diarrhea

B) Steroid use

C) Hemorrhage

D) Loop diuretic use

Ans: B

Complexity: Easy

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 422

Feedback: Disturbances in Fluid Balance, page 422

14. If a patient is confined to bed for a prolonged period of time, you would expect edema to form in the:

A) sacrum.

B) peritoneum.

C) upper extremities.

D) face, neck, and chest.

Ans: A

Complexity: Easy

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 422

Feedback: Disturbances in Fluid Balance, page 422

15. Dehydration is generally a more serious concern in older adults than in younger adults because:

A) older adults lose significantly more water through perspiration.

B) total body water constitutes only 45% of body weight in older adults.

C) renal function increases significantly in patients over 60 years of age.

D) a person's total body water increases by 10% for each 10 years of life.

Ans: B

Complexity: Moderate

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 421

Feedback: Disturbances in Fluid Balance, page 421

16. An isotonic fluid deficit is caused by a(n):

A) decrease in intracellular fluid with proportionate losses of sodium and water.

B) increase in extracellular fluid with proportionate sodium and water retention.

C) increase in intracellular fluid with proportionate sodium and water retention.

D) decrease in extracellular fluid with proportionate losses of sodium and water.

Ans: D

Complexity: Easy

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 422

Feedback: Disturbances in Fluid Balance, page 422

17. Your patient has a serum sodium level of 158 mEq/L. What condition does this indicate?

A) Hypernatremia

B) Hyponatremia

C) Hypokalemia

D) Hyperkalemia

Ans: A

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 422

Feedback: Electrolyte Imbalances, page 422

18. Which of the following findings would you MOST likely observe in a dehydrated patient?

A) Polyuria

B) Bradycardia

C) Hypernatremia

D) Hyperkalemia

Ans: C

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 422

Feedback: Electrolyte Imbalances, page 422

19. A sodium loss in the body without a proportionate loss of water would cause:

A) hypokalemia.

B) hyponatremia.

C) hyperkalemia.

D) hypernatremia.

Ans: B

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 422

Feedback: Electrolyte Imbalances, page 422

20. Interventions used in patients with edema may include all of the following, EXCEPT:

A) nitrates.

B) catecholamines.

C) positional therapy.

D) continuous positive airway pressure

Ans: B

Complexity: Easy

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 422

Feedback: Disturbances in Fluid Balance, page 422

21. What imbalance would MOST likely occur in a patient with diabetic ketoacidosis?

A) Fluid excess with hypernatremia

B) Fluid excess with hyponatremia

C) Fluid deficit with hyponatremia

D) Fluid deficit with hypernatremia

Ans: D

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 423

Feedback: Electrolyte Imbalances, page 423

22. Which of the following medications or conditions would MOST likely cause or contribute to hyperkalemia?

A) Selective beta-2 agonists

B) Any non–potassium-sparing diuretic

C) Angiotensin-converting enzyme inhibitors

D) Reduction in potassium dietary intake

Ans: C

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 423

Feedback: Electrolyte Imbalances, page 423

23. Ascites is defined as:

A) an abnormal accumulation of fluid in the peritoneal cavity.

B) lower extremity edema caused by lymphatic obstruction.

C) fluid buildup in the lungs due to decreased cardiac function.

D) fluid backup in the periphery due to right atrial dysfunction.

Ans: A

Complexity: Easy

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 422

Feedback: Disturbances in Fluid Balance, page 422

24. The cardinal sign of overhydration is:

A) edema.

B) dyspnea.

C) hypertension.

D) tachycardia.

Ans: A

Complexity: Easy

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 421

Feedback: Disturbances in Fluid Balance, page 421

25. Acute pulmonary edema:

A) commonly results from right-sided heart failure.

B) results in excess elimination of carbon dioxide.

C) is characterized by progressively worsening dyspnea.

D) impairs oxygen diffusion into the pulmonary capillaries.

Ans: D

Complexity: Easy

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 422

Feedback: Disturbances in Fluid Balance, page 422

26. Edema in an upper extremity following a mastectomy is the result of:

A) localized vasoconstriction.

B) decreased lymphatic drainage.

C) obstruction of a large blood vessel.

D) surgery-induced inflammation.

Ans: B

Complexity: Easy

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 421

Feedback: Disturbances in Fluid Balance, page 421

27. Which imbalance would MOST likely be observed in a patient with syndrome of inappropriate antidiuretic hormone (SIADH)?

A) Fluid deficit with hypernatremia

B) Fluid excess with hyponatremia

C) Fluid excess with hypernatremia

D) Normal fluid volume with hyponatremia

Ans: D

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 423

Feedback: Electrolyte Imbalances, page 423

28. The paramedic should suspect hyperkalemia in a patient with:

A) dehydration.

B) a crush injury.

C) vomiting and diarrhea.

D) congestive heart failure.

Ans: B

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 423

Feedback: Electrolyte Imbalances, page 423

29. A patient with kidney or liver failure would MOST likely develop:

A) severe dehydration.

B) an increase in isotonic fluid.

C) cellular shrinkage and death.

D) excessive hypertonic fluid levels.

Ans: B

Complexity: Easy

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 422

Feedback: Disturbances in Fluid Balance, page 422

30. Orthostatic hypotension and oliguria are common manifestations of:

A) dehydration.

B) fluid overload.

C) hypernatremia

D) left-sided heart failure.

Ans: A

Complexity: Easy

Ahead: Disturbances in Fluid Balance

Subject: Pathophysiology

Page: 422

Feedback: Disturbances in Fluid Balance, page 422

31. Which of the following factors would MOST likely cause hyponatremia?

A) Mild fever

B) A seizure

C) Acute nausea

D) Diuretic use

Ans: D

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 422

Feedback: Electrolyte Imbalances, page 422

32. Hyperkalemia is defined as:

A) excess potassium in the cells.

B) a relative deficit of sodium.

C) an elevated serum potassium level.

D) a critically low magnesium level.

Ans: C

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 423

Feedback: Electrolyte Imbalances, page 423

33. All of the following factors would cause potassium to shift into the cell, EXCEPT:

A) alkalosis.

B) epinephrine release.

C) increased vagal tone.

D) insulin administration.

Ans: C

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 423

Feedback: Electrolyte Imbalances, page 423

34. A diabetic patient who failed to take his or her insulin and presents with peaked T waves on the cardiac monitor and muscle weakness is MOST likely:

A) hypocalcemic.

B) hyperkalemic.

C) hypokalemic.

D) hypoglycemic.

Ans: B

Complexity: Moderate

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 423

Feedback: Electrolyte Imbalances, page 423

35. Which of the following represents an abnormal electrolyte serum level?

A) Chloride, 100 mEq/L

B) Sodium, 140 mEq/L

C) Calcium, 9.9 mEq/L

D) Potassium, 5.9 mEq/L

Ans: D

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 425

Feedback: Electrolyte Imbalances, page 425

36. Muscle cramps and paresthesias in a malnourished patient with alcoholism are MOST likely the result of:

A) hypocalcemia.

B) hypernatremia.

C) hyperkalemia.

D) hypermagnesemia.

Ans: A

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 423

Feedback: Electrolyte Imbalances, page 423

37. Half of the body's magnesium is stored in the:

A) bones.

B) kidneys.

C) skeletal muscle.

D) extracellular fluid.

Ans: A

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 425

Feedback: Electrolyte Imbalances, page 425

38. A patient with chronic renal insufficiency who has been taking laxatives and presents with confusion, muscle weakness, and decreased deep tendon reflexes MOST likely has:

A) decreased serum sodium levels.

B) an overall decrease in serum potassium.

C) an increased serum level of magnesium.

D) increased intracellular magnesium levels.

Ans: C

Complexity: Moderate

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 425

Feedback: Electrolyte Imbalances, page 425

39. Acid-base balance normally remains in a physiologic pH range of:

A) 7.25–7.35.

B) 7.35–7.45.

C) 7.45–7.55.

D) 7.55–8.25.

Ans: B

Complexity: Easy

Ahead: Disturbances of Acid-Base Balance

Subject: Pathophysiology

Page: 425

Feedback: Disturbances of Acid-Base Balance, page 425

40. How do the kidneys respond to acidosis?

A) Excrete potassium and reabsorb hydrogen ions.

B) Reabsorb hydrogen ions and potassium.

C) Excrete hydrogen ions and potassium.

D) Excrete hydrogen ions and reabsorb potassium.

Ans: D

Complexity: Moderate

Ahead: Disturbances of Acid-Base Balance

Subject: Pathophysiology

Page: 426

Feedback: Disturbances of Acid-Base Balance, page 426

41. Which of the following represents an abnormal electrolyte serum level?

A) Sodium, 140 mEq/L

B) Potassium, 4.9 mEq/L

C) Calcium, 9.5 mEq/L

D) Magnesium, 2.4 mEq/L

Ans: D

Complexity: Easy

Ahead: Electrolyte Imbalances

Subject: Pathophysiology

Page: 425

Feedback: Electrolyte Imbalances, page 425

42. Acidosis is characterized by a(n):

A) increase in hydrogen ions and a decrease in pH.

B) decrease in hydrogen ions and an increase in pH.

C) increase in hydrogen ions and an increase in pH.

D) decrease in hydrogen ions and a decrease in pH.

Ans: A

Complexity: Easy

Ahead: Disturbances of Acid-Base Balance

Subject: Pathophysiology

Page: 426

Feedback: Disturbances of Acid-Base Balance, page 426

43. A person who ingests an excessive amount of salicylate would MOST likely experience:

A) alkalosis.

B) bradycardia.

C) a fall in pH.

D) hypoventilation.

Ans: C

Complexity: Easy

Ahead: Disturbances of Acid-Base Balance

Subject: Pathophysiology

Page: 429

Feedback: Disturbances of Acid-Base Balance, page 429

44. Carpopedal spasm that occurs during respiratory alkalosis is caused by a(n):

A) decrease in arterial CO2.

B) intracellular calcium shift.

C) extracellular sodium shift.

D) intracellular potassium shift.

Ans: B

Complexity: Moderate

Ahead: Disturbances of Acid-Base Balance

Subject: Pathophysiology

Page: 427

Feedback: Disturbances of Acid-Base Balance, page 427

45. A patient who overdosed on heroin and is unconscious with slow, shallow respirations would MOST likely experience:

A) increased CO2 retention.

B) acute metabolic acidosis.

C) excess CO2 elimination.

D) a pH well above 7.45.

Ans: A

Complexity: Moderate

Ahead: Disturbances of Acid-Base Balance

Subject: Pathophysiology

Page: 426

Feedback: Disturbances of Acid-Base Balance, page 426

46. Which of the following conditions would be the LEAST likely to cause hyperventilation?

A) Ketoacidosis

B) Severe infection

C) Aspirin overdose

D) Metabolic alkalosis

Ans: D

Complexity: Easy

Ahead: Disturbances of Acid-Base Balance

Subject: Pathophysiology

Pages: 426–429

Feedback: Disturbances of Acid-Base Balance, pages 426–429

47. When cells are hypoxic for more than a few seconds:

A) they produce substances that may damage other local or distant body systems.

B) the respiratory system rapidly decompensates and breathing becomes slow.

C) an increase in cytochrome production occurs and the body makes more energy.

D) lysosomes quickly release enzymes that attempt to rebuild the structure of the cell.

Ans: A

Complexity: Moderate

Ahead: Cellular Injury

Subject: Pathophysiology

Page: 429

Feedback: Cellular Injury, page 429

48. What chemical induces hypoxia by blocking oxidative phosphorylation in the mitochondria and preventing oxygen metabolism?

A) Lead

B) Ethanol

C) Cyanide

D) Carbon monoxide

Ans: C

Complexity: Easy

Ahead: Cellular Injury

Subject: Pathophysiology

Page: 430

Feedback: Cellular Injury, page 430

49. Infectious cellular injury would LEAST likely occur in a patient:

A) with metastatic cancer.

B) with migraine headaches.

C) who is over 70 years of age.

D) with long-term diabetes.

Ans: B

Complexity: Easy

Ahead: Cellular Injury

Subject: Pathophysiology

Pages: 430–431

Feedback: Cellular Injury, pages 430–431

50. Foreign material such as bacteria and other microorganisms are engulfed and destroyed by:

A) basophils.

B) phagocytes.

C) eosinophils.

D) lymphocytes.

Ans: B

Complexity: Easy

Ahead: Cellular Injury

Subject: Pathophysiology

Page: 431

Feedback: Cellular Injury, page 431

51. In the presence of infection, white blood cells release endogenous chemicals called \_\_\_\_\_\_\_\_\_, which produce fever.

A) pyrogens

B) histamines

C) leukotrienes

D) catecholamines

Ans: A

Complexity: Moderate

Ahead: Cellular Injury

Subject: Pathophysiology

Page: 431

Feedback: Cellular Injury, page 431

52. Unlike bacteria, viruses:

A) are unable to replicate.

B) are treated effectively with antibiotics.

C) do not produce an immune response.

D) do not produce exotoxins or endotoxins.

Ans: D

Complexity: Easy

Ahead: Cellular Injury

Subject: Pathophysiology

Page: 432

Feedback: Cellular Injury, page 432

53. Apoptosis is defined as:

A) hypoxic cell death.

B) normal cell death.

C) pathologic cell death.

D) premature cell death.

Ans: B

Complexity: Easy

Ahead: Cellular Injury

Subject: Pathophysiology

Page: 433

Feedback: Cellular Injury, page 433

54. If an injury leading to cell degeneration is of sufficient intensity and duration:

A) ischemia will result in simple necrosis.

B) the cell will undergo coagulation necrosis.

C) the cell will become inflamed and may burst.

D) irreversible cell injury will lead to cell death.

Ans: D

Complexity: Moderate

Ahead: Cellular Injury

Subject: Pathophysiology

Page: 433

Feedback: Cellular Injury, page 433

55. Men with a defective X gene will:

A) not be affected because the defect can be masked.

B) not be affected because the defect cannot be masked.

C) always be affected because the defect cannot be masked.

D) always be affected because they only have one X chromosome.

Ans: C

Complexity: Moderate

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 456

Feedback: Factors That Cause Disease, page 456

56. The prevalence of a particular disease refers to:

A) the frequency with which the disease occurs.

B) how acutely the disease negatively affects a person.

C) the number of cases in a particular population over time.

D) the number of deaths from the disease in a given population.

Ans: C

Complexity: Moderate

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 456

Feedback: Factors That Cause Disease, page 456

57. Most immunologic diseases that exhibit familial tendencies:

A) are caused by immunosuppression.

B) involve an overactive immune system.

C) are outgrown by the age of 25 years.

D) are caused by immune system hypoactivity.

Ans: B

Complexity: Easy

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 457

Feedback: Factors That Cause Disease, page 457

58. Allergies are acquired following:

A) most bacterial infections.

B) initial exposure to an allergen.

C) indirect exposure to an allergen.

D) repeated exposure to an allergen.

Ans: B

Complexity: Easy

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 457

Feedback: Factors That Cause Disease, page 457

59. Recurrent episodes of rheumatic fever would MOST likely cause:

A) metastatic brain cancer.

B) frequent streptococcal infections.

C) progressive failure of the liver.

D) permanent damage to the heart valves.

Ans: D

Complexity: Easy

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 458

Feedback: Factors That Cause Disease, page 458

60. An inflammatory condition of the respiratory system that results in intermittent wheezing and excess mucus production is called:

A) sinusitis.

B) asthma.

C) bronchitis.

D) emphysema.

Ans: B

Complexity: Easy

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 457

Feedback: Factors That Cause Disease, page 457

61. Major risk factors for lung cancer include:

A) female sex and age over 40 years.

B) frequent respiratory infections and asthma.

C) cigarette smoking and exposure to asbestos.

D) chewing tobacco use and a history of allergies.

Ans: C

Complexity: Moderate

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 458

Feedback: Factors That Cause Disease, page 458

62. Early signs or symptoms of breast cancer include:

A) a small, painless lump in the breast.

B) swollen lymph glands in the axilla.

C) significant weight loss and vomiting.

D) nipple discharge and breast tenderness.

Ans: A

Complexity: Easy

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 459

Feedback: Factors That Cause Disease, page 459

63. Patients with type 1 diabetes mellitus:

A) need exogenous insulin to survive.

B) are less likely to develop ketoacidosis.

C) experience excessive cellular uptake of glucose.

D) control their disease with dietary modification.

Ans: A

Complexity: Moderate

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 460

Feedback: Factors That Cause Disease, page 460

64. Hemolytic anemia is a disease characterized by:

A) decreased production of red blood cells.

B) premature death of white blood cells.

C) an overproduction of red blood cells.

D) increased destruction of red blood cells.

Ans: D

Complexity: Easy

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 460

Feedback: Factors That Cause Disease, page 460

65. Which of the following statements regarding hemophilia is correct?

A) Hemophilia is caused by excessive production of factor VIII.

B) Hemophilia is an inherited disorder, is characterized by excessive bleeding, and occurs predominantly in males.

C) Hemophilia is characterized by factor VIII deficit and is passed from asymptomatic fathers to daughters.

D) Hemophilia is generally not an inherited disorder and affects males and females in equal numbers.

Ans: B

Complexity: Moderate

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 460

Feedback: Factors That Cause Disease, page 460

66. Patients with congenital prolongation of the QT interval are at GREATEST risk for:

A) sudden asystole.

B) ventricular dysrhythmias.

C) coronary artery disease.

D) acute myocardial infarction.

Ans: B

Complexity: Moderate

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 460

Feedback: Factors That Cause Disease, page 460

67. Syncope is probably NOT caused by a life-threatening dysrhythmia if it occurs:

A) immediately after a person is startled.

B) following exercise or heavy exertion.

C) in a person whose cousin has syncope.

D) in conjunction with chest pain or pressure.

Ans: C

Complexity: Moderate

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Pages: 460–461

Feedback: Factors That Cause Disease, pages 460–461

68. Hypertrophic cardiomyopathy is characterized by:

A) enlargement or thickening of the heart muscle.

B) progressive shrinking of the right side of the heart.

C) a significant reduction of blood return to the atria.

D) generalized thinning of the left and right ventricles.

Ans: A

Complexity: Easy

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 461

Feedback: Factors That Cause Disease, page 461

69. Generally, the only physical finding in a patient with a prolapsed mitral valve is:

A) a chronically irregular heart rate.

B) sharp chest pain following strenuous exertion.

C) dyspnea and palpitations while in a sitting position.

D) a clicking sound heard during cardiac auscultation.

Ans: D

Complexity: Moderate

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 461

Feedback: Factors That Cause Disease, page 461

70. A person with a normal total cholesterol level:

A) is at high risk for an acute cardiac event if his or her HDL levels are elevated.

B) will probably not develop coronary artery disease, even if his or her HDL levels are low.

C) will likely not experience an acute cardiac event, even if his or her LDL levels are elevated.

D) is still at risk for coronary artery disease if his or her LDL levels are elevated.

Ans: D

Complexity: Moderate

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 462

Feedback: Factors That Cause Disease, page 462

71. Gout is a condition in which:

A) calcium deposits affect the joints.

B) uric acid accumulates in the blood.

C) the kidneys fail to excrete sodium.

D) synovial fluid is progressively destroyed.

Ans: B

Complexity: Easy

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 462

Feedback: Factors That Cause Disease, page 462

72. Common signs and symptoms of ulcerative colitis include all of the following, EXCEPT:

A) pus or blood in the stools.

B) recurrent abdominal pain.

C) bloating after milk ingestion.

D) fever, chills, and diarrhea.

Ans: C

Complexity: Moderate

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 463

Feedback: Factors That Cause Disease, page 463

73. What disease is characterized by erosions in the mucous membrane lining of the gastrointestinal tract, specifically the stomach?

A) Peptic ulcer disease

B) Crohn's disease

C) Cholethiasis

D) Cholecystitis

Ans: A

Complexity: Easy

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 463

Feedback: Factors That Cause Disease, page 463

74. Common health risks associated with obesity include all of the following, EXCEPT:

A) diabetes.

B) infertility.

C) hypolipidemia.

D) insulin resistance.

Ans: C

Complexity: Easy

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 464

Feedback: Factors That Cause Disease, page 464

75. Muscular dystrophy is characterized by:

A) progressive deterioration of involuntary muscles, specifically the diaphragm.

B) weakness and wasting of groups of skeletal muscles, leading to increasing disability.

C) relaxation of the vascular smooth muscles, resulting in progressive hypoperfusion.

D) involuntary rapid, jerky motions and mental deterioration, leading to dementia.

Ans: B

Complexity: Easy

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 464

Feedback: Factors That Cause Disease, page 464

76. Early manifestations of Alzheimer disease include:

A) impaired cognition and impaired abstract thinking.

B) inability to carry out activities of daily living.

C) indifference to food and urinary incontinence.

D) memory loss and subtle personality changes.

Ans: D

Complexity: Easy

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 464

Feedback: Factors That Cause Disease, page 464

77. Gross distortions of reality, withdrawal from social contacts, and bizarre behavior are MOST characteristic of:

A) depression.

B) schizophrenia.

C) bipolar disorder.

D) obsessive-compulsive disorder.

Ans: B

Complexity: Moderate

Ahead: Factors That Cause Disease

Subject: Pathophysiology

Page: 464

Feedback: Factors That Cause Disease, page 464

78. How does the body respond to hypoperfusion?

A) Decreased preload, stroke volume, and heart rate

B) Catecholamine release and increased systemic vascular resistance

C) Splenic retention of red blood cells secondary to systemic hypoxia

D) A compensatory decrease in cardiac output and cardiac oxygen demand

Ans: B

Complexity: Moderate

Ahead: Hypoperfusion

Subject: Pathophysiology

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Feedback: Hypoperfusion, page 434

79. When oxygen does not reach the cell, the cell reverts to:

A) anaerobic metabolism and produces lactic acid.

B) aerobic metabolism and produces carbon dioxide.

C) fat metabolism and begins producing ketoacids.

D) anaerobic metabolism and produces bicarbonate.

Ans: A

Complexity: Moderate

Ahead: Hypoperfusion

Subject: Pathophysiology

Page: 435

Feedback: Hypoperfusion, page 435

80. The MOST common cause of cardiogenic shock is:

A) untreated hypertension.

B) blunt force chest trauma.

C) acute myocardial infarction.

D) sustained pulmonary hypertension.

Ans: C

Complexity: Easy

Ahead: Types of Shock

Subject: Pathophysiology

Page: 435

Feedback: Types of Shock, page 435

81. What type of shock occurs when blood flow becomes blocked in the heart or great vessels?

A) Cardiogenic

B) Peripheral

C) Distributive

D) Obstructive

Ans: D

Complexity: Easy

Ahead: Types of Shock

Subject: Pathophysiology

Page: 435

Feedback: Types of Shock, page 435

82. The MOST common type of exogenous hypovolemic shock is:

A) severe diarrhea.

B) internal hemorrhage.

C) excess plasma loss.

D) external bleeding.

Ans: D

Complexity: Easy

Ahead: Types of Shock

Subject: Pathophysiology

Page: 437

Feedback: Types of Shock, page 437

83. Distributive shock occurs when:

A) central vasoconstriction forces blood from the core of the body.

B) blood pools in expanded vascular beds and tissue perfusion decreases.

C) microorganisms attack the blood vessels, resulting in vasodilation.

D) a significant decrease in cardiac contractility causes decreased perfusion.

Ans: B

Complexity: Easy

Ahead: Types of Shock

Subject: Pathophysiology

Page: 437

Feedback: Types of Shock, page 437

84. Anaphylactic shock is characterized by:

A) labored breathing and hypertension.

B) wheezing and widespread vasodilation.

C) intracellular hypovolemia and hives.

D) a deficiency of circulating histamines.

Ans: B

Complexity: Easy

Ahead: Types of Shock

Subject: Pathophysiology

Page: 437

Feedback: Types of Shock, page 437

85. A loss of normal sympathetic nervous system tone causes:

A) neurogenic shock.

B) obstructive shock.

C) profound vasoconstriction.

D) a reduced absolute blood volume.

Ans: A

Complexity: Easy

Ahead: Types of Shock

Subject: Pathophysiology

Page: 437

Feedback: Types of Shock, page 437

86. Which of the following is an early sign of shock?

A) Altered level of consciousness

B) Absence of peripheral pulses

C) Decreasing end-tidal CO2

D) Systolic BP less than 90 mm Hg

Ans: C

Complexity: Easy

Ahead: Types of Shock

Subject: Pathophysiology

Page: 438

Feedback: Types of Shock, page 438

87. Strength of a person's peripheral pulses is related to:

A) heart rate and preload.

B) stroke volume and pulse pressure.

C) physical size and blood pressure.

D) cardiac output and heart rate.

Ans: B

Complexity: Easy

Ahead: Types of Shock

Subject: Pathophysiology

Page: 438

Feedback: Types of Shock, page 438

88. Which of the following statements regarding multiple organ dysfunction syndrome (MODS) is correct?

A) MODS typically develops within 20 to 30 minutes following resuscitation from cardiac arrest.

B) At the cellular level, MODS results in aerobic metabolism, metabolic alkalosis, and impaired cellular function.

C) Signs and symptoms of MODS include compensatory hypertension, bradycardia, and a fever greater than 105°F.

D) MODS occurs when injury or infection triggers a massive systemic immune, inflammatory, and coagulation response.

Ans: D

Complexity: Moderate

Ahead: Multiple Organ Dysfunction Syndrome

Subject: Pathophysiology

Page: 438

Feedback: Multiple Organ Dysfunction Syndrome, page 438

89. Signs and symptoms of multiple organ dysfunction syndrome (MODS) include:

A) polyuria.

B) coagulopathy.

C) decreased creatinine.

D) decreased liver enzymes.

Ans: B

Complexity: Easy

Ahead: Multiple Organ Dysfunction Syndrome

Subject: Pathophysiology

Page: 438

Feedback: Multiple Organ Dysfunction Syndrome, page 438

90. The chief white blood cell of the immune response is the:

A) lymphocyte.

B) neutrophil.

C) monocyte.

D) eosinophil.

Ans: A

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 439

Feedback: The Body’s Self-Defense Mechanisms, page 439

91. A type of B cell that aids in the quick response to subsequent exposures to an antigen and rapidly produces antibodies is the:

A) monocyte.

B) B lymphocyte.

C) memory B cell.

D) helper B cell.

Ans: C

Complexity: Moderate

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 440

Feedback: The Body’s Self-Defense Mechanisms, page 440

92. White blood cells that develop from B cells and produce large volumes of specific antibodies are called:

A) plasma cells.

B) macrophages.

C) T lymphocytes.

D) killer T cells.

Ans: A

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 440

Feedback: The Body’s Self-Defense Mechanisms, page 440

93. \_\_\_\_\_\_\_\_\_\_\_\_\_ are a type of white blood cell that phagocytizes bacteria.

A) Neutrophils

B) Eosinophils

C) B lymphocytes

D) Basophils

Ans: A

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 440

Feedback: The Body’s Self-Defense Mechanisms, page 440

94. Which of the following statements regarding basophils is correct?

A) Basophils release chemicals that destroy parasitic invaders.

B) Basophils account for approximately 70% of the leukocytes.

C) Basophils travel to the tissues, where they become macrophages.

D) Basophils release histamine in response to inflammation.

Ans: D

Complexity: Moderate

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 440

Feedback: The Body’s Self-Defense Mechanisms, page 440

95. Cells that mature in the bone marrow where they differentiate into memory cells or immunoglobulin-secreting (antibody) cells are called:

A) T lymphocytes.

B) B lymphocytes.

C) plasma cells.

D) memory B cells.

Ans: B

Complexity: Moderate

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 440

Feedback: The Body’s Self-Defense Mechanisms, page 440

96. An injection of immunoglobulin is a form of:

A) native immunity.

B) passive acquired immunity.

C) innate immunity.

D) active acquired immunity.

Ans: B

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 441

Feedback: The Body’s Self-Defense Mechanisms, page 441

97. The secondary (amnestic) immune response occurs when:

A) the body is initially exposed to a foreign substance.

B) the body is reexposed to a foreign substance.

C) an antibody binds to a specific antigen and destroys it.

D) biologic mediators release histamine and other chemicals.

Ans: B

Complexity: Moderate

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 441

Feedback: The Body’s Self-Defense Mechanisms, page 441

98. B lymphocytes produce antibodies when they are activated by:

A) mast cells.

B) eosinophils.

C) helper T cells.

D) phagocytes.

Ans: C

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 443

Feedback: The Body’s Self-Defense Mechanisms, page 443

99. Opsonization is a process in which:

A) antibodies bind to and inactivate toxins produced by bacteria.

B) antibodies cause antigens to clump together to facilitate phagocytosis.

C) a mother passes IgG and IgM antibodies to the fetus via breast milk.

D) an antibody coats an antigen to facilitate its recognition by immune cells.

Ans: D

Complexity: Moderate

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 445

Feedback: The Body’s Self-Defense Mechanisms, page 445

100. The \_\_\_\_\_ antibody is the dominant antibody in blood type incompatibilities.

A) IgG

B) IgE

C) IgM

D) IgE

Ans: C

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 445

Feedback: The Body’s Self-Defense Mechanisms, page 445

101. Older adults have increased levels of autoantibodies, which:

A) increase the person's risk of infection.

B) are antibodies directed against the patient.

C) predispose the patient to ischemic stroke.

D) cause a decreased level of macrophages.

Ans: B

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 446

Feedback: The Body’s Self-Defense Mechanisms, page 446

102. The two MOST common causes of inflammation are:

A) fever and phagocytosis.

B) infection and injury.

C) hypercarbia and hypoxemia.

D) immunosuppression and fever.

Ans: B

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 446

Feedback: The Body’s Self-Defense Mechanisms, page 446

103. During the acute inflammatory response:

A) transient arteriolar constriction is followed by arteriolar dilation, which allows an influx of blood under increased pressure.

B) active hyperemia causes the blood vessels to constrict, which diverts blood flow away from the affected site.

C) increased vessel wall permeability forces fluid out of the interstitial spaces, resulting in cell shrinkage and eventual death.

D) chemical mediators, which are primarily produced by monocytes, cause localized constriction of the vessels adjacent to the affected site.

Ans: A

Complexity: Moderate

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 446

Feedback: The Body’s Self-Defense Mechanisms, page 446

104. Slow-reacting substances of anaphylaxis are also known as:

A) histamine.

B) mast cells.

C) eosinophils.

D) leukotrienes.

Ans: D

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 446

Feedback: The Body’s Self-Defense Mechanisms, page 446

105. Aspirin and NSAIDs reduce inflammation and pain by:

A) inhibiting prostaglandin synthesis.

B) decreasing circulating pyrogen levels.

C) thinning the blood and reducing platelets.

D) promoting mast cell synthesis of prostaglandins.

Ans: A

Complexity: Moderate

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 447

Feedback: The Body’s Self-Defense Mechanisms, page 447

106. \_\_\_\_\_\_\_\_\_\_ is the protein that bonds to form the fibrous component of a blood clot.

A) Kinin

B) Plasmin

C) Fibrin

D) Collagen

Ans: C

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 447

Feedback: The Body’s Self-Defense Mechanisms, page 447

107. The destruction of a blood clot is called:

A) adhesion.

B) fibrinolysis.

C) chemotaxis.

D) agglutination.

Ans: B

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 447

Feedback: The Body’s Self-Defense Mechanisms, page 447

108. Factor \_\_\_\_ is the antihemophilic factor.

A) VII

B) VIII

C) IX

D) XI

Ans: B

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 448

Feedback: The Body’s Self-Defense Mechanisms, page 448

109. Interleukins function by:

A) releasing prothrombin from the liver and converting it to thrombin.

B) stimulating macrophages to help engulf and destroy foreign substances.

C) keeping leukocytes at the infection site until they can perform their task.

D) attracting white blood cells to the sites of injury and bacterial invasion.

Ans: D

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Pages: 448, 450

Feedback: The Body’s Self-Defense Mechanisms, pages 448, 450

110. When nerve cells and cardiac myocytes are injured:

A) they are replaced by regeneration from remaining cells.

B) their cells divide completely and thus heal completely.

C) a slow influx of blood flow causes progressive repair.

D) scar tissue forms because these cells cannot be replaced.

Ans: D

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 450

Feedback: The Body’s Self-Defense Mechanisms, page 450

111. Wounds that heal by primary intention:

A) do not utilize fibrin or fibronectin.

B) heal without the formation of a scab.

C) are generally clean wounds with opposed margins.

D) have a more pronounced and prolonged inflammatory phase.

Ans: C

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 450

Feedback: The Body’s Self-Defense Mechanisms, page 450

112. Which of the following disease processes would MOST likely cause delayed or dysfunctional wound healing?

A) Diabetes

B) Hypothyroidism

C) Heart disease

D) Hypertension

Ans: A

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 450

Feedback: The Body’s Self-Defense Mechanisms, page 450

113. Angiogenesis is defined as:

A) the growth of new blood vessels.

B) the destruction of blood vessels.

C) rerouting of intact blood vessels.

D) regrowth of damaged blood vessels.

Ans: A

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Pages: 450–451

Feedback: The Body’s Self-Defense Mechanisms, pages 450–451

114. In general, a child's immune system is not fully developed until he or she is between:

A) 1 and 2 years of age.

B) 2 and 3 years of age.

C) 3 and 4 years of age.

D) 4 and 5 years of age.

Ans: B

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 450

Feedback: The Body’s Self-Defense Mechanisms, page 450

115. The body's rejection of an organ following transplantation is MOST likely the result of:

A) autoimmunity.

B) hypersensitivity.

C) an infection.

D) isoimmunity.

Ans: D

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 451

Feedback: The Body’s Self-Defense Mechanisms, page 451

116. A type I hypersensitivity reaction is:

A) a local reaction that primarily involves IgG antibodies.

B) an acute reaction that occurs in response to a stimulus.

C) an allergic response that occurs within hours of antigen exposure.

D) a cytotoxic reaction and destroys many of the body's healthy cells.

Ans: B

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 451

Feedback: The Body’s Self-Defense Mechanisms, page 451

117. Unlike an allergic reaction, an autoimmune reaction:

A) targets an antigen or allergen.

B) is generally predictable.

C) targets a person's own tissues.

D) does not involve antibodies.

Ans: C

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 453

Feedback: The Body’s Self-Defense Mechanisms, page 453

118. All of the following diseases are autoimmune diseases, EXCEPT:

A) Graves disease.

B) type 1 diabetes.

C) HIV infection.

D) myasthenia gravis.

Ans: C

Complexity: Difficult

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

Page: 453

Feedback: The Body’s Self-Defense Mechanisms, page 453

119. If the cause of a disease is unknown, it is said to be:

A) idiopathic.

B) organic.

C) functional.

D) pathologic.

Ans: A

Complexity: Easy

Ahead: The Body’s Self-Defense Mechanisms

Subject: Pathophysiology

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Feedback: The Body’s Self-Defense Mechanisms, page 453

120. The resistance stage of the stress reaction is characterized by:

A) an immediate release of the catecholamines epinephrine and norepinephrine, which causes the fight-or-flight response.

B) a reduction of cortisol in the body, which predisposes the person to acute inflammatory processes.

C) stimulation of the adrenal glands to secrete hormones that increase blood glucose levels and maintain blood pressure.

D) adrenal gland depletion, which leads to decreased blood glucose levels, physical exhaustion, and immunocompromise.

Ans: C

Complexity: Moderate

Ahead: Stress and Disease

Subject: Pathophysiology

Page: 466

Feedback: Stress and Disease, page 466

121. Severe, prolonged stress:

A) is frequently a direct cause of death.

B) results in the destruction of cholesterol and fat.

C) causes the body to lose its ability to fight disease.

D) results in chronically low levels of cortisol.

Ans: C

Complexity: Easy

Ahead: Stress and Disease

Subject: Pathophysiology

Page: 467

Feedback: Stress and Disease, page 467

122. The body reacts to stress first by releasing:

A) insulin

B) endorphins.

C) serotonin.

D) catecholamines.

Ans: D

Complexity: Easy

Ahead: Stress and Disease

Subject: Pathophysiology

Page: 466

Feedback: Stress and Disease, page 466

123. What hormone targets the adrenal cortex, resulting in cortisol secretion?

A) Norepinephrine

B) Antidiuretic hormone

C) Thyroid stimulating hormone

D) Adrenocorticotropic hormone

Ans: D

Complexity: Easy

Ahead: Stress and Disease

Subject: Pathophysiology

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Feedback: Stress and Disease, page 466