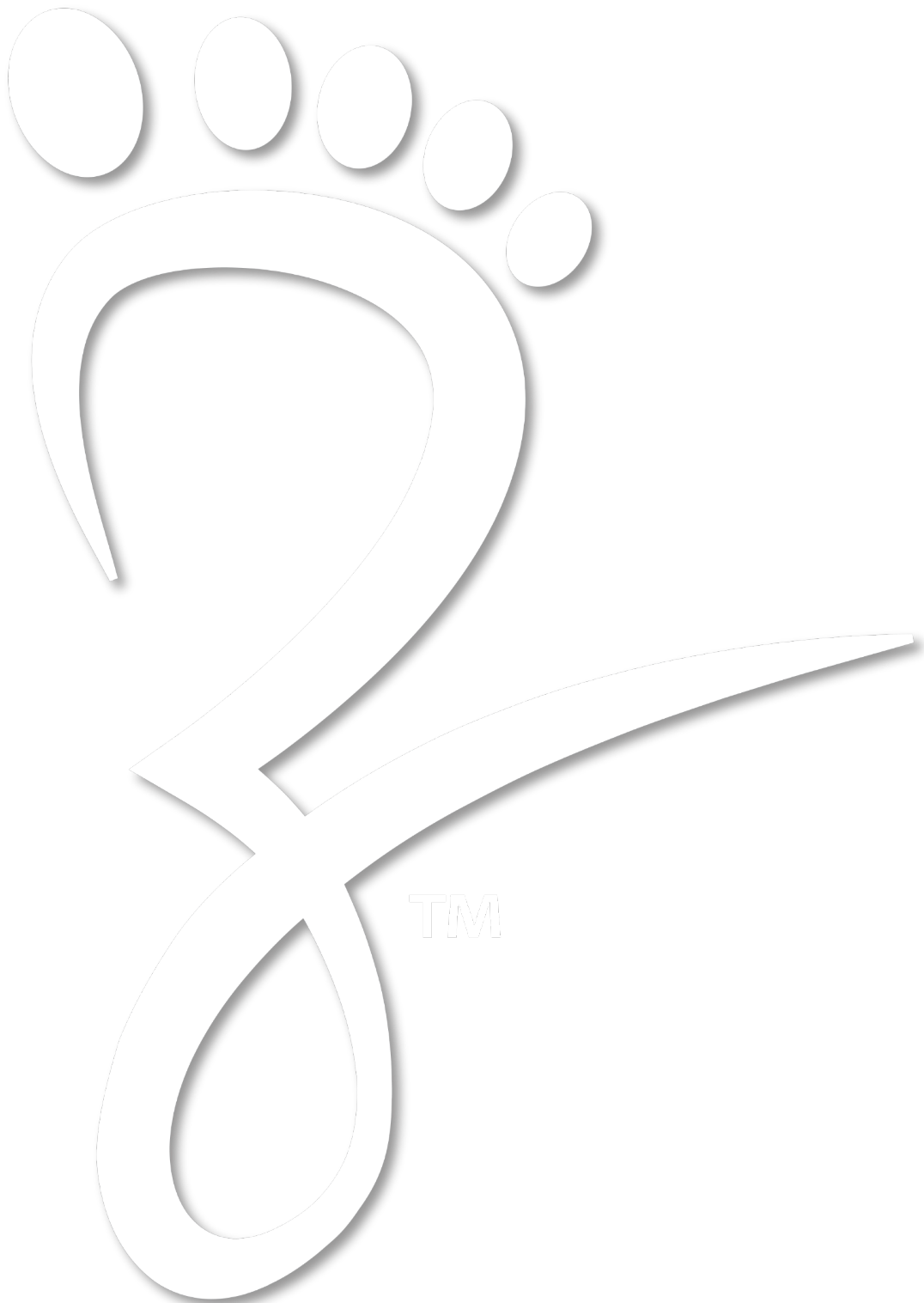


Name: \_\_\_\_\_

Date: \_\_\_\_\_



Wellness Life Zone, Foot Zone Academy

A&P Board Certification Exam

## THE BRAIN

1. Name the sensory lobe that is responsible for taste, smell, temperature, and texture. It is located above the corpus callosum, in front of occipital lobe, and behind frontal lobe.
  - a) Occipital
  - b) Temporal
  - c) Frontal
  - d) Parietal
2. Name the lobe responsible for hearing and long-term memory. It is located on the temples beneath the frontal lobe.
  - a) Parietal
  - b) Temporal
  - c) Occipital
  - d) Frontal
3. The cingulate gyrus is the large band in the inner part of the brain that connects the right and left hemispheres and carries messages between them.  
TRUE/FALSE Answer: Corpus Collosum
4. The limbic system of loosely interconnected structures is involved with emotions and long and short-term memory. TRUE/FALSE
5. The amygdala is the two bulbs of the brain that determine what sensory information is important and which experiences the brain should store. They are associated with being sociable. TRUE/FALSE
6. Name the inter-region of the brain that includes the thalamus, hypothalamus, and epithalamus.
  - a) Limbic System
  - b) Brain Stem
  - c) Diencephalon Group
  - d) Midbrain
7. This area of the brain controls the endocrine activity, body temperature, and food and water intake through the autonomic nervous system.
  - a) Medulla Oblongata
  - b) Epithalamus
  - c) Thalamus
  - d) Hypothalamus

8. When melatonin is needed, the pineal gland receives direction to secrete melatonin from which part of the brain?
- a) Midbrain
  - b) Thalamus
  - c) Medulla Oblongata
  - d) Epithalamus
9. The diencephalon group produces cerebral spinal fluid, bathing and cushioning the brain and spinal cord for protection. TRUE/FALSE  
Answer: First, Second, Third, Fourth Ventricles
10. The medulla oblongata houses structures that control functions associated with survival, such as breathing, swallowing, and vomiting. TRUE/FALSE
11. The midbrain is the upper part of the brain stem that integrates sensory information and relays it to the brain. TRUE/FALSE
12. Which part of the brainstem controls autonomic reflexes such as breathing, heart rate and blood pressure, smooth muscles for digestion etc.?
- a) Cerebellum
  - b) Medulla Oblongata
  - c) Limbic System
  - d) Midbrain

### THE NERVOUS SYSTEM

13. Name cranial nerve V.
- a) Vagus
  - b) Trigeminal
  - c) Vestibulocochlear
  - d) Trochlear
14. Name cranial nerve X.
- a) Vagus
  - b) Trigeminal
  - c) Vestibulocochlear
  - d) Trochlear

15. Name cranial nerve II.

- a) Abducens
- b) Accessory
- c) Oculomotor
- d) Optic

16. Name cranial nerve XII.

- a) Facial
- b) Glossopharyngeal
- c) Hypoglossal
- d) Olfactory

17. Which cranial nerve is responsible for ophthalmic, maxillary, and mandibular responses?

- a) Trigeminal
- b) Olfactory
- c) Facial
- d) Abducens

18. The olfactory nerve is responsible for facial expressions. TRUE/FALSE

Answer: Facial

19. The abducens nerve is responsible for hearing and balance. TRUE/FALSE

Answer: Vestibulocochlear

20. The oculomotor nerve responsible for 4 major muscles of the eyeball and restriction of the pupil. TRUE/FALSE

21. The oculomotor nerve is responsible for 180° visual field. TRUE/FALSE

Answer: Optic

22. The vagus nerve is known as the "wanderer" because it leaves the cranium and is responsible for parasympathetic innervation of organs. TRUE/FALSE

23. The somatic systems controls voluntary muscles and the autonomic nervous system controls involuntary muscles. TRUE/FALSE

24. Which branch of the autonomic nervous system increases heart rate, respiration, and perspiration to ready our body for "flight or flight"?

- a) Central Nervous System
- b) Somatic Nervous System
- c) Parasympathetic Nervous System
- d) Sympathetic Nervous System

25. Afferent neurons that conduct impulses away from the CNS to muscles and glands. TRUE/FALSE Answer: Towards the CNS
26. What are the two divisions of the nervous system?
- a) Central Nervous System, Peripheral Nervous System
  - b) Autonomic Nervous System, Somatic Nervous System
  - c) Sympathetic Nervous System, Parasympathetic Nervous System
  - d) Cranial Nervous System, Axial Nervous System
27. What two divisions are the PNS?
- a) Central Nervous System, Peripheral Nervous System
  - b) Autonomic Nervous System, Somatic Nervous System
  - c) Sympathetic Nervous System, Parasympathetic Nervous System
  - d) Cranial Nervous System, Axial Nervous System
28. The somatic nervous system is under conscious control. TRUE/FALSE
29. The autonomic nervous system is under unconscious control. TRUE/FALSE
30. What are the two divisions of the autonomic nervous system?
- a) Central Nervous System, Peripheral Nervous System
  - b) Autonomic Nervous System, Somatic Nervous System
  - c) Sympathetic Nervous System, Parasympathetic Nervous System
  - d) Cranial Nervous System, Axial Nervous System

### THE SKELETAL SYSTEM

31. Which bone forms the lower jaw and is the only bone of the skull that moves?
- a) Frontal
  - b) Maxillary
  - c) Sphenoid
  - d) Mandible
32. What is the name of the bony socket that houses the eyeball and is formed by several cranial bones?
- a) Sphenoid
  - b) Zygomatic
  - c) Orbit
  - d) Temporal

33. Which bone is known as the keystone bone because so many bones join it, and also houses the sella turcica notch that houses the pituitary gland?

- a) Sphenoid
- b) Orbital
- c) Lacrimal
- d) Zygomatic

34. Identify the four sinuses.

- a) Frontal, Mandible, Sphenoid, Ethmoid
- b) Frontal, Maxillary, Sphenoid, Ethmoid
- c) Frontal, Mandible, Temporal, Lacrimal
- d) Frontal, Maxillary, Temporal, Lacrimal

35. The C1 bone that allows one to nod the head is known as the axis. TRUE/FALSE  
Answer: Atlas

36. The C2 bone that allows one to pivot the head is known as the atlas.  
TRUE/FALSE Answer: Axis

37. The pelvic girdle is the bony structure that connects the base of the spine to the upper end of the rear legs, including the sacrum and tailbone. TRUE/FALSE

38. The fibula, ulna, and radius are the three major bones of the arm. TRUE/FALSE  
Answer: Humerus

39. The humerus is the largest bone of the body and is known as the thighbone of the leg. TRUE/FALSE Answer: Femur

40. What lateral bone of the lower leg is known as the calf bone?

- a) Humerus
- b) Fibula
- c) Ulna
- d) Tibia

41. Movement and stability are the main functions of joints. TRUE/FALSE

42. The three types of joints are cardiac, smooth, and skeletal. TRUE/FALSE  
Answer: Fibrous, Cartilaginous, Synovial

## THE MUSCULAR SYSTEM

43. Identify the system that, along with the nervous system, is responsible for movement of the skeletal system and the body.
- a) Digestive System
  - b) Muscular System
  - c) Immune System
  - d) Lymph System
44. Name the three types of muscle tissue.
- a) Fibrous, Cartilaginous, Synovial
  - b) Fibrous, Cardiac, Skeletal
  - c) Cardiac, Smooth, Skeletal
  - d) Cardiac, Smooth, Synovial
45. Which type of muscle tissue attaches to and covers the bony skeleton, has the longest muscle cells (strips called striations), and are a voluntary muscle responsible for overall body mobility?
- a) Cardiac
  - b) Cartilaginous
  - c) Skeletal
  - d) Synovial
46. What tough fibrous band of connective tissue supports internal organs and holds bones together in proper articulation at the joints?
- a) Tendons
  - b) Ligaments
  - c) Muscles
  - d) None of the above
47. The primary function of tendons is to transmit the mechanical force of muscle contraction to the bones. TRUE/FALSE
48. Muscles don't contract, they flex. TRUE/FALSE Answer: Muscles don't flex, they contract.
49. Muscles don't always work in pairs. TRUE/FALSE Answer: They do

50. Which of the following is not supported by the pelvic floor muscles?
- a) Bladder
  - b) Kidneys
  - c) Uterus and Vagina
  - d) Intestines and Rectum
51. What muscle is the key to balance while walking and running?
- a) Obliques
  - b) Abdominals
  - c) Gluteus
  - d) Erector Spinae
52. What do skeletal muscles attach to?
- a) Bones
  - b) Smooth Muscles
  - c) Nothing
  - d) Other Skeletal Muscles
53. Which of the following is not considered part of the body's "core" muscles?
- a) Erector Spinae
  - b) Gluteus
  - c) Obliques
  - d) Abdominals

### THE FASCIAL SYSTEM

54. Organs and glands are surrounded by what type of fascia?
- a) Deep
  - b) Superficial
  - c) Visceral
  - d) Lateral
55. Deep fascia suspends the organs within their cavities and wraps them in layers of connective tissue membranes? TRUE/FALSE Answer: Visceral
56. A grapefruit a good example of fascia because it shows different types of fascia, including sections inside of the grapefruit. TRUE/FALSE
57. The three main types of fascia in the human body are superficial, visceral, and lateral. TRUE/FALSE Answer: Deep



58. A tensegrity structure allows the body to push and pull. TRUE/FALSE
59. Fascia is not found on the cellular level. TRUE/FALSE Answer: It is
60. Piezoelectricity is the converted vibrational energy that creates an electrical energy throughout the body. TRUE/FALSE
61. Crystals can absorb, store, amplify, and transmit vibrational energy. TRUE/FALSE

### THE DIGESTIVE SYSTEM

62. The two types of digestion are temporary digestion and permanent digestion. TRUE/FALSE Answer: Mechanical, Chemical
63. Which of the following are not primary organs of the alimentary canal?
- a) Esophagus
  - b) Liver
  - c) Stomach
  - d) Anus
64. Name the long muscle, about 25-30 cm long, that transports food to the stomach.
- a) Esophagus
  - b) Trachea
  - c) Throat
  - d) Pharynx
65. Name the sphincter located between the esophagus and stomach.
- a) Pyloric Sphincter
  - b) Esopharyngeal Sphincter
  - c) Cardiac Sphincter
  - d) Esogastric Sphincter
66. Name the valve located between the stomach and duodenum.
- a) Pyloric Valve
  - b) Esopharyngeal Valve
  - c) Cardiac Valve
  - d) Esogastric Valve

67. What organ produces bile and is also considered the largest gland?
- a) Pancreas
  - b) Large Intestines
  - c) Liver
  - d) Small Intestines
68. The pancreas is a source of digestive enzymes and bicarbonate, which are released into ducts for digestion to help neutralize acidic chyme and provide and optimal environment for enzymatic activity. TRUE/FALSE
69. The three sections of the small intestines are the duodenum, jejunum, and ileum. TRUE/FALSE
70. The three sections of the colon are the duodenum, jejunum, and ileum. TRUE/FALSE Answer: Ascending, Transverse, Descending

### THE EXCRETORY SYSTEM

71. The skin's role in the excretion is to control the body's temperature. TRUE/FALSE
72. The liver is involved in excretion by changing worn out blood cells into bile pigments and changing protein into lymph. TRUE/FALSE Answer: Changing protein into urea
73. The main excretion from the lungs is oxygen. TRUE/FALSE Answer: Carbon Dioxide
74. Identify which of the following is not a main function of the kidneys.
- a) Transport urine
  - b) Change excess protein into urea
  - c) Clean the blood
  - d) Control water balance
75. What are the functional units of the kidney?
- a) Renal Cortex
  - b) Ureters
  - c) Nephrons
  - d) Renal Medulla

76. Name the sack-like muscular organ that stores urine until it is eliminated from the body.

- a) Stomach
- b) Urethra
- c) Kidney
- d) Bladder

77. What is the narrow tube that carries urine from one of the kidneys to the urinary bladder?

- a) Ureter
- b) Urethra
- c) Lymphatic Vessels
- d) Renal Pelvis

78. What is the small tube through which urine flows from the body?

- a) Ureter
- b) Urethra
- c) Lymphatic Vessels
- d) Renal Pelvis

## THE ENDOCRINE SYSTEM

79. What part of the brain links the endocrine and nervous system, and controls the pituitary gland?

- a) Hypothalamus
- b) Cingulate Gyrus
- c) Amygdala
- d) Sensory Cortex

80. What are chemical "messengers" of the endocrine system that are released into the blood called?

- a) Plasma
- b) Nerves
- c) Epinephrine
- d) Hormones

81. Which of the following are not organs or glands of the endocrine system?

- a) Thymus
- b) Thyroid
- c) Pancreas
- d) Parathyroid

82. What master hormone gland controls blood pressure, growth, metabolism, and sex development?
- a) Thyroid gland
  - b) Pineal gland
  - c) Hypothalamus
  - d) Pituitary
83. The thymus plays a major role in developing the immune system. TRUE/FALSE
84. The parathyroid gland produces the fight or flight mechanism. TRUE/FALSE  
Answer: Adrenal Gland
85. FSH is protein hormone secreted by the anterior pituitary, which stimulates ovulation in females and androgen production in males. TRUE/FALSE
86. The thyroid gland is found in the neck that regulates rate of metabolism and produces thyroxine T-4, T-3 and Reverse T-3. TRUE/FALSE
87. The FSH hormone is secreted by the cortex of the adrenal gland and regulates mineral balance in blood and controls fluid volumes. TRUE/FALSE  
Answer: Aldosterone
88. What gland is located partially behind the stomach in the abdomen, and functions as both an endocrine and exocrine gland, producing digestive enzymes as well as insulin and glucagon?
- a) Thyroid
  - b) Parathyroid
  - c) Pancreas
  - d) Liver
89. Beta cells of the pancreas are attacked and destroyed by this type of diabetes?
- a) Type 1 diabetes
  - b) Type 2 diabetes
  - c) Type AB diabetes
  - d) Gestational diabetes
90. What gland is located near the heart and aids in the body's immune system by making antibodies?
- a) Lungs
  - b) Diaphragm
  - c) Thymus
  - d) Parathyroid

91. When there is balance in the human body, it is called homeostasis. TRUE/FALSE

### THE REPRODUCTIVE SYSTEM

92. The fallopian tubes (oviduct) propels the egg (ovum) towards the uterus.  
TRUE/FALSE

93. Fertilization (sperm joins egg) usually occurs in the vagina.  
TRUE/FALSE Answer: Oviduct

94. The lining of the uterus is called the endometrium. TRUE/FALSE

95. Where do male gonads make testosterone?

- a) Seminal vesicle
- b) Prostate
- c) Vas deferens
- d) Testes

96. The epididymis produces an alkaline mucus secretion that protects the sperm when it passes through the urethra during ejaculation. TRUE/FALSE  
Answer: Cowper's Gland

97. Name the hormone produced by the ovaries that acts with estrogen to stimulate a menstrual cycle.

- a) LH
- b) Estrogen stimulating
- c) FSH
- d) Progesterone

98. Ovulation occurs around day 20. TRUE/FALSE Answer: 14

99. When estrogen is absent, gonads develop into ovaries. TRUE/FALSE  
Answer: Testosterone

100. Tissues that produce a penis in males, produce the labia in females.  
TRUE/FALSE Answer: Clitoris

101. Tissues that produce a scrotum in a male, produce the labia in a female.  
TRUE/FALSE

102. What hormone causes smooth muscles in the uterine wall to contract?

- a) FSH
- b) Progesterone
- c) Estrogen
- d) Oxytocin

### THE CIRCULATORY SYSTEM

103. What is the name of the heart's natural pacemaker?

- a) The Pericardial Sac
- b) The Purkinje Fibers
- c) Right Atrium
- d) SA Node

104. The wall of the heart is made up of three layers. The Epicardium, Ecocardium, and Endocardium. TRUE/FALSE Answer: Epicardium, Myocardium, Endocardium

105. A cardiac tamponade occurs when excess fluid builds within the pericardial space. TRUE/FALSE

106. Coronary arteries supply blood to the the myocardium and other components of the heart. TRUE/FALSE

107. Which of the following is not a primary cause of a myocardial infarction?

- a) Fluid build up within the pericardial space
- b) Lack of blood flow and oxygen to a region of the heart
- c) Death of the cardiac muscle
- d) When a coronary artery is blocked

108. What occurs when the buildup of plaque in artery walls obstructs blood flow and decreases flexibility or compliance of the blood vessels?

- a) Coronary Artery Disease
- b) Cardiac Tamponade
- c) Heart Murmur
- d) Heart Attack

109. What is the left atrioventricular valve more commonly known as?

- a) Tricuspid Valve
- b) Bicuspid Valve
- c) Cardiac Valve
- d) Pyloric Valve

110. What does the superior and inferior vena cava return blood to?

- a) The Right Atrium
- b) The Aortic Arch
- c) The Left Atrium
- d) The Right Ventricle

111. The arch of aorta supplies blood to the head, neck, shoulders, and arms.

TRUE/FALSE

## THE RESPIRATORY SYSTEM

112. The major entrance and exit of the respiratory system is the mouth.

TRUE/FALSE Answer: Nose

113. The sinuses located in the upper airway are the frontal, maxillary, sphenoid, and ethmoid. TRUE/FALSE

114. The pharynx is part of the throat located directly behind the nasal cavity and mouth, and directly below the esophagus. TRUE/FALSE Answer: Above the Esophagus

115. The pharynx has four major divisions: the nasopharynx, oropharynx, laryngopharynx, and larynx. TRUE/FALSE Answer: three major divisions: nasopharynx, oropharynx, laryngopharynx

116. What connects the pharynx to the trachea?

- a) Epiglottis
- b) Laryngopharynx
- c) Larynx
- d) Oropharynx

117. The trachea is also known as the esophagus. TRUE/FALSE Answer: Windpipe

118. The pleural sac helps the lungs in breathing by transmitting movements of the rib muscles to the lungs. TRUE/FALSE

119. The diencephalon group helps maintain a constant breathing rhythm by stimulating the diaphragm and intercostal muscles to contract, resulting in inspiration. TRUE/FALSE Answer: DRG
120. The dorsal respiratory group is the second respiratory center of the brain found in the pons. TRUE/FALSE Answer: Pontine Respiratory Group of Cells
121. The hypothalamus and other regions of the limbic system are involved in regulating respiration. Which of the following does not trigger a response for respiration in these parts of the brain?
- a) Pain
  - b) Temperature
  - c) Emotions
  - d) Smell

### THE LYMPHATIC SYSTEM

122. Identify which of the following is not a primary function of the lymphatic system.
- a) Maintain fluid balance in the body
  - b) Defend body against disease
  - c) Filter blood in the Kidneys
  - d) Absorb fats and fat-soluble vitamins and transport them to the blood
123. The circulatory system is directly connected to the lymphatic system. Which of the following systems is also directly connected to the lymphatic system?
- a) Skeletal
  - b) Reproductive
  - c) Ventricular
  - d) Immune
124. Because lymph originally derived from blood plasma, its composition is much the same. TRUE/FALSE
125. Lymph nodes get swollen as their macrophages eat and destroy invaders. TRUE/FALSE
126. The lumbar trunk does not receive lymph from which of the following areas of the body?
- a) Pelvis and Deep Lymph of the Abdominal Wall
  - b) Lower Limbs
  - c) Kidneys and Adrenal Glands
  - d) Upper Limbs



127. The lumbar trunk drains into the right lymphatic duct. TRUE/FALSE  
Answer: Cisterna Chyli
128. The intestinal trunk does not receive lymph from which of the following areas of the body?
- a) Gallbladder
  - b) Stomach and Intestines
  - c) Pancreas and Spleen
  - d) Liver
129. The intestinal trunk drains into the left lymphatic duct. TRUE/FALSE  
Answer: Cisterna Chyli
130. Which of the following is not considered an organ of the lymphatic system?
- a) Pancreas
  - b) Thymus
  - c) Tonsils
  - d) Spleen
131. The tonsils' role in the lymphatic system is to filter and protect the body from pathogens that may enter the oral and nasal cavity, by forming a protective barrier of tissue around the pharynx. TRUE/FALSE
132. If the spleen is removed, the gallbladder and pancreas take on many functions of the spleen. TRUE/FALSE Answer: Liver, Bone Marrow, and Lymph Nodes take on many functions of the Spleen
133. Which lymphatic organ atrophies as a person ages?
- a) Gallbladder
  - b) Thymus
  - c) Pancreas
  - d) Spleen
134. Lymph vessels are found in the lining of what to transport fats to the blood circulation?
- a) Respiratory Tract
  - b) Gastrointestinal Tract
  - c) Urinary Tract
  - d) Reproductive Tract

135. Which lymphatic disease occurs when a damaged or deformed lymphatic system accumulates too much lymph and starts to swell?
- a) Lymphadenopathy
  - b) Lymphoma
  - c) Lymphangiomatosis
  - d) Lymphedema
136. Which of the following is a cancer of the lymphatic system and can be either primary or secondary?
- a) Lymphadenopathy
  - b) Lymphoma
  - c) Lymphangiomatosis
  - d) Lymphedema

### THE IMMUNE SYSTEM

137. The two subsystems of the immune system are the innate immune system and the adaptive acquired immune system. TRUE/FALSE
138. Platelets help in preventing the loss of blood. TRUE/FALSE
139. Leukocytes are white blood cells. TRUE/FALSE
140. Identify which of the following is not a physical barrier of the immune system.
- a) Oils on the Skin or Hair
  - b) Unbroken Mucous Membranes
  - c) Urinary Tract
  - d) Vaginal Tract
141. Saliva, sweat, urine, and vaginal secretions are all chemical barriers of the immune system. TRUE/FALSE
142. Oils contain anti-microbial fatty acids that protect pathogens from growing. TRUE/FALSE
143. Inflammation is part of the adaptive acquired immune system. TRUE/FALSE  
Answer: Innate
144. Compliment immunity is a physical barrier in the innate immune system. TRUE/FALSE Answer: Chemical

145. Identify the part of immunity that deals with preventing viruses.

- a) Adaptive Acquire Immune System
- b) Interferons
- c) Lymphocytes
- d) Chemical Barriers

146. Hormones have no impact on the immune system. TRUE/FALSE Answer:  
Great impact