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| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | School:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**TAMS Tournament 2013**

**Human Anatomy and Physiology**

Instructions:

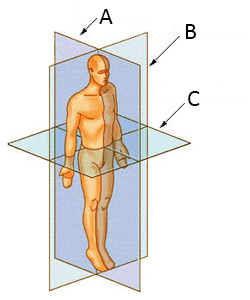
You will have 50 minutes to complete 50 multiple choice questions.

There is no guessing penalty.

You may write on this test.

Good luck!

1. The final step in the development of sperm is called .
2. spermiogenesis
3. spermatogenesis
4. oogenesis
5. spermatogonia
6. Functionally, the mammary glands produce milk; structurally, they are modified .
7. pituitary gland
8. thyroid gland
9. adrenal glands
10. sweat glands
11. When in life does the body function the most effectively and efficiently?
12. Infancy
13. Childhood
14. Young Adulthood
15. Late Maturity/Old Age
16. The digestive system includes the digestive tract and its accessory organs, which process food into \_\_\_\_\_\_\_\_\_ that can be absorbed and utilized by the cells of the body.
17. packages
18. enzymes
19. molecules
20. fluids
21. Four different types of cells that make up the gastric glands are: mucous cells, parietal cells, chief cells, and \_\_\_\_\_\_\_\_\_\_.
22. endocrine cells
23. exocrine cells
24. goblet cells
25. hepatocytes
26. Lymph nodes are widely distributed throughout the body along the lymphatic pathways where they filter the \_\_\_\_\_\_\_ before it is returned to the \_\_\_\_\_\_\_\_.
27. lymph, blood
28. lymph, heart
29. blood, heart
30. blood, lymp
31. One of the additional requirements specific to the basic processes of human life is \_\_\_\_\_\_\_\_.
    1. organization
    2. differentiation
    3. metabolism
    4. responsiveness
32. The spleen is a lymph organ that filters blood and also acts as a reservoir for .
33. water
34. fat
35. interstitial fluid
36. blood
37. The \_\_\_\_\_\_\_\_ cavity contains the heart, lungs, trachea, esophagus, large blood vessels, and nerves.
38. dorsal
39. abdominopelvic
40. cranial
41. thoracic
42. The pump for the pulmonary circuit, which circulates blood through the lungs, is the\_\_\_\_\_\_\_\_\_.
43. left ventricle
44. left atrium
45. right ventricle
46. right atrium
47. As the total cross-sectional area of the vessels increases, the velocity of flow \_\_\_\_\_\_\_\_.
48. increases
49. decreases
50. stays the same
51. explodes
52. In figure 1, which of the following letters corresponds to the sagittal plane?



1. A
2. B
3. C
4. The \_\_\_\_\_\_\_\_ is the organ that filter the blood, remove the wastes, and excrete the wastes in the urine.
5. kidney
6. testes
7. large intestine
8. urethra
9. The \_\_\_\_\_\_\_\_ is a large cavity that collects the urine as it is produced.
10. frontal pelvis
11. renal pelvis
12. frontal groin
13. renal groin
14. The pharynx plays an essential role in human speech.
15. pharynx
16. larynx
17. trachea
18. voicebox
19. The amount of air that is exchanged during one cycle varies with\_\_\_\_\_\_\_\_\_ .
20. age
21. sex
22. physical condition
23. all of the above
24. Anatomy is the study of \_\_\_\_\_\_\_?
25. animals
26. analogies
27. anatomical animals
28. body plan
29. The kidneys are well known for their ability to filter and detoxify blood. What part of the cell has such detoxifying properties?
30. Smooth Endoplasmic Reticulum
31. Rough Endoplasmic Reticulum
32. Peroxisome
33. Lyosome
34. Which of these do not denote the same structure?
35. uterine tubes
36. Fallopian tubes
37. oviducts
38. menstrual tubes
39. Which of the following structures are NOT erectile organs?
40. penis
41. clitoris
42. vagina
43. These are all erectile organs
44. Which of the following is NOT an accessory organ to the digestive system?
45. pancreas
46. salivary gland
47. galbladder
48. esophagus
49. The surface of the small intestine is increased by which of the following?
50. villi
51. microvilli
52. plicae circulares
53. All of the above
54. The urinary system controls red blood cell production by secreting which hormone?
55. erythropoietin
56. lenin
57. myosin
58. ACTH
59. Synovial fluid lubricates the membrane and reduces friction and abrasion when organs in the thoracic or abdominopelvic cavity move against each other or the cavity wall.
60. True
61. False
62. The \_\_\_\_\_ is a tubular structure that carries the urine from the urinary bladder to the outside.
63. ureter
64. urethra
65. uranus
66. kidney tube
67. What is the connective tissue covering on the brain and spinal cord called?
68. synovial membranes
69. meninges
70. serous membranes
71. epithelial membranes
72. Which of these pressures is NOT involved in pulmonary ventilation?
73. Atmospheric
74. Intraalveolar
75. Intraventricular
76. Intrapleural
77. Epithelial tissue consists of tightly packed cells with little intercellular matrix, having one free surface.
78. True
79. False
80. Which of the following pairings are incorrect?
81. upper respiratory tract: pharynx
82. upper respiratory tract: nose
83. lower respiratory tract: bronchial tree
84. lower respiratory tract: larynx
85. When blood calcium levels decrease below normal, calcium is released from the bones so that there will be an adequate supply for metabolic needs.
86. True
87. False
88. The wall of the lymph capillary is composed of\_\_\_\_\_\_\_\_\_.
89. endometrium
90. lymphocytes
91. red blood cells
92. science
93. Once the epiphyseal plate completely ossifies, the bones can no longer grow \_\_\_\_\_\_\_.
94. thicker
95. red bone marrow
96. longer
97. osteocytes
98. Lymphatic organs are characterized by \_\_\_\_\_\_\_\_\_\_\_\_
99. only spleens
100. emphatic organs, excited to be alive
101. clusters of lymphocytes and other cells, such as macrophages
102. clusters of red and white blood cells, well-prepared for an immune response
103. How many bones are present in an adult human body?
104. 206
105. 126
106. 180
107. 220
108. I am an organ. If I stop working, you’ll die. Like right away. Who am I?
109. Brain
110. Stomach
111. Heart
112. iPhone
113. The ACL is part of what type of joint?
114. Synarthrose
115. Diarthrose
116. Amphiarthrose
117. Cranarthrose
118. What is NOT found in blood?
119. platelets
120. red blood cells
121. microphages
122. boogers
123. Which of the following makes up a compact bone tissue?
124. trabeculae
125. haversian system
126. hyaline cartilage
127. plate bone
128. Which of the following is not a function of the skeletal system?
129. protection
130. mineral storage
131. absorption of fats and fat-soluble vitamins
132. all of the above are functions of the skeletal system
133. \_\_\_\_\_\_\_\_ contain only afferent fibers, long dendrites of sensory neurons.
134. Cranial nerves
135. Sensory nerves
136. Motor nerves
137. Mixed nerves
138. Like other systems in the body, the nervous system is composed of organs, principally the brain, spinal cord, nerves, and \_\_\_\_\_.
139. ganglia
140. axon
141. neurons
142. dura mater
143. Which of the following is not considered to be part of the Peripheral Nervous System?
144. ganglia
145. spinal cord
146. intercostal nerves
147. sciatic nerves
148. A cell with membrane-bound proteins that selectively bind a specific hormone is called that hormone's
149. secretory cell.
150. plasma cell.
151. endocrine cell.
152. target cell.
153. Nitric oxide and epinephrine\_\_\_\_\_\_.
154. both function as neurotransmitters.
155. both function as steroid hormones.
156. are both involved in the "fight-or-flight" response.
157. bind the same receptors.
158. A negative feedback system causes a reversal of increases and decreases in body conditions in order to maintain a state of stability or homeostasis.
159. True
160. False
161. I control involuntary motions such as peristalsis. What kind of muscle am I?
162. smooth
163. cardiac
164. skeletal
165. esophageal
166. \_\_\_\_\_\_ are attached to bones by \_\_\_\_\_\_\_\_\_.
167. muscles; tendons
168. tendons; muscles
169. tendons; tendons
170. muscles; muscles
171. What is the tendon NOT composed of?
172. epimysium
173. perimysium
174. endomysium
175. paramysium
176. Which of the following is *not* an example of a homeostatic mechanism?
177. shivering when body temperature falls below normal limits
178. increasing heart rate and contraction force when blood pressure falls
179. pulling blankets over yourself when cold at night
180. secreting insulin after a meal to decrease blood sugar concentration
181. Underneath every epithelial tissue, we find \_\_\_\_\_\_\_\_\_\_\_\_.
182. Hyaline cartilage
183. Dense regular connective tissue
184. Areolar tissue
185. Adipose tissue