

Anatomy and Physiology - Div. C - 2020-2021

Written by Nin

Total Points: _____ / 148

All questions are worth 1 point

Integumentary System

<p>1. What layer of the skin are drugs usually injected into?</p> <ol style="list-style-type: none">EpidermisPapillary layer of the dermisReticular layer of the dermisHypodermis <p>2. Which of the following layers is thickest in thick skin?</p> <ol style="list-style-type: none">Stratum basaleStratum spinosumStratum corneumStratum granulosumBasement membrane <p>3. This type of birthmark tends to be permanent.</p> <ol style="list-style-type: none">Capillary hemangiomasMongolian blue spotsPort-wine stainsSalmon patches <p>4. Where are sebaceous glands found? (select all that apply)</p> <ol style="list-style-type: none">PalmsAxillary regionsLegsScalp <p>5. Skin cancer mostly occurs in which regions?</p> <ol style="list-style-type: none">Head/neckArms/legsShoulders/armsTrunk <p>6. Which of the following structures are found in the stratum basale? (select all that apply)</p> <ol style="list-style-type: none">KeratinocytesMelanocytesTactile cellsFree nerve endings <p>7. How many layers of cells is the stratum granulosum?</p> <ol style="list-style-type: none">1-32-43-54-6 <p>8. Sunscreen provides protection for which type of skin cancer?</p> <ol style="list-style-type: none">Basal cell carcinomaSquamous cell carcinomaMalignant melanomaMerkel cell carcinoma	<p>9. The pH of the surface of skin is?</p> <ol style="list-style-type: none">4.24.777.2 <p>10. Which of the following are found in thick skin? (select all that apply)</p> <ol style="list-style-type: none">Sweat glandsHair folliclesSebaceous glandsApocrine glands <p>11. Which of the following is a probable pH of the surface of the epidermis?</p> <ol style="list-style-type: none">3.94.15.26.5 <p>12. Mutation of which oncogene is most commonly responsible for melanoma in men?</p> <ol style="list-style-type: none">BRAFHER-2/neuEGFRBCL3 <p>13. Which of the following statements does not correctly match the structure to its location?</p> <ol style="list-style-type: none">Eleidin, stratum lucidumKeratohyalin, stratum granulosumElastin, dermisFilaggrin, stratum spinosum <p>14. Which of the following is true about the epidermal water barrier? (select all that apply)</p> <ol style="list-style-type: none">It is located between the stratum granulosum and stratum spinosumIts function is sealing out water from cells, ensuring durability of the stratum corneumIt consists of lipids, tight junctions, and proteinsIt acts to block nutrients from reaching cells above it <p>15. This type of skin disease features bumps with “pearly” edges and a depression in the middle.</p> <ol style="list-style-type: none">Squamous cell carcinomaBasal cell carcinomaMalignant melanomaCarbuncles
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16. What does the papillary layer consist of?
- Loose connective tissue with capillaries and free nerve endings
 - Closely-packed cells and large amounts of collagen
 - Irregular, elastic connective tissue
 - Narrow, branching protein fibers
17. Squamous cell carcinoma usually is found in which regions? (select all that apply)
- Ears
 - Shoulders
 - Neck
 - Lower lip
18. Which epidermal layers have waterproof cells? (select all that apply)
- Stratum granulosum
 - Stratum spinosum
 - Stratum basale
 - Stratum corneum
19. What is the correct arrangement of the layers of hair from the deepest to most superficial?
- Medulla > cortex > cuticle
 - Cortex > cuticle > medulla
 - Cuticle > cortex > medulla
 - Cuticle > medulla > cortex
20. Apocrine sweat has more _____ than apocrine sweat:
- Fatty acids
 - Potassium
 - Urea
 - Ammonia
21. Which of the following cells are found in the stratum spinosum? (select all that apply)
- Merkel cells
 - Langerhans cells
 - Melanocytes
 - Keratinocytes
22. Which of the following terms denotes excessive body odor?
- Eschar
 - Bromhidrosis
 - Diaphoresis
 - Hirsutism
23. Which of the following is false regarding cells migrating towards the stratum corneum?
- Cytoskeleton grows
 - Cells grow flatter
 - Cells grow faster
 - Apoptosis occurs
24. Which of the following structures link epidermal keratinocytes together?
- Desmosomes
 - Tight junctions
 - Gap junctions
 - Adherin junctions
25. Mammary glands are modified _____ glands:
- Apocrine
 - Ecocrine
 - Sebaceous
 - Ceruminous
26. What layers of the skin are hair follicles present in? (select all that apply)
- Epidermis
 - Papillary layer of the dermis
 - Reticular layer of the dermis
 - Hypodermis
27. In which phase of hair growth is club hair formed?
- Anagen
 - Catagen
 - Telogen
 - Late telogen
28. The sheen of hair is the result of which type of gland?
- Apocrine
 - Ecocrine
 - Sebaceous
 - Ceruminous
29. In which layer of the skin do cells begin to die off?
- Stratum lucidum
 - Stratum granulosum
 - Stratum corneum
 - Stratum basale
 - Stratum spinosum
30. Upward projections of the dermis are called _____ and downward projections of the epidermis are called _____.
- Epidermal ridges, dermal papillae
 - Epidermal papillae, dermal ridges
 - Dermal ridges, epidermal papillae
 - Dermal papillae, epidermal ridges
31. Nutrients are carried to the epidermis through:
- Osmosis
 - Diffusion
 - Capillaries
 - Arteries

32. The epithelium that lines eccrine sweat gland are classified as:

- a. Simple squamous
- b. Keratinised stratified squamous
- c. Stratified cuboidal
- d. Simple columnar

33. Which epidermal layers are still capable of mitosis? (select all that apply)

- a. Stratum spinosum
- b. Stratum granulosum
- c. Stratum basale
- d. Stratum corneum
- e. Stratum lucidum

34. The _____ sebaceous gland/holocrine gland _____ secretes sebum.

35. _____ Ruffini _____ corpuscles sense sustained pressure and stretching.

36. _____ Lamellar/panician _____ corpuscles sense vibration and light pressure.

37. Besides free nerve endings, cold sensations are detected by _____ krause end bulbs _____.

38. Besides free nerve endings, warm sensations are detected by _____ ruffini endings _____.

39. A(n) _____ carbuncle _____ is caused when boils form close together and join underneath the skin.

40. An infection that starts in a hair follicle or oil gland is known as a(n) _____ boil _____.

41. Individuals with darker skin have _____ equal amounts of _____ melanocytes in comparison to those with lighter skin.

42. Athlete's foot is caused by the _____ tinea pedis _____ fungus.

43. The lighter, crescent-shaped area at the base of the nail is known as the _____ lunula _____.

44. _____ Epithelial root sheath _____

45. _____ Internal root sheath _____

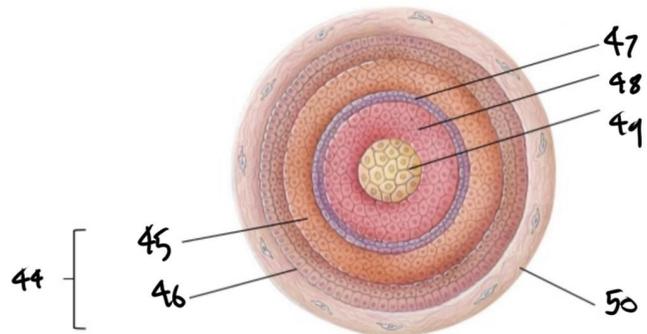
46. _____ External root sheath _____

47. _____ Cuticle _____

48. _____ Cortex _____

49. _____ Medulla _____

50. _____ Dermal root sheath _____



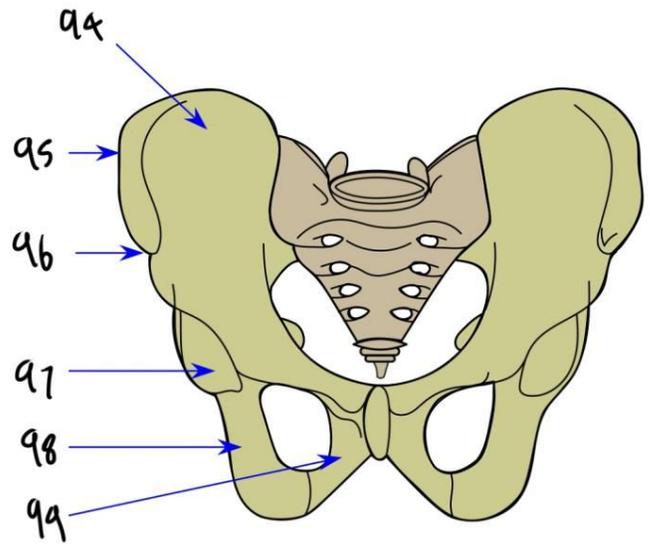
Skeletal System

51. In the _____ minerals are temporarily deposited in the matrix between lacunae.
- Zone of cell proliferation
 - Zone of cell hypertrophy
 - Zone of calcification
 - Zone of bone deposition
52. Hypocalcemia can be caused by: (select all that apply)
- Vitamin D deficiency
 - Thyroid tumors
 - Overactive parathyroid glands
 - Pregnancy
53. The sphenoid is a(n):
- Long bone
 - Short bone
 - Flat bone
 - Irregular bone
54. In which area is 7-dehydrocholesterol converted to cholecalciferol?
- Epidermis
 - Dermis
 - Kidney
 - Liver
55. Which of the following parts does the atlas vertebrae have? (select all that apply)
- Body
 - Vertebral foramen
 - Transverse foramen
 - Spinous process
56. The odontoid process is found on the:
- Atlas
 - Axis
 - Thoracic vertebrae
 - Lumbar vertebrae
57. _____ connect bones to bones.
- Tendons
 - Ligaments
 - Cartilage
 - Joints
58. Which type of cartilage covers joints?
- Elastic
 - Fibrocartilage
 - Reticular
 - Articular
59. The endosteum consists of _____:
- Reticular tissue
 - Areolar tissue
 - Adipose tissue
 - Fluid tissue
60. Which of the following cells originate from the lineage of mesenchymal cells? (select all that apply)
- Osteogenic
 - Osteoblast
 - Osteoclast
 - Osteocytes
61. Secretion of osteocalcin does not cause:
- Increasing insulin secretion
 - Increasing insulin sensitivity
 - Growth of adipose tissue
 - Increased regulation of brain function
62. Which of the following originates from the thyroid gland?
- Vitamin D3
 - PTH
 - Calcitonin
 - Calcidiol
63. Osteoclasts are found in _____: (select all that apply)
- Howship lacunae
 - Canaliculi
 - Periosteum
 - Endosteum
64. Which of the following are functions of PTH? (select all that apply)
- Increasing secretion of RANKL
 - Increased reabsorption of calcium by kidneys
 - Increased collagen synthesis
 - Reabsorption of bone by osteoclasts
65. The transverse costal facet is found on which of the following vertebrae?
- C2
 - C7
 - T11
 - L5
66. In the _____ chondrocytes die off and matrix is laid down by osteoblasts.
- Zone of cell proliferation
 - Zone of cell hypertrophy
 - Zone of calcification
 - Zone of bone deposition
67. In response to acidosis, the skeleton:
- Releases calcium phosphate
 - Takes up calcium phosphate
 - Releases bicarbonate
 - Takes up bicarbonate

68. Which of the following describes the correct path for vitamin D synthesis?
- Epidermis > kidney > liver
 - Dermis > kidney > liver
 - Dermis > liver > kidney
 - Epidermis > liver > kidney
69. The metacarpal is a(n):
- Long bone
 - Short bone
 - Flat bone
 - Irregular bone
70. Which of the following is not a result of increased levels of calcitriol?
- Increased osteoblast activity
 - Reabsorption of calcium by kidneys
 - Increased calcium absorption by the small intestine
 - Secretion of RANKL
71. How much blood does the skeleton receive per minute?
- 0.5L
 - 1.0L
 - 1.5L
 - 2.0L
72. Which of the following are functions of calcitonin? (select all that apply)
- Stimulation of osteoblasts
 - Stimulation of osteoclasts
 - Inhibition of osteoblasts
 - Inhibition of osteoclasts
73. Which of the following are functions of PTH? (select all that apply)
- Increasing secretion of RANKL
 - Increased reabsorption of calcium by kidneys
 - Decreasing urinary excretion of phosphate
 - Reabsorption of bone by osteoclasts
74. Inorganic matter in bone includes: (select all that apply)
- Glycosaminoglycans
 - Hydroxyapatite
 - Iron
 - Chlorate
75. Which of the following are secondary curvatures? (select all that apply)
- Cervical
 - Thoracic
 - Lumbar
 - Pelvic
76. The lightest type of vertebrate is the:
- Cervical
 - Thoracic
 - Lumbar
 - Coccygeal
77. The tarsal is a(n):
- Long bone
 - Short bone
 - Flat bone
 - Irregular bone
78. Bone is a:
- Connective tissue
 - Epithelial tissue
 - Muscular tissue
 - Nervous tissue
79. The _____ contains the humerus.
- Brachium
 - Antebrachium
 - Carpus
 - Manus
80. In adults, red marrow is found in the _____: (select all that apply)
- Clavicle
 - Humerus
 - Femur
 - Ribs
81. The glenoid cavity is found on the:
- Humerus
 - Scapula
 - Femur
 - Pelvic girdle
82. The _____ suture consists of the joining of two bones with overlapping edges.
- Serrate
 - Squamous
 - Sagittal
 - Plane
83. The epiphyseal plate is a:
- Suture
 - Syndesmosis
 - Synchondroses
 - Symphyses

84. The outer layer of the periosteum is known as the fibrous layer and the inner layer is known as the osteogenic layer.
85. The spongy bone of the cranium is called the diploe.
86. The hormone osteoblasts secrete is known as osteocalcin.
87. circumferential lamellae are found in the inner and outer layers of compact bone and run parallel to the surface of the bone.
88. Spongy bone consists of spicules, which are shaped like rods and spines, and trabeculae, which are flat like plates.
89. Elongation of bones is considered interstitial growth, while widening of the diameter of bone is considered appositional growth.
90. There are 7 cervical vertebrae, 12 thoracic vertebrae, 5 lumbar vertebrae, 5 sacral vertebrae, and 4 coccygeal vertebrae.
91. The intervertebral disc is consisted of an inner region known as the nucleus pulposus and an outer ring called the anulus fibrosus.
92. The sternum is divided into 3 regions: the manubrium, the body, and the xiphoid process.
93. A fibrous sac filled with synovial fluid that acts to reduce friction between tissues is known as a(n) bursae.

94. Ilium
95. Iliac crest
96. Iliac spine
97. Acetabulum
98. Ischium
99. Pubis



Muscular System

100. Which of the following are antigravity muscles? (select all that apply)

- a. Rectus abdominis
- b. Adductor longus
- c. Soleus
- d. Gastrocnemius

101. The gastrocnemius is:

- a. Fusiform
- b. Unipennate
- c. Bipennate
- d. Parallel

102. Elastic filaments consist of

- a. Nebulin
- b. Titin
- c. Dystrophin
- d. Desmin

103. Sphincters may be formed from _____: (select all that apply)

- a. Smooth muscle
- b. Cardiac muscle
- c. Skeletal muscle
- d. Bone

104. Which of the following is the correct sequence describing the primary source of ATP for muscles in order of least duration of exercise to longest?

- a. Phosphagen system > glycogen-lactic acid system > aerobic respiration
- b. Glycogen-lactic acid system > aerobic respiration > phosphagen system
- c. Aerobic respiration > glycogen-lactic acid system > phosphagen system
- d. Glycogen-lactic acid system > phosphagen system > aerobic respiration

105. This region contains only thick filaments.

- a. A band
- b. H band
- c. I band
- d. Z disk

106. This region contains only thin filaments.

- a. A band
- b. H band
- c. I band
- d. Z disk

107. When the muscle is contracting, calcium binds to:

- a. Actin
- b. Myosin
- c. Troponin
- d. Tropomyosin

108. Which of the following generally generates the most force?

- a. Fusiform
- b. Parallel
- c. Triangular
- d. Unipennate

109. The synergist of the brachialis for forearm flexion is the _____.

- a. Biceps brachii
- b. Deltoid
- c. Triceps brachii
- d. Teres major

110. Glycogen is a:

- a. Carbohydrate
- b. Protein
- c. Lipid
- d. Fatty acid

111. Myoglobin is: (select all that apply)

- a. Binds to CO₂, CO, and NO in addition to O₂
- b. Monomeric
- c. Primarily used for storage of oxygen
- d. Requires higher oxygen tension than hemoglobin for saturation

112. A single, multinucleated muscle cell is known as a:

- a. Myofibril
- b. Myofiber
- c. Myoblast
- d. Myofilament

113. Thin filaments have which of the following? (select all that apply)

- a. Myosin
- b. G actin
- c. F actin
- d. Tropomyosin

114. Which of the following are regulatory proteins?

- a. Actin
- b. Myosin
- c. Troponin
- d. Tropomyosin

115. _____ anchors thick filaments to the Z disc.

- a. Desmin
- b. Dystrophin
- c. Titin
- d. Nebulin

116. Muscles may insert in _____: (select all that apply)

- a. Bones
- b. Tendons
- c. Dermis
- d. Fascia

117. Insertion is the dermis of lips.

- a. Buccinator
- b. Occipitalis
- c. Orbicularis oris
- d. Orbicularis oculi

118. The masseter is:

- a. Fusiform
- b. Unipennate
- c. Bipennate
- d. Parallel

119. _____ links actin filaments to proteins on the sarcolemma.

- a. Desmin
- b. Dystrophin
- c. Titin
- d. Nebulin

120. This protein is only found on thin filaments.

- a. Calmodulin
- b. Calsequestrin
- c. Nebulin
- d. Desmin

121. Insertion is the base of the second metacarpal.

- a. Extensor carpi radialis brevis
- b. Extensor carpi radialis longus
- c. Extensor carpi ulnaris
- d. Extensor digiti minimi

122. Which of the following is responsible for external rotation of the arm?

- a. Infraspinatus
- b. Brachialis
- c. Latissimus dorsi
- d. Pectoralis major

123. Which of the following affects the strength of a muscle twitch? (select all that apply)

- a. Concentration of calcium in the sarcoplasm
- b. pH
- c. Hydration
- d. Temperature

124. Twitches at a frequency at which the muscle does not have time to completely relax, resulting in increasing of forces is known as: (select all that apply)

- a. Treppe
- b. Tetanus
- c. Temporal summation
- d. Wave summation

125. Mutations in the gene that codes for this protein results in muscular dystrophy.

- a. Dystrophin
- b. Calpain
- c. Ubiquitin
- d. Calsequestrin

126. Which of the following muscles would have the smallest motor units?

- a. Deltoid
- b. Orbicularis oculi
- c. Brachialis
- d. Peroneus brevis

127. Which kind of cell envelops the neuromuscular junction?

- a. Glial cells
- b. Schwann cells
- c. Microglia cells
- d. Satellite cells

128. Acetylcholinesterase is found in: (select all that apply)

- a. Sarcolemma
- b. Basal lamina
- c. Synaptic vesicles
- d. Sarcoplasm

129. The optimal resting length of a sarcomere is roughly:

- a. 1.5 μm
- b. 2.0 μm
- c. 2.5 μm
- d. 3.0 μm

130. Which enzymes are involved in the phosphagen system? (select all that apply)

- a. ATP synthase
- b. Myokinase
- c. Creatine kinase
- d. ATPase
- e.

131. Which of the following is not a cause of muscle fatigue?

- a. Slowing of the sodium-potassium pumps
- b. Increasing pH
- c. Junctional fatigue
- d. Hyperpolarization

132. Which of these fibers contain higher relative amounts of creatine kinase and myokinase?

- a. Type I
- b. Type IIA
- c. Type IIB
- d. Intermediate fibers

133. The endomysium surrounds a muscle fiber.
134. The muscle that provides the major force of a contraction for a specific movement is known as the agonist.
135. The muscle that assists the one above in its function is known as the synergist.
136. A T tubule and the two terminal cisternae adjacent to it is collectively referred to as a triad.
137. One nerve fiber and all the muscle fibers that are innervated by it are known as a motor unit.
138. Synapse of a somatic motor neuron at a muscle fiber is known as the neuromuscular junction/motor end plate.
139. A resting muscle cell is polarized, meaning that the interior of the sarcolemma is more negative than the outside.
140. In a resting muscle cell, there is more Na+ outside the cell and more K+ inside the cell.
141. The period between a stimulus and a muscle twitch is known as the latent period.
142. Excitation of more motor units to produce a stronger response is known as multiple motor summation/recruitment.

143. Sarcolemma
144. Dense body
145. Intermediate filament
146. Nucleus
147. Thick filament
148. Thin filament

