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Practice Exam Kit for the MBLEx

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Your Test Statistics

Test Mode	Study
Number of Questions	179
Number Correct	29
Number Incorrect	22
Number Not Answered	128
Date/Time Started	Dec 9, 2016 8:55 (PST)
Date/Time Finished	
Time Logged	49:06
Score	16%

Test Preferences for this Test

Test Preference	Your Setting
Test Sections	Anatomy and Physiology
Prompts & Explainations	On
Test Notes	On
Question Order	Sequential and by Section
# of Questions	179 Questions
Time Limit	No Limit

Your results for this test follow:

Anatomy and Physiology

1. What nerve is involved when a client experiences pain, numbness or tingling sensations in the medial aspect of the ring finger and pinky finger?

a. Median
b. Sciatic
✓ c. Ulnar
d. Radial

Explanation: The ulnar nerve originates from the C8-T1 nerve roots of the brachial plexus, descends the posteromedial aspect of the humerus, enters the anterior compartment of the forearm through the two heads of the flexor carpi ulnaris and along the ulna into the hand ending at the tips of the ring and pinky finger. The ulnar nerve is the largest unprotected nerve in the body and commonly susceptible to various compression issues including cubital tunnel and Guyon's canal syndrome.

2. The lateral malleolus is comprised of which of the following bones?

✓ a. Fibula
b. Tibia
c. Calcaneus
d. Femur

Explanation: The lateral malleolus is located on the lower extremity at the distal end of the fibula, also known as the external malleolus. The shape is of a pyramidal form and somewhat flattened from side to side and is the attachment site for the calcaneofibular ligament. The lateral malleolus descends to a lower level than the medial malleolus and the lateral malleolus is often the site of ankle injuries and fractures.

3. Piriformis syndrome affects which of the following nerves?

✓ a. Sciatic
b. Musculocutaneous
c. Coccygeal
d. Thoracic

Explanation: Piriformis syndrome is a neuromuscular disorder that occurs when the sciatic nerve is irritated or compressed by the piriformis muscle causing pain, tingling and numbness in the gluteals and along the path of the sciatic nerve descending down the posterior thigh and into the leg. Common causes of Piriformis syndrome are strenuous sitting exercises that include rowing or bicycling.

4. Which of the following muscles inserts into the olecranon process?

a. Gastrocnemeus
b. Biceps femoris
c. Brachioradialis
✓ d. Triceps brachii

Explanation: The triceps brachii is the large muscle on the posterior aspect of the upper limb which is responsible for extension of the elbow joint. There are three origins: the lateral head from the dorsal surface of the humerus, the long head from the infraglenoid tubercle of the scapula and the medial head from the groove of the radial nerve. All three heads insert into the olecranon process of the ulna.

5. Where would you expect to find a facet joint?

a. Hand
✗ b. Pelvis
✓ c. Spine
d. Foot

Explanation: There are two facet joints on each side of a vertebra between the superior articular process of one vertebra and the inferior articular process on the vertebra directly above. Facet joints are a common injury site along the spine.

6. The psoas major muscle inserts into which bony landmark on the femur?

✓ a. Lesser trochanter
✗ b. Greater trochanter
c. Medial condyle
d. Trocanteric fossa

Explanation: The psoas major muscle originates on the lateral surface of the vertebrae T12 - L1-L5 and joins with the iliacus at the inguinal ligament, where it then crosses the hip joint and inserts into the lesser trochanter of the femur.

7. The fibular collateral ligament is also known as the _____.

a. iliotibial band
✓ b. lateral collateral ligament
c. medial collateral ligament
d. anterior cruciate ligament

Explanation: The fibular collateral ligament is located on the lateral or outside portion of the knee in a region known as the posterolateral corner of the knee. The location of the fibula being on the lateral portion of the lower leg is the give-away to its other name. Ligaments are bands of tough, dense, fibrous connective tissue that attach bone to bone as well as cartilage to bone.

8. Striated muscle is found in which of the following anatomical structures?

a. Intestines
✗ b. Blood vessels
c. Brain
✓ d. Quadriceps

Explanation: Striated muscle is most commonly found in skeletal muscle such as the quadriceps. However, striated muscle can also be found in the heart as cardiac muscle. Striated muscle gains its name due to the parallel pattern of muscle fibers.

9. Smooth muscle is also known as _____ muscle.

a. skeletal
b. striated
✓ c. involuntary
d. voluntary

Explanation: Smooth muscle is also known as involuntary muscle and is found within the walls of organs, blood vessels and within the skin but not in the heart. The muscles are labeled involuntary because they contract without conscious control. The heart contracts involuntarily but the heart is comprised of a separate classification of cardiac muscle. Smooth muscle is formed of thin layers of unstriated cells.

10. What class of tissue is fascia?

✗ a. Epithelial
✓ b. Connective
c. Nervous
d. Muscular

Explanation: Fascia is the connective tissue that extends from head to toe, surrounding all our muscles, nerves and blood vessels and binds all of our tissues together. There are several layers of fascia including, superficial fascia, deep fascia and subserous or visceral fascia which covers and connects our organs. Fascia contains closely packed bundles of collagen fibers nestled in a wavy pattern parallel to the direction of force. Connective tissue types include tendons, bones, adipose tissue, blood, etc.

11. The fight-or-flight response is a choreography of physiological changes stimulated by which of the following body systems?

a. Circulatory system
b. Muscular system
✓ c. Sympathetic nervous system
✗ d. Parasympathetic nervous system

Explanation: The sympathetic nervous system is mostly active at a basal or base level of homeostatic function. However, it has the responsibility to synchronize the body's defense mechanisms to address both internal and external stressors. People in chronic fight-or-flight states are at risk of diminished functions of the bodies systems which can contribute to the cause of physical and mental diseases.

12. The lymphatic system is responsible for the _____.

a. removal of toxins from our blood
b. synthesis of hormones
✓ c. removal of interstitial fluid from tissues
d. regeneration of new cells

Explanation: The lymphatic system never comes in direct contact with blood but is part of the circulatory system that removes interstitial fluid from tissues and carries lymph unidirectionally toward the heart.

13. Where is the largest cache of serotonin located within the body?

✗ a. Brain
b. Thoracic cavity
c. Pelvic cavity
✓ d. Abdominal cavity

Explanation: Although the gut runs through the thoracic and pelvic cavity, it is mostly located in the abdominal cavity and it is in the gut that the largest storage of serotonin exists within the body. The gut is known as the second brain and makes up the enteric nervous system which includes tissue sheaths that line the esophagus, stomach, small intestine and colons. This would explain why people feel butterflies in their stomach when they are nervous, fearful or excited.

14. Which system is responsible for carrying oxygen to the cells of the body and assisting in the removal of waste from the cells of the body?

✓ a. Circulatory
b. Lymphatic
c. Respiratory
d. Digestive

Explanation: Erythrocytes or red blood cells in the circulatory system carry oxygen (and nutrients) to the cells of the body and transport waste from cells to be processed by other body systems.

15. Arteries carry blood to the heart.

True
✓ False

Explanation: Arteries carry blood away from the heart and veins carry blood to the heart. Oxygen rich blood in arteries is red and oxygen poor blood in veins is blue/green.

16. Synarthrosis, amphiarthrosis and diarthrosis refers to _____.

a. cellular functions
✓ b. joint movements
c. nervous system functions
d. digestive function

Explanation: All three are classifications of joint movements. An example of a synarthrosis joint is the skull sutures which permit little to no mobility. An example of amphiarthrosis joint is the cartilage of the vertebra which permits slight mobility. Examples of the diarthrosis joint are the shoulders, hips and knees which permit a wide range of movements.

17. What is a function of bursa?

✓ a. Lubricates joints
b. Produce hormones
c. Creates bile
d. Storage of lymph

Explanation: Bursa is a small synovial fluid holding sac which provides cushion between bones and tendons as well as between muscles and bone typically around a joint. It helps reduce the friction between these structures during movement.

18. Peristalsis occurs the most in which of the following body systems?

a. Reproduction
✓ b. Digestion
c. Endocrine
✗ d. Nervous

Explanation: Peristalsis is the symmetrical contraction and relaxation of the smooth muscles that moves contents such as food through the digestive system.

19. Which muscles contract during dry heaves or vomiting?

- ✓ a. Abdominal
- b. Intercostal
- ✗ c. Esophageal
- d. Diaphragm

Explanation: The abdominal muscles are responsible for the contractions during dry heaves and vomiting. This will explain why a client's abdomen may be sore after a stomach flu.

20. Where are the carotid arteries located in the human body?

- a. Abdomen
- b. Groin
- ✗ c. Legs
- ✓ d. Throat

Explanation: The carotid arteries are located in the anterior portion of the neck known as the anterior triangle. The carotids regulate blood flow to the brain which can cause dizziness or fainting if occluded. There is also a risk of arterial plaque buildup which can be accidentally broken free during massage and can cause a stroke. The carotids are a contraindicated endangerment site.

21. Which of the following muscles are a part of the hamstrings?

- a. Rectus femoris
- ✓ b. Biceps femoris
- c. Gracilis
- d. Soleus

Explanation: The hamstrings are the muscle group of the posterior thigh and include the biceps femoris, semitendinosus and the semimembranosus. The hamstrings cross over and act upon both the hip and knee joints.

22. Insulin and glucagon are hormones released from which of the following anatomical structures?

- ✓ a. Pancreas
- b. Liver
- c. Adrenal glands
- ✗ d. Thyroid

Explanation: The pancreas plays a major role in both the endocrine and digestive system. As an endocrine gland, the pancreas develops and releases insulin to lower blood sugar, glucagon to raise blood sugar levels and somatostatin to regulate the endocrine system. As a digestive organ, the pancreas secretes digestive enzymes into the chyme (partially digested food that is passed from the stomach to the duodenum) to further assist in the breaking down of carbohydrates, lipids and proteins.

23. How many vertebrae are located in a typical human body?

a. 16
b. 22
✗ c. 25
✓ d. 33

Explanation: In a normal human body, there are 33 vertebrae. They are: 7 cervical, 12 thoracic, 5 lumbar which makes 24. Then there are 9 fused vertebrae that comprise the sacrum and coccyx.

24. The lymphatic system is a part of which greater body system?

a. Reproduction
✗ b. Digestive
c. Nervous
✓ d. Immune

Explanation: The lymphatic system plays a substantial role in a healthy functioning immune system. Lymphoid tissues are found throughout the body and help the body defend against disease, infections or the spread of tumors.

25. Endocrine glands secrete _____ into the blood.

a. lipids
b. bile
c. toxins
✓ d. hormones

Explanation: The endocrine system is a series of glands which secrete specific types of hormones directly into the blood stream to aid and assist in the regulation of various functions within the body. These functions include growth and development, metabolism, tissue functions and emotional states.

26. Where would you find a sarcomere in the human body?

a. Brain
b. Liver
✓ c. Muscle
d. Bone

Explanation: Sarcomeres are the basic unit structures of a muscle. A sarcomere is composed of lengthy fibrous proteins called myosin (thick) and actin (thin) that slide past each other during muscle contraction and relaxation. When sarcomeres are grouped they become myofibrils and, in this form, they become either light or dark bands depending on their myoglobin (iron and oxygen binding protein) content.

27. Osteophyte is the technical term for _____.

✓ a. a bone spur
b. a tooth

c. a bone fracture
d. bone cancer

Explanation: An osteophyte is the technical term for a bone spur. A bone spur is an abnormal bone growth caused by old age, articular degeneration, disease or excessive wear and tear during mechanical instability.

28. Where would you find a diaphysis in the human body?

a. Kidney
✓ b. Bone
c. Brain
d. Lung

Explanation: The diaphysis is the relatively straight main body of a long bone and is also known as the shaft. A great example is the long part shaft of the femur.

29. Which postural muscle is typically indicated in the chronic frozen shoulder?

a. Infraspinatus
b. Supraspinatus
c. Pectoralis major
✓ d. Subscapularis

Explanation: The subcapularis muscle is a powerful postural muscle of the shoulder originating on the subscapular fossa and inserting into the lesser tubercle of the humerous. Its location between the scapula and posterior rib cage makes it difficult to access and palpate during massage. The difficulty to stretch and release adhesions within this muscle is a major contributing factor to frozen shoulder.

30. An acetabulum is found in which part of the body?

✓ a. Hip
b. Shoulder
c. Spine
d. Knee

Explanation: The acetabulum is the concave surface of the pelvis that holds the head of the femur, forming the hip joint. The acetabulum structure is comprised of three bones: the ischium, the ilium and the pubis.

31. How many cervical vertebrae are present in a normal human body?

✗ a. 5
b. 6
✓ c. 7
d. 8

Explanation: There are 7 cervical vertebrae in a normal human body. They are designated by a capital C as in C-1 thru C-7 or C1 - C7.

32. Where would you locate the largest grouping of hyaline cartilage?

a. Abdomen
b. Thoracic cavity
✓ c. Joints
d. Ears

Explanation: Hyaline cartilage (also known as gristle) is located on most joint surfaces and provides the necessary flexible support for proper joint functions. It is a fairly simple structure with no nerves or blood vessels and is shiny or pearly blue in color. The collagen in hyaline cartilage gives it incredible tensile strength and the presence of ground substance adds to its ability to withstand incredible amounts of pressure.

33. A hairline fracture of the talus bone would indicate an injury to which area of the body?

a. Head
✗ b. Spine
c. Head
✓ d. Foot

Explanation: The talus is one of the tarsus bones within the foot which comprises the ankle. It is unique in that it has no muscles attachments and therefore relies on the neighboring bones for positioning.

34. Where would you find collagen?

a. Blood vessels
b. Bones
c. Tendons
✓ d. All of the above

Explanation: Collagen is the main component of connective tissue and is abundant throughout the human body. In addition to blood vessels, bones and tendons, collagen can also be found in skin, ligaments, cartilage, intervertebral discs and throughout the human body.

35. Where would you locate an epiphysis?

✓ a. Femur
b. Brain
c. Kidneys
d. Sternum

Explanation: An epiphysis describes the round end of a long bone such as the femur.

36. How many epiphysis types are in the human body?

✗ a. 2
✓ b. 4
c. 6

d. 8

Explanation: There are four types of epiphyses within the human body: 1. pressure epiphyses which are weight transmitting; 2. traction epiphyses which are attachment sites for tendons; 3. atavistic epiphyses which are fused bone like the coracoid process to the scapula; and 4.aberrant epiphyses where the best example is at the base of metacarpal bones.

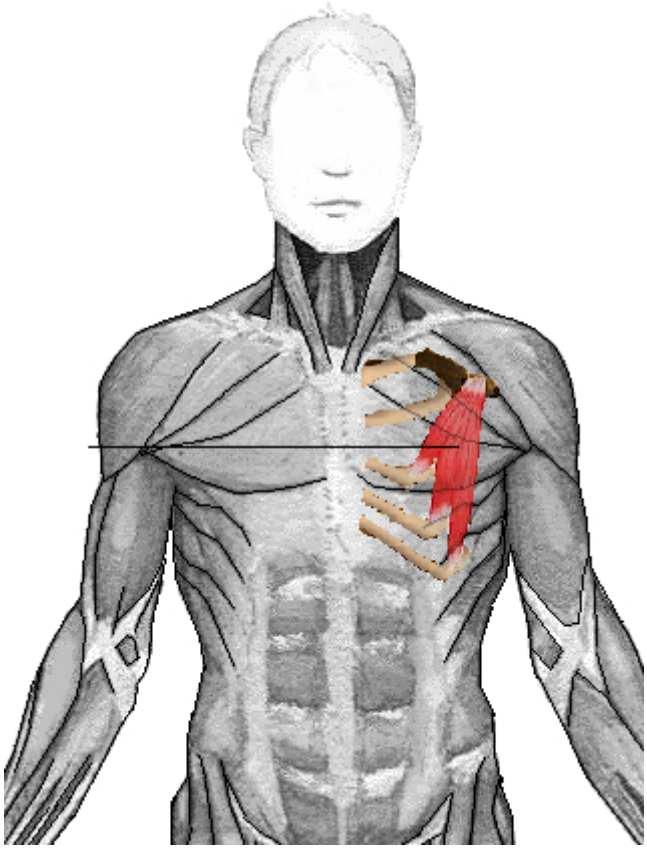
37. Which of the following muscles inserts into the mastoid process of the temporal bone?

✗ a. Upper trapezius
b. Posterior scalene
c. Levator scapula
✓ d. Sternocleidomastoid

Explanation: The sternocleidomastoid has two heads of origin: the medial or sternal head on the anterior surface of the manubrium and the lateral or clavicular head on the medial third of the clavicle, which both insert into the mastoid process of the temporal bone.

38. Select the muscle that is highlighted in red.

a. Pectineus
b. Pectoralis major
✓ c. Pectoralis minor
✗ d. Serratus anterior



Explanation: The location of the muscle attachment onto the third, fourth and fifth ribs and the insertion into the coracoid process indicates that the muscle in red is the pectoralis minor.

39. What term is used to describe the minimum daily caloric requirement the body needs to stay alive when at rest?

✗ a. Metabolism
✓ b. Basal metabolism
c. Essential input
d. Chemotaxis

Explanation: Basal metabolism is the term used to describe the minimum daily caloric intake required by the body to stay alive while at rest. Basal metabolism is the balance between constructive and destructive metabolism.

40. Fast twitch or white muscle fibers are anaerobic in function.

✓ True
False

Explanation: Fast twitch muscle fibers do not require much oxygen to contract. Instead, they obtain ATP (adenosine triphosphate) or energy by converting glucose to lactic acid in the absence of oxygen.

41. Which of the following is an example of a convergent muscle shape?

a. Sphincter
b. Biceps brachii
✓ c. Pectoralis major
d. Sartorius

Explanation: A convergent muscle starts with a broad origin and converges to insert into a much smaller tendon. The pectoralis major is an excellent example of this muscle shape.

42. How many layers are present in the thoracolumbar fascia?

a. 1
b. 2
✓ c. 3
d. 4

Explanation: There are three layers to the thoracolumbar fascia: the anterior, middle and posterior. Two spaces are created between the three layers which houses the quadratus lumborum and erector spinae muscles.

43. Open and closed kinematic chains refer to joint movements.

✓ True
False

Explanation: Open kinematic chains refer mostly to the joints that do not force an action on another joint, similar to how the wrist can bend without forcing the rest of the body into movement. A closed kinematic

chain is the opposite, where the motion of one joint forces other joints into movement such as a hip movement initiating the movement of the knee and ankle.

44. What bone has no direct articulation with any other bones?

✗ a. Patella
✓ b. Hyoid
c. Hamate
d. Pisiform

Explanation: The hyoid bone is most unique in that it is only distantly articulated with another bone via muscles and ligaments.

45. Where is the insertion of the temporalis muscle?

✓ a. Coronoid process of the mandible
b. Ramus of the mandible
c. Body of the mandible
✗ d. Zygomatic arch

Explanation: The temporalis muscle originates on the temporal fossa of the skull and inserts into the coronoid process of the mandible. Its action is retraction and elevation of the mandible.

46. What part of the spine is affected by hyperkyphosis?

a. Cervical
✓ b. Thoracic
c. Lumbar
d. Sacral

Explanation: Hyperkyphosis is an excessive curvature of the thoracic spine. The condition is often caused by weakened vertebrae through diseases like osteoporosis.

47. What area of the body would you find the buccinator muscle?

✗ a. Groin
b. Chest
✓ c. Head
d. Feet

Explanation: The buccinator is a muscle located between the maxilla and mandible of the head and is the muscle that assists with whistling, smiling, and sucking from a straw.

48. The arms, legs, and pelvis are part of the _____ skeleton.

a. axial
✓ b. appendicular
c. osteocalcin

d. phalangeal

Explanation: The appendicular skeleton is comprised of 126 bones and is formed by the upper limbs (60), the pectoral girdles (4), the pelvic girdles (2) and the lower limbs (60). Their function is to make locomotion possible and to protect the major organs of digestion, excretion and reproduction.

49. Where would you locate branchiomeric musculature?

a. Feet
✗ b. Intestines
c. Urinary system
✓ d. Head and neck

Explanation: Branchiomeric muscles are striated muscles of the head and neck and are supplied by the cranial nerves. Actions of branchiomeric muscles include mastication and facial expressions.

50. Which part of the lymphatic system is responsible for filtering the lymph?

a. Ducts
b. Vessels
✓ c. Nodes
d. Capillaries

Explanation: Lymph nodes are a small ball or oval shaped organ of the immune system that contains lymphocytes, a type of white blood cell, which is responsible for transferring pathogens and waste into the lymph nodes for filtering.

51. Which muscle at the base of the skull is often associated with tension headaches?

a. Frontalis
✓ b. Occipitalis
c. Scalenes
d. Levator scapula

Explanation: The occipitalis muscle has two bellies which originate on the lateral 2/3 portion of the superior nuchal line and the external occipital protuberance. The insertion is into the dense fibrous tissue surrounding the skull called the galea aponeurosis which connects with the frontalis muscle along the forehead. Both the frontalis and the occipitalis muscles play a role in tension headaches.

52. Which type of nerves are stimulated by massage to send messages to the central nervous system?

Skipped ✓ a. Afferent nerves
b. Efferent nerves
c. Somatic nerves
d. Neurologic nerves

Explanation: Nerves that send messages to the central nervous system (CNS) are called afferent nerves. Sensory receptors are examples of afferent nerves. The nerves that send messages from the CNS to the body are called efferent nerves. Somatic nerves are an example of efferent nerves.

53. Which system is also known as the excretory system?

a. Integumentary
b. Digestive
Skipped ✓ c. Urinary
d. Respiratory

Explanation: The purpose of the excretory system is to regulate the chemical composition of the body by removing metabolic waste and to monitor the proper amount of water, salts and nutrients. The integumentary, digestive and respiratory system all play a minor role in the excretory system. However, the urinary system is responsible for the excretion of fluid to maintain homeostasis.

54. What color is associated with the heart chakra?

a. Red
Skipped ✓ b. Green
c. Blue
d. Violet

Explanation: The MBLEx candidate handbook indicates that the test may have questions covering the concepts of energetic anatomy. This question is an example of such a question. The heart chakra, positioned in the center of the chest, is associated with the color green or emerald green. The heart chakra represents the perceptions of love and the relationships between people and the world. The element of the heart chakra is air.

55. The circadian rhythm is a biological clock that resets every 12 hours.

True
Skipped ✓ False

Explanation: The circadian rhythm is a term used to describe biological process that are governed by external factors like light and darkness or temperature. The circadian rhythm was first recorded in the 4th century BC and has been researched ever since. The evidence points to this clock being reset every 24 hours.

56. Where would you locate stratum lucidum?

heart
muscle
Skipped ✓ skin
bone

Explanation: Stratum lucidum is a translucent buildup of two to three layers of dead skin cells typically found on the palms of the hands or the soles of the feet. Stratum lucidum is located between the deeper stratum granulosum and the more superficial stratum corneum layers of skin. The thickness of stratum layers of cells is governed by the rate of mitosis (cellular division.)

57. What is the name of the joint where the clavicle and scapula meet?

Skipped ✓ a. Acromioclavicular joint

b. Sternoclavicular
c. Coracoclavicular joint
d. Humeroclavicular joint

Explanation: The clavicle connects to the scapula at the acromion process and this juncture is called the acromioclavicular joint.

58. What is the medical term for the shoulder joint?

a. Facet joint
b. Acromioclavicular joint
Skipped ✓ c. Glenohumeral joint
d. Humeroclavicular joint

Explanation: The shoulder joint is comprised of the glenoid fossa of the scapula and the head of the humerus. This juncture is called the glenohumeral joint.

59. A hematocrit is a medical test for _____.

a. healthy liver function
b. identifying peptic ulcers
Skipped ✓ c. measuring blood and plasma
d. pupil dilation

Explanation: A hematocrit is a medical test where blood is placed into a test tube and spun on a centrifuge to separate the whole blood into its liquid elements to help access the various components within the blood.

60. Which of the following muscles would contribute to wrist abduction?

a. Brachioradialis
Skipped ✓ b. Extensor carpi radialis
c. Flexor digitorum longus
d. Extensor carpi ulnaris

Explanation: Wrist abduction is another term for radial deviation of the wrist. Of the muscles listed, the extensor carpi radialis is the muscle responsible for wrist abduction, which is to laterally extend the wrist away from the body while in correct anatomical position.

61. Which of the following muscles would contribute to wrist adduction?

a. Extensor carpi radialis
Skipped ✓ b. Extensor carpi ulnaris
c. Flexor digitorum profundus
d. Extensor pollcis brevis

Explanation: The extensor carpi ulnaris acts to both extend and adduct the wrist.

62. Which of the four quad muscles is the largest in size?

a. Rectus femoris
Skipped ✓ b. Vastus lateralis
c. Vastus intermedius
d. Vast medialis

Explanation: The vastus lateralis is the largest quadriceps muscle with its origin starting superiorly to the intertrochanteric line and inserting into the lateral border of the patella.

63. Carbohydrate digestion mostly occurs at which point in the digestive tract?

a. Mouth
b. Stomach
Skipped ✓ c. Small intestine
d. Large intestine

Explanation: Carbohydrate digestions occurs mainly in the small intestine where the pancreatic digestive enzyme amylase converts starches into maltose which is then converted to glucose by the enzyme maltase. Sucrase converts sucrose to glucose and lactase converts lactose to glucose in the small intestine as well.

64. The linea aspera is located on which of the following bones?

a. Humerus
b. Tibia
c. Ulna
Skipped ✓ d. Femur

Explanation: The linea aspera is comprised of three raised ridges along the posterior aspect of the femur. These ridges include a lateral, intermediate and medial and are caused by the insertion of muscles along each line.

65. Pulmonary circulation distributes blood, nutrients and gases throughout the body.

a. True
Skipped ✓ b. False

Explanation: Pulmonary circulation transfers blood from the heart to the lungs and then back to the heart for systemic circulation which distributes blood, nutrients and gases throughout the body.

66. What is another name for the alimentary canal?

a. Ear canal
Skipped ✓ b. Digestive tract
c. Hepatic portal vein
d. Nasal cavity

Explanation: The alimentary canal is the passageway from the mouth, pharynx, esophagus, stomach, small intestine, large intestine and ends at the anus. This canal is also the digestive tract.

67. Which of the following muscles is a synergist for the biceps brachii?

a. Triceps
b. Posterior deltoid
c. Pec major
Skipped ✓ d. Brachialis

Explanation: The synergist or assisting muscle to the biceps brachii is the brachialis muscle.

68. Extensor pollicis longus attaches to which of the following digits?

a. Pinky
b. Ring
c. Index
Skipped ✓ d. Thumb

Explanation: A pollicis is another term for thumb. Any question that includes the term pollicis will relate to the thumb.

69. Which muscle does the radial nerve innervate?

a. Biceps femoris
Skipped ✓ b. Triceps
c. Flexor digitorum longus
d. Pectorals major

Explanation: The radial nerve innervates all muscles of the posterior arm and this includes the triceps muscle.

70. Which muscle attaches to the zygomatic arch?

Skipped ✓ a. Masseter
b. Temporalis
c. Piriformis
d. Illiacus

Explanation: The masseter is a dense muscle with a superficial head and a deep head both of which originate from the zygomatic arch of the temporal bone.

71. Which nerve passes through the flexor retinaculum of the hand?

a. Trigeminal
Skipped ✓ b. Median
c. Radial
d. Sciatic

Explanation: The median nerve passes through the flexor retinaculum of the hand.

72. The radial nerve divides into a deep branch called the _____ nerve?

a. musculocutaneous
b. anterior interosseous
c. palmar digital
Skipped ✓ d. posterior interosseous

Explanation: The radial nerve divides into the superficial dorsal digital nerves and the deeper posterior interosseous nerve, located at the posterior aspect of the forearm.

73. The ulna rotates around the radius.

a. True
Skipped ✓ b. False

Explanation: The ulna is stationary during wrist rotation.

74. Which two tendons comprise the anatomical snuff box?

Skipped ✓ a. Extensor pollicus longus and extensor pollicus brevis
b. Extensor carpi ulnaris and flexor digitorum longus
c. Extensor digiti minimi and flexor carpia radialis
d. Extensor digitorum and extensor retinaculum

Explanation: The term anatomical snuff box or rather, "snuff box" was coined by using the space between the tendons of the extensor pollicus longus and the extensor pollicus brevis (and the abductor pollicus longus) as a place to hold snuff tobacco.

75. Which condition would include an issue with the flexor carpi radialis muscle?

Skipped ✓ a. medial epicondylitis
b. thoracic outlet syndrome
c. lateral epicondylitis
d. cubital tunnel syndrome

Explanation: The flexor carpi radailis muscle is part of the flexor muscle group of the forearm which inserts into the common flexor tendon. Medial epicondylitis is the condition which includes the flexor muscle group of the forearm. Medial epicondylitis is also called golfers elbow due to the end range of motion during a golf swing that causes the most damage to the flexor muscles.

76. Tennis elbow affects the flexor muscles of the forearm.

a. True
Skipped ✓ b. False

Explanation: Tennis elbow affects the extensor muscles of the forearm and is attributed to the tearing of flexor muscles during impact of a back hand swing.

77. The occipitals contribute to TMJD.

Skipped ✓ a. True
b. False

Explanation: The occipital muscles act to anchor the head during mastication but add stress and strain to the temporalis and masseter when the occipitals are hypertonic.

78. Lateral epicondylitis affects the outside of the knee joint.

a. True
Skipped ✓ b. False

Explanation: Lateral epicondylitis is the technical term for tennis elbow.

79. In which region of the lung does the gaseous exchange occur?

Skipped ✓ a. Alveoli
b. Atrium
c. Bronchii
d. Trachea

Explanation: The alveoli also known as the pulmonary alveolus is the anatomical structure of the lung that has a hollow cavity in which air is compressed and then exchanged with blood. There is roughly 170 alveoli in one square millimeter in the functional structure (parenchyma) of the lung.

80. Molecules of carbon dioxide and oxygen are passively exchanged by the process of _____.

a. fission
Skipped ✓ b. diffusion
c. dispersion
d. metabolism

Explanation: Diffusion is the process where an area of higher concentration naturally flows into an area of lower concentration. Upon inspiration of air into the lungs, the alveolar sac is full of oxygen and the surrounding tissue is saturated with carbon dioxide rich blood. Next, the process of diffusion allows oxygen to flow into the blood from the alveolar sacs and carbon dioxide to flow from the blood into the alveolar sacs where it will be released through exhalation.

81. Which muscle is responsible for initiating inhalation?

a. Intercostals
b. Abdominals
Skipped ✓ c. Diaphragm
d. Pectoralis major

Explanation: The diaphragm muscle which extends across the bottom of the rib cage is the muscle responsible for initiating inhalation.

82. Which muscle is flexed during forced exhalation?

Skipped ✓ a. Abdominals
b. Rectus femoris
c. Diaghram
d. Illiopsoas

Explanation: During a forced exhalation, the abdominal muscles are engaged to assist the expulsion of air from the lungs.

83. How many lobes are in each hemisphere of the cerebral cortex?

a. 2
b. 3
Skipped ✓ c. 4
d. 5

Explanation: The cerebral cortex is divided into two halves or hemispheres. Each hemisphere consists of four lobes: the frontal lobe, parietal lobe, occipital lobe and temporal lobe. The lobes relate not to brain function but rather to the bones that underlie the cerebral cortex. The borders of these lobes are dictated by sutures in the skull with the exception between the frontal and parietal lobes which follow a deep fold in the brain called the central sulcus and this is just behind the frontal and parietal sutures.

84. Humans are considered to have an open circulation system.

a. True
Skipped ✓ b. False

Explanation: There are two primary types of circulation systems in nature, one being open and the other being closed. In humans, the blood never leaves the intricate webbing of blood vessels and is thus considered a closed circulatory system. An open circulatory system is one where blood and interstitial fluid move freely within an organism, as in the case of gastropods, otherwise known as snails.

85. _____ are the smallest blood vessels.

a. Arteries
b. Venules
Skipped ✓ c. Capillaries
d. Arterioles

Explanation: Capillaries are the smallest blood vessels with endothelial linings that are only one cell thick. This allows for the transfer of water, oxygen, carbon dioxide, nutrients and waste between the blood and surrounding tissues.

86. How many types of Schwann cells exist in the human body?

a. 1
Skipped ✓ b. 2
c. 3

d. 4

Explanation: There are two types: myelinating and nonmyelating. Myelinating Schwann cells wrap around axons of motor and sensory neurons to form the myelin sheath, which acts to protect and support nerve functioning. Non-myelinating Schwann cells are involved with maintaining the health and vitality of the axon or nerve fiber.

87. The tibial nerve is a distal branch of which nerve?

Skipped ✓ a. Sciatic
b. Brachial plexus
c. Sacral plexus
d. Lumbar plexus

Explanation: The tibial nerve is a distal branch of the sciatic nerve which passes through the popliteal fossa where it divides into the medial and lateral plantar nerves.

88. Where are the lumbrical muscles located?

a. Lumbar region
Skipped ✓ b. Hands and feet
c. Pelvic floor
d. Neck

Explanation: Despite their name, the lumbricals are located in the hands and feet and assist with movement of the phalanges in both locations.

89. The cerebral cortex is responsible for _____.

Skipped ✓ a. consciousness
b. hormone production
c. regulating the heartbeat
d. muscle motor functions

Explanation: The cerebral cortex is the largest part of the brain and plays a key role in awareness, communication, consciousness and memory.

90. The mesencephalon is also known as the _____.

a. forebrain
Skipped ✓ b. midbrain
c. hindbrain
d. brainstem

Explanation: The mesencephalon is also known as the midbrain, and is associated with arousal, hearing, motor control, vision, sleeping patterns and more.

91. In humans, which part of the brain is located superiorly to all others?

a. Cerebellum
b. Diencephalon
Skipped ✓ c. Telencephalon
d. Pons

Explanation: The telencephalon is also known as the cerebrum. Telencephalon refers to the embryonic structure from which the mature cerebrum develops.

92. Which of the following functions does the pineal gland help regulate?

a. Movement
b. Digestion
c. Blood pressure
Skipped ✓ d. Sleep patterns

Explanation: The pineal gland is a small endocrine gland that produces seratonin, the hormone that regulates sleep patterns.

93. What does the term "stroma" relate to?

Skipped ✓ a. Supportive framework of a biological cell
b. Perceptions of the third eye
c. Functional movement of digestive system
d. Light sensitivity

Explanation: A stroma refers to the connective framework that supports the cellular structure of tissue and organs.

94. Auditory ossicles are formed of which kind of tissue?

a. Muscle
Skipped ✓ b. Bone
c. Cartilage
d. Nervous

Explanation: The ossicles are the three smallest bones in the human body and help transmit sound to the cochlea. The term ossicles literally means "tiny bones" and are named the incus, the malleus and the stapes. An absence of these bones causes a severe hearing loss.

95. Which body system do the tonsils belong to?

a. Digestive
b. Cardiovascular
c. Endocrine
Skipped ✓ d. Immune

Explanation: The tonsils are masses of lymphatic tissue located just behind the tongue at the back of the throat. Tonsils are the first line of defense against inhaled or ingested pathogens and are part of the immune system.

96. Which muscle is a prime mover for neck extension?

Skipped ✓ a. Splenius capitis
b. Extensor hallicus longus
c. Sternocleidomastoid
d. Rhomboids major

Explanation: The splenius capitis muscle originates along the lower half of the nuchal ligament, spinous process of the seventh cervical vertebrae and the upper third or fourth thoracic vertebrae which insert into the mastoid process of the temporal bone. The action of the splenius capitis is to extend the neck posteriorly as well as assisting with lateral rotation and lateral flexion of the cervical spine.

97. Which cells are responsible for generating the electrical impulses that control heart rate?

Skipped ✓ a. Myocytes
b. Glial
c. Epithilial
d. Merkel

Explanation: There are various forms of myocytes in the body, but it is the cardiac myosytes that are responsible for generating the electrical impulses that control heart rate.

98. Which part of a cell is responsible for breaking down glucose molecules to release energy?

a. Ribosomes
b. Centrioles
c. Nucleus
Skipped ✓ d. Mitochondria

Explanation: The mitochondria within a cell handles the task of breaking down glucose molecules to release energy.

99. The brachial artery is a branch from which larger artery?

Skipped ✓ a. Axillary
b. Femoral
c. Carotid
d. Descending aorta

Explanation: The brachial artery continues from the axillary artery and runs between the triceps and biceps brachii. The pulse of the brachial artery can be palpated between these muscles on the anterior side of the arm.

100. On which bone would you locate the infraglenoid tubercle?

a. Clavicle
b. Pelvic
c. Calcaneuos
Skipped ✓ d. Scapula

Explanation: The infraglenoid tubercle is the attachment site of the long head of the triceps brachii and is located at the most superior aspect of the lateral border of the scapula.

101. Which muscle attaches to the acromion process?

Skipped ✓ a. Trapezius
b. Pec minor
c. Short head of the biceps brachii
d. Supraspinatis

Explanation: The acromion process is located at the top of the shoulder and articulates with the lateral end of the clavicle. It is the fibers of the middle trapezius that insert into the medial margin of the acromion process.

102. Where would you locate the annular ligament?

a. Knee
b. Ankle
c. Wrist
Skipped ✓ d. Elbow

Explanation: The annular ligament stabilizes the proximal radius against the ulna during pronation and supination of the wrist. The ligament is located deep to the supinator and origin of the extensor muscles of the forearm near the head and proximal shaft of the radius at the elbow.

103. Celiac refers to which location in the body?

Skipped ✓ a. Abdomen
b. Mouth
c. Brain
d. Chest

Explanation: The term celiac describes the location of the abdomen and is used to describe the location of nerves as in the celiac plexus or the location of cardiovascular tissue as in the celiac artery. Celiac disease denotes the location of the disease located in the abdominal region.

104. Which is an example of a triangular muscle?

a. Frontalis
Skipped ✓ b. Deltoid
c. Soleus
d. Masseter

Explanation: It is important to know what the names of muscles refer to when remembering their locations. In this case, deltoid means triangular and, thus, the deltoid muscle is a triangular muscle.

105. Where are cubital lymph nodes located?

a. Knees
b. Thoracic cavity
c. Neck
Skipped ✓ d. Elbow

Explanation: Cubital refers to the elbow and will indicate that region when used with anatomical terms as cubital fossa, cubital tunnel and median cubital vein.

106. Which of the following best describes antigens?

Skipped ✓ a. A substance that stimulates an immune response
b. A substance that suppresses an immune response
c. A substance that assists digestion
d. A substance that causes muscle to fire

Explanation: An antigen is a substance either foreign or internal that triggers an immune response. This response is triggered by a histocompatibility molecule within each cell that can trigger an immune response.

107. Which of the following bones are part of the hindfoot?

a. Phalanges
b. Cuboid
c. Navicular
Skipped ✓ d. Talus

Explanation: The talus is also known as the ankle bone to which the tibia and fibula connect. The other bone of the hindfoot region is the calcaneus also known as the heel.

108. Which of the following best describes a reflex arc?

a. Emotional response
b. Massage technique
Skipped ✓ c. Neural pathway
d. Gait assessment

Explanation: A reflex arc is a neural pathway that allows for the activation of spinal motor neurons to trigger without involving the brain for a response.

109. How many bones comprise the shoulder girdle?

a. 1
Skipped ✓ b. 2
c. 3
d. 4

Explanation: There are two bones that make the shoulder girdle - the clavicle and the scapula.

110. How many joints are part of the shoulder girdle?

a. 1
b. 2
Skipped c. 3
d. 4

Explanation: There are three joints that are part of the shoulder girdle - the sternoclavicular joint, the acromioclavicular joint and the glenohumeral joint.

111. What is another term for the bicipital groove?

a. Tuberosity
Skipped b. Intertubercular
c. Epicondyle
d. Fossa

Explanation: The deep groove between the greater and lesser tubercules of the humerus is the home of the bicipital tendon which lies in the intertubercular groove, also known as the bicipital groove.

112. What does a "sulcus" refer to in the human body?

a. Protuberance
b. Bony landmark
c. Attachment site
Skipped d. Furrow

Explanation: A sulcus is the anatomical term for a furrow, fissure, crevice or a groove in the human body. Two examples are the central sulcus of the cerebellum which divides the frontal and parietal lobes, and the radial sulcus along the lateral border of the humerus which houses the radial nerve and the deep brachial artery.

113. What do the trapezium, trapezoid, capitate and hamate have in common?

a. comprise the proximal row of carpal bones
Skipped b. comprise the distal row of carpal bones
c. tarsal bones of the foot
d. bones of the cranium

Explanation: The trapezium, trapezoid, capitate and hamate comprise the distal row of carpal bones of the hand. The scaphoid lunate, triquetrum and pisiform comprise the proximal row of carpals.

114. Where would you locate the obturator foramen?

Skipped a. Pelvis
b. Jaw
c. Skull
d. Spine

Explanation: The obturator foramen is the gap created by the ischium and pubis bones of the pelvis which allows passage for the nerves and blood vessels that supply the leg. The shape of the obturator foramen differ between the sexes with the gap in men being round and in women being oval.

115. How many arches are in a normal human foot?

a. 1
b. 2
Skipped ✓ c. 3
d. 4

Explanation: There are three arches in a normal human foot. These are the medial longitudinal arch, the lateral longitudinal arch and the transverse arch.

116. What is counted to determine the atomic number of an atom?

a. Neutron
Skipped ✓ b. Proton
c. Electron
d. Nucleus

Explanation: Protons located within the nucleus are counted to determine the atomic number of an atom. This is different than the atomic mass which is a count of the total count of neutrons and protons within a nucleus.

117. Oxygen, carbon, hydrogen and _____ make up the four majority elements in the human body.

a. calcium
b. sodium
c. potassium
Skipped ✓ d. nitrogen

Explanation: Elements are pure substances that are composed of a single type of atom. The fourth element missing from this statement is nitrogen, which is a key component of the amino acid chains that comprise proteins. Nitrogen is also found in the DNA and RNA of our gene codes.

118. The plasma membrane is also known as _____.

Skipped ✓ a. phospholipid bilayer
b. peripheral protein
c. cytoplasm
d. branching cells

Explanation: The plasma membrane is made of two layers of fat molecules that contain phosphorus and is also known as the phospholipid bilayer.

119. Which of the following is not found in the nucleus of a cell?

a. Nucleolus
b. Chromatin
c. Chromosomes
Skipped ✓ d. Lysosomes

Explanation: The nucleus comprised of the nucleolus, chromatin and chromosomes is the command center of a cell. Lysosomes act as the cells digestive system.

120. Which best describes mitosis?

Skipped ✓ a. Cell division
b. Cell death
c. Muscle infection
d. Inflammation

Explanation: Mitosis is part process of cellular division in which a cell replicates its chromosomes and nucleus and divides them evenly into an identical cell.

121. Where would stratified transitional epithelium be located?

a. Skin
b. Muscle
Skipped ✓ c. Bladder
d. Tendon

Explanation: Stratified transitional epithelium are multi layered tissue cells that have the ability to expand and contract under stress and are the cells found in the bladder.

122. Which element is needed for muscle contraction?

Skipped ✓ a. Calcium
b. Nitrogen
c. Magnesium
d. Iron

Explanation: Skeletal muscle contraction occurs when an action potential from the brain reaches the neuromuscular junction. It causes a calcium ion influx which starts the process of a muscle contraction.

123. What does a "z-line" refer to?

a. A spinal disorder
Skipped ✓ b. Border of a sarcomere
c. A cardiology report
d. Type of bone fracture

Explanation: A z-line is the dark band that separate sarcomeres and forms the borders where actin molecules within a muscle combine.

124. What is the outside membrane of the myelin sheath called?

a. Astrocyte
b. Oligodendroglia
c. Axons
Skipped ✓ d. Neurilemma

Explanation: The outside layer of the myelin sheath is called the neurilemma.

125. Which of the following surrounds the individual fibers within a nerve?

a. Epineurium
b. Perineurium
Skipped ✓ c. Endoneurium
d. Microglia

Explanation: Endoneurium surrounds the individual fibers within a nerve.

126. What is another term for nerve impulses?

a. Instinct
Skipped ✓ b. Action potentials
c. Interneurons
d. Synapse

Explanation: A nerve impulse is also known as an action potential, which is an electrical current that runs along a nerve pathway that can trigger a response in other cells.

127. What are acetylcholine and catecholamines?

Skipped ✓ a. Neurotransmitters
b. Digestive enzymes
c. Electrolytes
d. Erythrocytes

Explanation: Acetylcholine and catecholamines are neurotransmitters which have many various functions and affects on the human body.

128. The medulla oblongata and pons are part of which section of the brain?

Skipped ✓ a. Brain stem
b. Cerebellum
c. Diencephalon
d. Cerebrum

Explanation: The brain stem which provides the sensory and motor innervations of the face and neck consists of three parts: the medulla oblongata, pons and midbrain.

129. Which body system does the thymus belong to?

a. Digestive
b. Endocrine
Skipped ✓ c. Immune
d. Nervous

Explanation: The thymus is a very special organ of the immune system. It functions to train T-lymphocytes to adapt to pathogens and disorders within the body to maintain homeostasis.

130. Neutrophils, monocytes and macrophages are all under the classification of _____.

a. lymphocytes
Skipped ✓ b. phagocytes
c. proteins
d. neurotransmitters

Explanation: Neutrophils, monocytes and macrophages are all phagocytes, which are cells of the immune system that ingest and destroy foreign cells or other harmful substances via phagocytosis.

131. Albumins, globulins and fibrinogens are the 3 major classes of _____.

a. neuropeptides
b. chromosomes
Skipped ✓ c. plasma proteins
d. lymphocytes

Explanation: Albumins, globulins and fibrinogens are proteins found in the blood plasma. They serve many different functions, including transport of lipids, hormones, vitamins and metals in the circulatory system. They also regulate acellular (single cell) activity and the functioning of the immune system.

132. Neutrophils, basophils and eosinophils are types of _____.

Skipped ✓ a. leukocytes
b. myocytes
c. pathogens
d. enzymes

Explanation: Neutrophils, basophils and eosinophils are the three types of granular leukocytes (white blood cells) of the immune system which consume infectious diseases and foreign materials.

133. Which of the following cells are important to blood clotting?

a. Erythrocytes
b. Leukocytes
c. Phagocytes
Skipped ✓ d. Thrombocytes

Explanation: Thrombocytes or platelets, are essential to blood clotting. Thrombocytes create platelet plugs by releasing prothrombin at an injury site that bonds with calcium to form a clot.

134. Which heart valve is the mitral valve?

a. Tricuspid
Skipped b. Bicuspid
c. Pulmonary semilunar
d. Aortic semilunar

Explanation: The mitral valve is also known as the bicuspid, which controls blood flow between the opening of the left atrium into the left ventricle.

135. What do the terms systole and diastole refer to?

a. Kidney process
b. Breathing cycle
Skipped c. Heart beat
d. Immune function

Explanation: Systole and diastole refer to the contraction (systole) and relaxation (diastole) phase of a heart beat.

136. Which of the following hormones regulates the development of reproductive processes within the body?

Skipped a. FSH
b. ADH
c. Insulin
d. HRT

Explanation: FSH or follicle stimulating hormone, produced by the anterior portion of the pituitary gland regulates the reproductive processes of the body, including development, growth and maturation.

137. Which of the following hormones is responsible for the regulation of metabolism?

Skipped a. Thyroxine
b. FSH
c. Progesterone
d. Adrenaline

Explanation: Thyroxine, produced by the thyroid gland, is a hormone that affects nearly every cell in the body by regulating metabolic processes.

138. Which of the following regulates the development of reproductive processes within the body?

a. HRT
b. ADH

c. Insulin

Skipped ✓ d. FSH

Explanation: FSH or follicle stimulating hormone, produced by the anterior portion of the pituitary gland regulates the reproductive processes of the body, including development, growth and maturation.

139. Which of the following is not part of the small intestine?

a. Duodenum

b. Jejunum

Skipped ✓ c. Sigmoid

d. Ilium

Explanation: The sigmoid colon is part of the large intestine that is closest to the anus.

140. What is another term for kinesthesia?

Skipped ✓ a. Proprioception

b. Pain

c. Mechanoreceptors

d. Tetanus

Explanation: Kinesthesia is another term for proprioception, or the ability of a person to perceive their own movement.

141. Which chemical or element would be found in blood serum?

a. Fibrinogen

b. White blood cells

Skipped ✓ c. Electrolytes

d. Red blood cells

Explanation: Serum is the blood plasma that is separated from white and red blood cells as well as the fibrinogens. Serum contains the antibodies, antigens, electrolytes, hormones and any exogenous substances (drugs, pathogens, etc)

142. Which would lead to a condition of sepsis?

a. Excess iron in the blood

Skipped ✓ b. A bacterial infection

c. Insufficient carbohydrate intake

d. Lowered glucose levels in the blood

Explanation: Sepsis is a serious immunity response and inflammation of the entire body. It is often caused by a pathogenic infection but sometimes the condition can arise from or is complicated by an organ malfunction. Some symptoms are high fever, irregular heart and breathing rate, altered mental state and edema. Pathology

143. What is the technical name for the Adam's Apple?

a. Hyoid bone
Skipped b. Larangeal prominence
c. Esophagus
d. Zygomatic arch

Explanation: The Adams Apple is a protrusion on the anterior portion of males named after the ancient story of Adam eating the fruit from Eve and having a piece become lodged in his throat. This protrusion is the larangeal prominence formed by an angular section of thyroid cartilage. It is present in both men and women. However, it grows in size during puberty in young men.

144. Which of the following valves is between the stomach and the small intestine?

Skipped a. Pyloric
b. Mitral
c. Ileocecal
d. Eustachian

Explanation: The valve between the stomach and the small intestine is the pyloric valve also known as the pylorus or pyloric sphincter.

145. Which bone does the tibialis anterior insert into?

a. Base of the first metacarpal
Skipped b. Medial cuneiform
c. Navicular
d. Calcanius

Explanation: Tibialis anterior muscle inserts into the medial or first cuneiform bone and the first metatarsal of the foot.

146. The suffix -plegia refers to:

a. Light
Skipped b. Paralysis
c. Formation
d. Different parts

Explanation: The suffix -plegia refers to a paralysis and is added to root words to distinguish a paralysis of that particular region or structure. An example is hemiplegia, which describes a paralysis on one half of the body.

147. The prefix nephro- refers to:

a. Nerve
b. Infant
Skipped c. Kidney
d. Brain

Explanation: Nephro and nephr both refer to the kidneys. An example is nephritis, which is an inflammation of the kidneys.

148. The suffix -crine refers to:

Skipped ✓ a. Secretions
b. Inflammation
c. Digestion
d. Enzymes

Explanation: The suffix -crine refers to secretions. Endocrine gland is an example of the suffix -crine, which means an internal gland that secretes.

149. Choose the correct definition of the anatomical term "linea".

a. A passage or canal
Skipped ✓ b. A line or long ridge
c. A hole or opening
d. A meeting point of two or more bones

Explanation: The anatomical term "linea" refers to a line or long ridge, such as the attachment site of the hamstrings along the linea aspera on the posterior aspect of the femur.

150. Choose the correct definition of the anatomical term "foramen".

a. A rounded articular process
b. A shallow cavity or slight depression
Skipped ✓ c. A hole or opening for nerves and other tissues to pass through
d. A narrow projection of the spine

Explanation: The anatomical term "foramen" refers to a hole or opening for nerves or tissues to pass through as in the foramen ovale of the sphenoid bone on the skull which allows several nerves, arteries and veins to pass through.

151. Choose the correct definition of the anatomical term "condyle".

a. A shallow cavity or slight depression
b. The superior region of a long bone
c. A projection or protuberance
Skipped ✓ d. A rounded articular process

Explanation: The anatomical term "condyle" refers to a rounded articular process as in the medial or lateral condyles of the femur which articulate with the condyles of the tibia.

152. Where are the adrenal glands located?

a. Brain cavity of skull
b. Along the anterolateral portion of the neck

Skipped ✓ c. Superior to the kidneys
d. Throughout the body along circulatory tissues

Explanation: The adrenal glands, known for releasing "fight or flight" hormones in response to stressors, are located superiorly to the kidneys.

153. Systole refers to the force needed to contract blood out of the heart.

Skipped ✓ True
False

Explanation: Systole or systolic pressure is the measured amount of force required by the heart to pump or squeeze blood out of its chambers.

154. Choose the medical term given to name the collection of heart muscle cells that regulate the heart beat.

a. Arterioles
b. Bradycardia
Skipped ✓ c. Bundle of His
d. Coronary sinus

Explanation: The collection of specialized heart muscle cells which regulate the heart beat was discovered by the Swiss cardiologist Wilhelm His in 1893 and this given the name, Bundle of His.

155. The smallest blood vessels in the human body are called _____.

a. arterioles
b. veins
c. venules
Skipped ✓ d. capillaries

Explanation: Capillaries are the smallest blood vessels in the body. Arterioles are the connecting vessels between arteries and capillaries. Venules are the connecting vessels between capillaries and veins.

156. What is the function of a bulboid corpuscle?

Skipped ✓ a. Detect changes in temperature
b. Receptor which responds to pressure
c. Contract to stand hairs straight along body
d. Mucous membranes in the skin

Explanation: A bulboid corpuscle is a cutaneous thermo-receptor which detect changes in temperature and relay the message to the CNS.

157. What is known as the "molecular unit of currency"?

a. Actin
Skipped ✓ b. ATP

c. T cells
d. Gamma globulins

Explanation: The "molecular unit of currency" is often used to describe the importance of ATP (adenosine triphosphate) to cellular functions within the body.

158. Which of the following is the only neurotransmitter used by the motor division of the somatic nervous system?

Skipped ✓ a. Acetylcholine
b. Dopamine
c. Serotonin
d. Glutamate

Explanation: Acetylcholine is distinguished from other neurotransmitters due to its ability to transmit signals at the neuromuscular junction between the nervous system and the muscular system.

159. What is the control center of a cell?

a. Cytoplasm
b. Mitochondrion
Skipped ✓ c. Nucleolus
d. Ribosome

Explanation: The nucleolus houses most of a cells genetic material, which dictates the functions of the cell and is this considered the control center.

160. What does the term meiosis relate to?

Skipped ✓ a. Cell division
b. Milk production
c. Muscle deterioration
d. Voluntary contractions

Explanation: Meiosis is a specific type of cellular division which is necessary for sexual reproduction.

161. What does a sulcus refer to?

a. A passage or canal
b. The meeting point where bones are joined together
Skipped ✓ c. A narrow groove
d. A knob like process

Explanation: A sulcus is a general term to describe a narrow groove. There are many places on the body where a sulcus can be found. A few examples are the gluteal sulcus, radial sulcus or the gingival sulcus between the gums and teeth.

162. What does the term olfaction relate to?

Skipped ✓ a. Sense of smell
b. Sense of taste
c. Eyesight
d. Hearing

Explanation: Olfaction is the sense of smell. Special sensory cells in the nasal cavity called olfactory sensors are designed to transmit the sense of smell via the detection of odor molecules.

163. Which is the correct order of anatomical organization in the human body, from the most basic to the more complex?

a. Cell, organ, tissue
Skipped ✓ b. Cell, tissue, organ
c. Tissue, cell, organ
d. Organ, cell, tissue

Explanation: The cell is the basic building block of all living things. Cells are organized into tissues having specialized properties and functions. Tissues are further organized into organs (and organ systems).

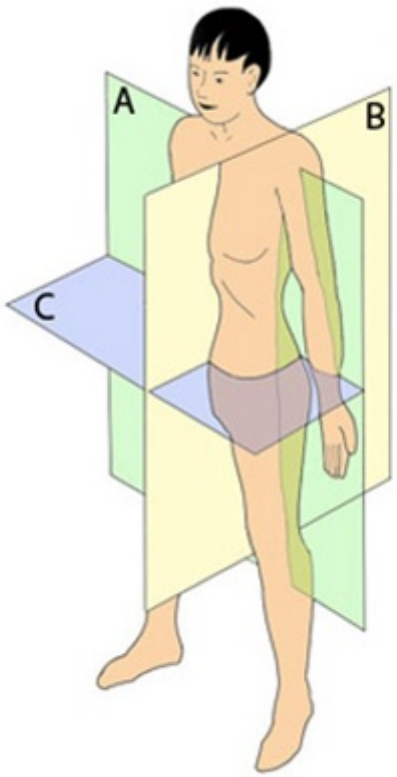
164. Which of the following anatomical directional references is not matched correctly?

a. Medial - toward the midline of the body
Skipped ✓ b. Distal - toward an attached base structure
c. Ventral - toward the front or belly side
d. Dorsal - on the posterior or back side

Explanation: All directional terms use the anatomical position as the standard point of reference. The term "distal" refers to a structure that is located away from a base structure - for example, the hand is distal to the elbow.

165. What type of anatomical section does plane B depict?

Skipped ✓ a. Sagittal
b. Coronal
c. Cross
d. Surgical



Reference : Clinically Oriented Anatomy - Moore

Explanation: Anatomical structures can be sectioned in various planes. The sagittal section divides structures along a vertical (superior to inferior) axis.

166. The main function of the epiglottis is to:

a. Produce sound and vocalization
Skipped ✓ b. Protect the airway during swallowing
c. Deliver oxygen to the lungs
d. Protect the esophagus during eating

Explanation: The epiglottis is a fold of cartilaginous tissue located above the glottis in the pharynx. During normal swallowing the larynx moves upward and the epiglottis folds over the glottis. This prevents substances from entering the respiratory system.

167. A client is eating a snack while waiting for a massage in the waiting area and begins coughing and panicking, pointing to her throat. You ask if you can help, but the client is unable to speak. What has most likely happened, and what should you do?

a. Food is lodged in his esophagus and you should give him water to drink.
b. Food is lodged in his esophagus and you should hit him sharply on the back to dislodge it.
Skipped ✓ c. Food is lodged in his trachea and you should immediately apply an abdominal thrust (Heimlich maneuver) to dislodge it.
d. Food is lodged in his trachea and you should give him water to drink.

Explanation: Foreign objects, including food, can become lodged in the larynx or trachea (windpipe). These can often be expelled by coughing. If the person can speak or make sounds, the airway is open and there is

no emergency. If the person cannot breathe or speak, there is an immediate threat of death by asphyxiation and emergency measures are needed. The Heimlich maneuver is the correct first emergency remedial action to take.

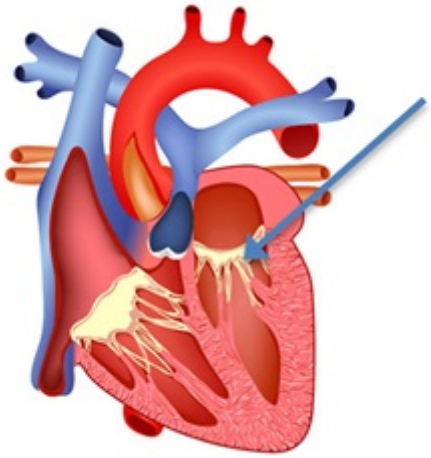
168. The following structures contain deoxygenated blood?

a. Aorta
b. Pulmonary vein
c. Subclavian artery
Skipped ✓ d. Pulmonary artery

Explanation: Arteries carry blood away from the heart. The pulmonary artery carries deoxygenated blood from the right ventricle of the heart toward the lungs. It is the only artery that carries deoxygenated blood.

169. The arrow is pointing to the _____.

Skipped ✓ a. Aortic semilunar valve
b. Mitral valve
c. Pulmonary semilunar valve
d. Tricuspid valve



Explanation: The mitral valve is located between the left atrium and left ventricle of the heart. The tricuspid valve is between the right atrium and right ventricle.

170. It's very cold outside and Bill gets into the spa, turning it up to its maximum temperature (106°F). After several minutes in the water, he faints and would have drowned if a passerby had not saved him. Which best explains what happened?

a. His body could not tolerate the shock going from cold to hot.
b. He suffered a heart attack due to the excess heat.
Skipped ✓ c. He fainted from a lack of oxygenated blood to his brain.
d. He received second-degree burns and went into shock.

Explanation: When the body is exposed to prolonged heat, more blood is shunted to superficial veins in order to lower body temperature. This results in decreased venous return to the heart. The resulting lowered cardiac output causes less oxygenated blood to reach the brain, causing dizziness and fainting.

171. Waves of muscular contractions in the digestive tract are called:

Skipped ✓ a. Peristalsis
b. Dialysis
c. Arrhythmia
d. Hemostasis

Explanation: The digestive tract contains a smooth muscle cell layer (the muscularis externa) having no motor innervation. Pacemaker cells located throughout the digestive tract send signals to the muscularis externa. This causes rhythmic waves of muscular contraction and propels material through the digestive tract.

172. The structure that connects the liver to the gall bladder is the:

a. Hepatic portal vein
Skipped ✓ b. Hepatic duct
c. Bile duct
d. The liver is not connected to the gall bladder

Explanation: The hepatic duct transports bile secreted in the liver into the gall bladder. The gall bladder stores and concentrates bile. The bile duct releases bile from the gall bladder into the small intestine.

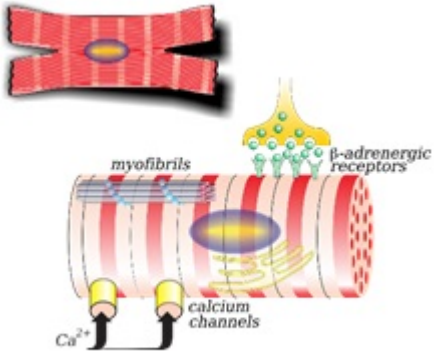
173. The protein that stores oxygen in skeletal muscle cells is:

a. Myosin
b. Hemoglobin
Skipped ✓ c. Myoglobin
d. Troponin

Explanation: Skeletal muscles are reddish because they contain the red pigment myoglobin. Myoglobin is a globular protein similar to hemoglobin, the pigment in red blood cells that transports oxygen. Myoglobin also binds oxygen, making it available to skeletal muscles during muscle contraction.

174. What type of muscle tissue is shown in the image of the neuromuscular junction?

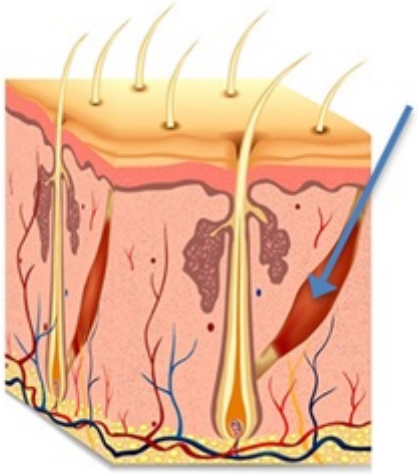
a. Smooth muscle
Skipped ✓ b. Skeletal muscle
c. Cardiac muscle
d. None of the above



Explanation: Skeletal muscle fibers are under neuronal control. Neurons release chemicals (neurotransmitters) that stimulate a cascade of electrical activity resulting in contraction of the muscle fibers. Cardiac muscle fibers are not under direct neuronal control, and smooth muscle fibers are not striated as shown in the image.

175. The arrow in the diagram is pointing to a(an) _____ which causes "goose bumps".

a. Sebaceous gland
b. Hair follicle
Skipped ✓ c. Arrector pili muscle
d. Sweat gland



Explanation: The arrector pili muscle is a small strand of smooth muscle extending from the upper papillary layer of the dermis down to the connective tissue surrounding a hair follicle. It can be stimulated by physical factors such as cold, or emotional states such as fear or rage. Its effect is to pull on the hair follicle and raise the hair, producing "goose bumps".

176. All of the following are effects of aging on the skin EXCEPT:

a. Decrease in number of hair follicles
b. Thinner epidermis layer
c. Fewer melanocytes
Skipped ✓ d. Increased sweat gland activity

Explanation: All aspects of the integumentary system are affected by aging. These changes result in thinning of the skin layers, fewer active hair follicles, leading to thin, sparse hair and sebaceous activity, and reduced blood supply. There is also dryness due to reduced sweat.

177. This is an image of a long bone. The arrow is pointing to _____.

a. Periosteum
b. Compact bone
Skipped ✓ c. Spongy bone
d. Epiphyseal line

Explanation: The arrow points to an area of spongy bone tissue. Spongy bone has numerous open spaces separated and connected by trabeculae. This gives it greater strength and resilience and also decreases the overall weight of the skeleton.

178. A small, rough protuberance on a bone is called a _____.

Skipped ✓ a. Tuberosity
b. Condyle
c. Trochanter
d. Spine

Explanation: A condyle is a large rounded area on a bone, usually at a joint articulation. A trochanter is a large projection from a bone. A spine or spinous process is a flat ridge-like flange protruding from a bone, typically a vertebra.

179. An epiphyseal line on a bone indicates what?

a. The bone has begun a new growth phase.
b. The bone was previously fractured in that location.
c. The bone has stopped growing.
Skipped ✓ d. The bone has reached its adult length.

Explanation: Long bones possess a cartilaginous zone between the diaphysis (midsection) and the epiphysis (end) called the epiphyseal plate. During childhood this allows the bone to continue growing in length. At some point the cartilage ossifies (becomes bone tissue), leaving a line of demarcation, the epiphyseal line. This indicates the bone has reached its adult length and no further growth in length will occur. However, the bone can continue to grow in diameter.

My Tests