Macomb Science Olympiad
Macomb Community College
March 19,2016

Division C : High School

Subjects: Anatomy/Physiology: Skeletal, Muscular, and Integument

Instructor: Dr. Maria E. Cserhalmi

Station 1:

1. The tissue of the heart is called:

   a. Myometrium
   b. Endometrium
   c. Myocardium
   d. Epicardium
   e. endocardium

2. This muscle extends thigh and flexes the leg; found on the medial surface of the posterior thigh; it is wider and underneath the semitendinosus.

a. Tibialis anterior
b. Semimembranosus
c. Vastus medialis
d. Vastus lateralis

Station 2:

3. This muiscle dorsiflexes and inverts foot. It is on the anterior surface of the leg; it runs parallel to the anterior surface of the bone which it covers.

a. Gastrocnemius
b. Soleus
c. Semitendinosus
d. Tibialis anterior

4. This muscle extends leg and stabilizes knee joint. It is underneath the rectus femoris.

a. Vastus lateralis
b. Rectus femoris
c. Vastus intermedius
d. Vastus medialis

Station 3:

5. This muscle plantar flexes foot. It is on the posterior surface of the leg and overshadowed by the gastrocnemius.

   a. Tibialis anterior
   b. Soleus
   c. Sartorius
   d. Biceps femoris

6. When this muscle contracts, it flattens and increases the volume of the thoracic cavity .

   a. Pectoralis major
   b. Teres minor
   c. Diaphragm
   d. Serratus anterior

Station 4:

7. This muscle adducts the thigh; flexes and medially rotates leg.Very thin muscle which lies in a straight line on the medial surface of the thigh.

a. Adductor longus
b. Adductor magnus
c. Gracilis
d. Gluteus maximus

8. This muscle flexes and laterally rotates thigh and flexes leg. It runs obliquely.

a. Rectus femoris
b. Sartorius
c. Vastus lateralis
d. Biceps femoris

Station 5:

9. This muscle extends thigh and flexes leg. It is one of the hamstrings; it is on the lateral surface of the thigh; it is adjacent to tensor fascia latae

a. Sartorius
b. Tibialis anterior
c. Gastrocnemius
d. Biceps femoris

10. This muscle adducts and laterally rotates and flexes thigh.It is found just anterior to the gracilis.

a. Iliopsoas
b. Adductor longus
c. Psoas major
d. Gluteus medius

Station 6:

11. This muscle extends arm; adducts arm; and extends forearm. This is the only muscle on the posterior surface of the arm.

a. Triceps brachii
b. Biceps brachii
c. Brachialis
d. Pronator teres

12. This muscle flexes forearm.

a. Brachioradialis
b. brachialis
c. Pronator teres
d. All of the above are correct

Station 7:

13. This muscle extends,adducts, and medially rotates the arm; it also depresses the shoulder. It is used in swimming, climbing, and rowing.

a. Teres minor
b. Supraspinatus
c. Coracobrachialis
d. Latissimus dorsi

14. This is the deepest muscle of the abdominal wall; these muscles run across the abdomen from each side meeting at the linea alba.

a. Rectus abdominis
b. External oblique
c. Transversus abdominis
d. External oblique

Station 8:

15. These are the so called " six pack " muscle. These run along a straight line upon the abdomen; they can be found on each side of the linea alba.

a. External oblique
b. Transverse abdominis
c. Internal oblique
d. Rectus abdominis

16. The following is a slide of:

a. Osteoclasts resorbing bone
b. Osteoblasts forming bone
c. Osteocyte within lacuna
d. Epiphyseal plate bone formation

Station 9:

17. The following is a slide of:

a. Thick skin
b. Pacinian corpuscle
c. arrector pili muscle
d. Hair follicle

18. The following is a slide of:

a. Smooth muscle
b. Skeletal muscle
c. An osteoblast
d. An osteoclast
e. Two of the above are correct

Station 10:

19. Torso: identify muscle labeled.

a. Pectoralis minor
b. Trapezius
c. Serratus anterior
d. Deltoid

20. Torso: identify muscles labeled.

a. External oblique
b. Internal intercostals
c. External intercostals
d. Diaphragm

Station 11:

21. This muscle is a drape of extremely thin tissue from mandible to clavicle and estremely difficult to dissect. It contributes to the depression of the mandible and lower lip. See " little man" and tape.

a. Sternocleido mastoid
b. Masseter
c. Zygomaticus major
d. Platysma

22. This muscle is very thick and is anterior to the ear; it is the primary chewing muscle; it closes the jaw; it elevates and protracts the mandible. See " little man " and tape.

a. Buccinators
b. Temporalis
c. Masseter
d. Risorius

Station 12:

23. This muscle draws the scalp ventrally; raises the eyebrows and wrinkles skin horizontally. See " little man ".

a. Frontalis
b. Occipitofrontalis
c. Orbicularis oculi
d. Masseter

24. Vertebra: classify

a. Cervical
b. Thoracic
c. Lumbar
d. sacral

Station 13:

25. Vertebra: name region

a. Lamina
b. Pedicle
c. Transverse foramen
d. Spine

26. Identify bone and region:

a. Humerus, greater trochanter
b. Radius,radial tuberosity
c. Femur, greater trochanter
d. Fibula, lateral malleolus

Station 14:

27. Identify bone and region:

a. Clavicle, acromion process
b. Os coxae, supraspinous fossa
c. sternum, glenoid cavity
d. Clavicle, coracoid process

28. Identify bone and region:

a. Radius coronoid process
b. Ulna, head
c. Fibula, olecranon process
d. Ulna, trochlear notch

Station 15:

29. Skeleton: identify bone

a. Tarsals
b. Calcaneus
c. Phalanges
d. Talus

30. Microscope: Identify fine lines throughout field.

a. Central canal
b. Canaliculli
c. Lacuna
d. Circumferential lamella

Station 16:

31. Identify regions of long bone.

a. Spongy or cancellous bone
b. Compact bone
c. Endosteum
d. Periosteum

32. Identify bone and region.

a. Os coxae, greater sciatic notch
b. Pelvis, acetabulum
c. Sacrum, ischial spine
d. Pelvis, anterior superior iliac crest

Station 17:

33. Skeleton: Identify región or bone

a. Angle of Louis
b. Junction of body and manubrium
c. Zyphoid process
d. Body
e. Both " a " and " b " are correct

34. Skull: identify bone of orbit.

a. Greater wing of the sphenoid
b. Ethmoid bone
c. Lacrimal bone
d. Zygomatic bone
e. Lesser wing of the sphenoid

Station 18:

35. Skull: identify bone

a. Frontal bone
b. Parietal bone
c. Greater wing of the sphenoid
d. Occipital bone
e. Temporal bone

36. Skull: identify bone

a. Occipital condyles
b. Zygomatic bone
c. Styloid process
d. Zygomatic process of temporal bone
e. Temporal process of zygoma

Station 19:

37. Identify the structures of the microscopic anatomy of skeletal muscle.

a. Thin filament
b. Transverse tubule
c. Thick filament
d. Sarcoplasmic reticulum

38. Identify the structures of the microscopic anatomy of skeletal muscle.

a. Sarcomere
b. Sarcoplasmic reticulum
c. T- tubule
d. Thin filament

Station 20:

39. The smallest muscle within the human body is located in the middle ear.

a. Stapaedius muscle
b. Arrector pili muscle
c. Superciliary muscle
d. Ciliary muscle

40. The organ of hearing along with the vestibular mechanism are housed in the:

a. Parietal bone
b. Occipital bone
c. Petrous portion of the temporal bone
d. Frontal bone

Station 21:

41. When you cut yourself and you have bleeding, this is necessarily within the :

a. Stratum spinosus
b. Stratun granulosum
c. Stratum basale
d. Dermis

42. The sympathetic division of the autonomic nervous system will, during stress, cold, and fright, pull the hair shaft with the arrector pili muscle:

a. Flat upon the skull
b. Up toward toward the perpendicular position
c. Have no effect whatsoever
d. It is really a parasympathetic input and it relaxes the hair.

Station 22:

43. Muscles work with each other for the same purpose; this is called-------- and examples of such muscles are shown on the skeleton. Identify these muscles and the term used for them.

a. Synergism, brachialis, biceps brachii
b. Synergism, triceps brachii, (long head and lateral head)
c. Synergism, trapezius, anterior serratus
d. Synergism, pectoralis major, choracobrachialis

44. The relationship between the epidermis and the directly underlying dermis is kept physically stable by:

a. Nervous tissue within the dermis
b. Musculature within the hypodermis
c. The extensive fatty tissue within the dermis.
d. The architectural relationship between the rete pegs and dermal papilla which is mechanical in nature.

Station 23:

45. These are genetically unique to each individual upon Earth. These are caused by epidermal ridges which are unique to every person. These are:

a. Factors which determine skin colour
b. Factors which determine finger prints
c. Factors which determine the number of sweat glands
d. Factor which determine the colour and amount of

46. Select which of the following are the most predominant to the least predominant cells of the epidermis.

a. Keratinocytes---→melanocytes--→intraepithelial macrophages---→tactile epithelial cells

b. Melanocytes--→keratinocytes--→intraepithelial macrophages--→tactile epithelial cells

c. Tactile epithelial cells--→intraepithelial cells--→melanocytes---→keratinocytes

d. Intraepithelial cells-→ tactile epithelial cells--→melanocytes-→ keratinocytes

Station 24:

47. Thin skin never has one of the following layers:

a. Stratum corneum
b. Stratum spinosum
c. Stratum lucidum
d. Stratum basale

48. The following lamellated corspucle which has the appearance of an onion cut mid-sagittally and is a deep pressure sensor is called:

a. Merkel disk
b. Pacinian corpuscle
c. Is found in the hypodermis
d. Only " a " and " c " are correct.
e. Only " b " and " c " are correct.

Station 25:

49. The integumentary system includes all of the following except:

a. Sudoriferous glands
b. Adipose tissue
c. Hair and nails
d. Sebaceous glands
e. Osseous tissue

50. The microscopic depiction of the contraction mechanism of skeletal muscle is represented in the drawing to the right. In it, you find all of the following except:

a. Actin thin filament
b. Myosin thick filament
c. Z-lines
d. Contraction
e. relaxation

Grade Master

STUDENTS

USE NO. 2 PENCIL ONLY

- EXAMPLE: ⊂A⊃ ⊂B⊃ ⊂C⊃ ⊂D⊃ ⊂E⊃
- MAKE ***DARK*** MARKS
- ERASE ***COMPLETELY*** TO CHANGE
- MAKE NO STRAY MARKS

INSTRUCTORS

KEY MARKING INSTRUCTIONS

KEY: Must mark this box on Key sheet.

VERIFY: Prints correct response next to incorrect answers. If Verify is not marked, a dash will print next to incorrect answers.

RESCORE: Rescores a previously scored test. Automatically prints correct responses.

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SUBJECT Anatomy & Physiology - Div. C

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