

Science Olympiad
Anatomy and Physiology Test
2020-2021

1. About how much of a human's body weight is skin?
 - a. 10%
 - b. 27%
 - c. 16%
 - d. 23%

2. Where are cardiac muscles found?
 - a. Heart
 - b. Stomach
 - c. Arteries
 - d. Brain

3. Which two myofilaments control muscle movement.
 - a. Myosin, Tropomyosin
 - b. Myosin, Actin
 - c. Troponin, Tropomyosin
 - d. Actin, Troponin

4. What does yellow bone marrow do?
 - a. Create blood cells
 - b. Protect the bone
 - c. It does nothing
 - d. Store fat

5. What is the function of an osteoblast?
 - a. Create bone
 - b. Destroy bone
 - c. Protect bone
 - d. Protect nerves and blood vessels

6. What is the first vertebra in a human spinal column called?
 - a. Axis vertebra
 - b. Lumbar vertebra
 - c. Atlas vertebra

- d. Thoracic vertebra
7. What are fully moveable joints called?
- a. Diarthroses
 - b. Amphiarthroses
 - c. Synarthroses
 - d. Sutures
8. What is the surface area for the average adult human's skin?
- a. About 2 square meters
 - b. About 4 square meters
 - c. About 0.5 square meters
 - d. About 10 square meters
9. Which one of these is in the hypodermis?
- a. Bone matrix
 - b. Adipose tissue
 - c. Troponin
 - d. Nothing
10. What allows the epidermis to be waterproof?
- a. Adipose tissue
 - b. Melanocyte
 - c. Keratinocytes
 - d. Macrophages
11. What is the shape of a Merkel cell?
- a. Circle
 - b. Square
 - c. Not a definite shape
 - d. Oval
12. How many epidermal layers do the soles of your feet, and palms of your hand have?
- a. 3
 - b. 4
 - c. 5
 - d. 6
13. What is the longest muscle in the human body?
- a. Gluteus Maximus
 - b. Bicep brachii
 - c. Sartorius
 - d. Rectus Femoris

14. What is the structural classification of sutures called?
- a. Cartilaginous joints
 - b. Synovial joints
 - c. Fibrous joints
 - d. Diarthroses
15. What color are type 2 muscle fibers?
- a. White
 - b. Red
 - c. Blue
 - d. Black
16. About how long will hair be after one month?
- a. $\frac{1}{2}$ of an inch
 - b. 2 inches
 - c. 1 inches
 - d. $\frac{1}{4}$ of an inch
17. How many kinds of synovial joints are there?
- a. 5
 - b. 6
 - c. 3
 - d. 8
18. How many vertebrae does a human have?
- a. 26
 - b. 30
 - c. 19
 - d. 33
19. If an adult is burned on the front and back of their torso, what percentage of their body is burned?
- a. 40%
 - b. 36%
 - c. 32%
 - d. 28%
- 20.

What kind of fracture is this?

- a. Transverse
- b. Oblique
- c. Compound
- d. Greenstick



Short Answer:

21. What two muscle movements do a person's arms make when doing jumping jacks?

Abduction and Adduction

22. How would this infection be cured?

Antifungal cream



23. What kind of skin cancer is this?

Basal Cell Carcinoma



24. What kind of synovial joint is a person's shoulder?

Ball and Socket

25. How many bones are in the appendicular skeleton?

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26. What is the difference between a sprain and a strain?

Sprains are the tearing or stretching of a ligament. Strains are the tearing or stretching of muscle or tendon.

27. What are 5 functions of the skeletal system?

(May be in any order)

supports the body

facilitates movement

protects internal organs

produces blood cells

stores and releases minerals and fat

28. What is the origin of a muscle?

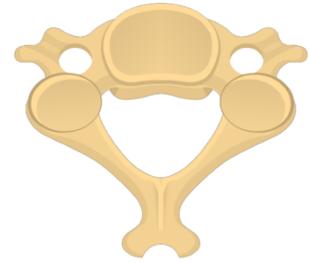
The origin of a muscle is the point that does not move during muscle contraction.

29. Where would red bone marrow be found in a long bone?

Found in epiphyses/ends of the long bone

30. What kind of vertebrae is this?

Cervical



True or False:

31. Tetanus affects the skeletal system.

False

32. Hair can not grow on the palms of people's hands.

True

33. There are 207 bones in the adult human body.

False

34. Cardiac muscles are striated.

True

35. Smooth muscles have one nucleus.

True

36. Scoliosis never needs surgery to be treated.

False

37. Tendon connects bone to muscle.

True

38. The smallest bone in the body is not the stapes.

False

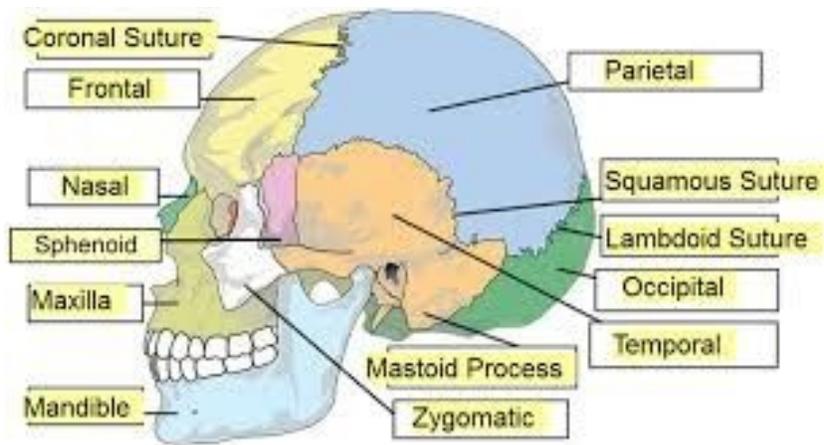
39. Amphiarthroses are synovial joints.

False

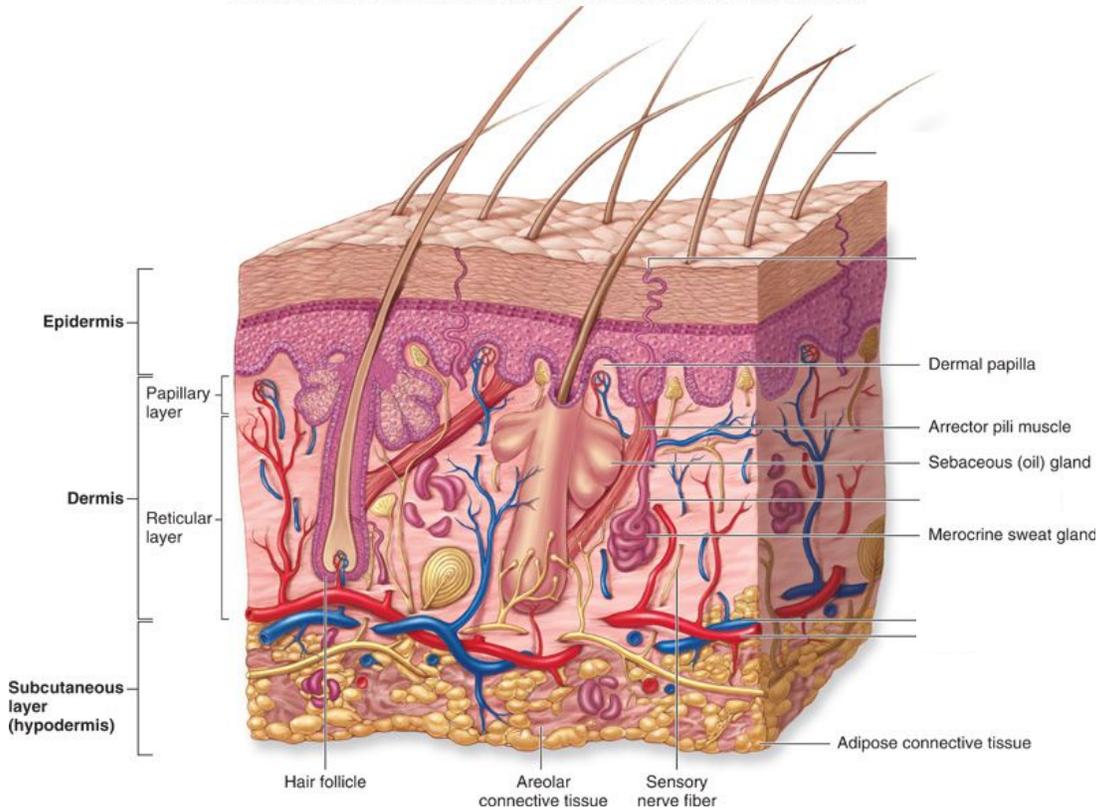
40. Muscle fibers are made up of fascicles.

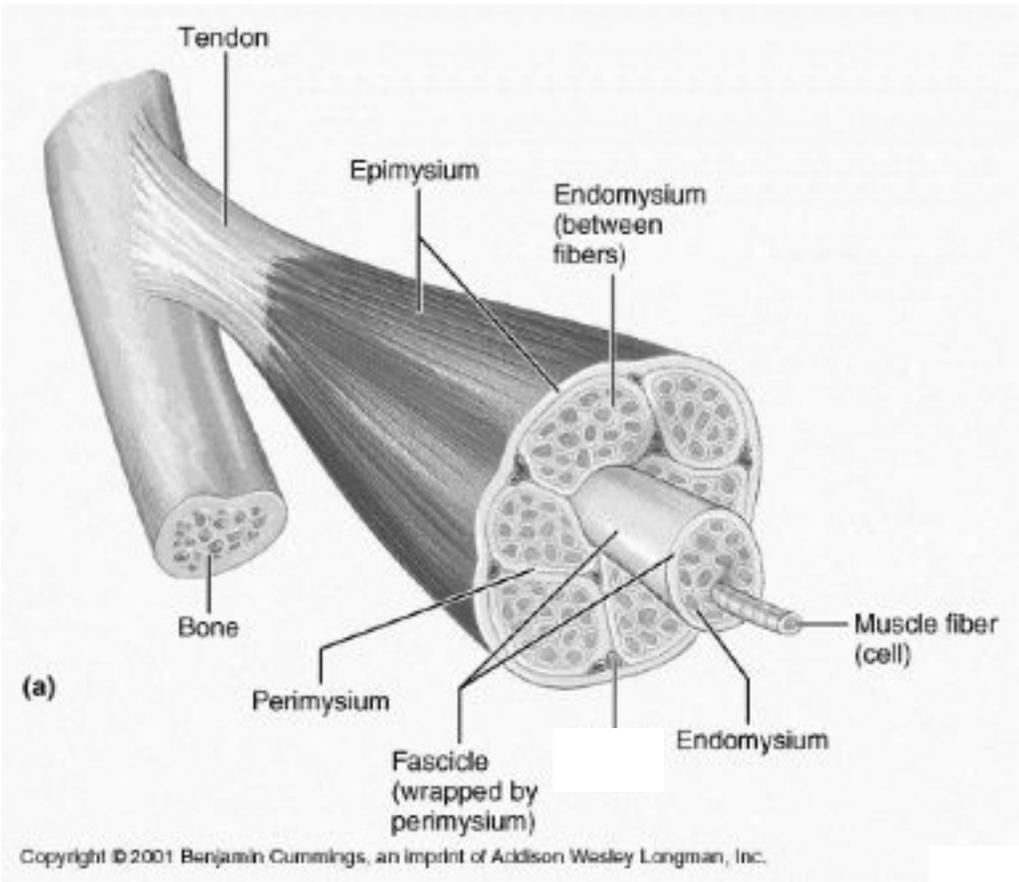
False

Labels:



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