

MY SO PRACTICE TEST

DIVISION B - MIDDLE SCHOOL, GRADES 6-9

PRACTICE TEST

Instructions

- You have 20 minutes to complete this test.
- You may write your answers directly in the test.
- You may use any notes or resources you have created or collected.
- You may use a calculator and scratch paper if necessary.
- Good Luck!

Test Questions

1. Which of the following statements is **FALSE** regarding the reticular layer of the dermis?
 - a. The reticular layer is the deepest layer of the dermis.
 - b. The reticular layer is composed of mostly irregular dense connective tissue.
 - c. The reticular layer is composed of collagen fibers which increase the elasticity of skin.
 - d. The roots of hair are found in the reticular layer.
2. Epidermal cells synthesize:
 - a. Vitamin D₃
 - b. Vitamin B₁₂
 - c. Vitamin A
 - d. All of the above
3. Which of the following is **NOT** a function of the integumentary system?
 - a. Protection
 - b. Excretion
 - c. Circulation
 - d. Nutrient Storage
4. Where do cell divisions occur in the hair follicle?
 - a. Matrix
 - b. Arrector pilus
 - c. Hair bulb
 - d. Shaft

5. A patient has arrived at your emergency room with burns that cover more than 20% of their skin. Which of the following actions should you **NOT** take to ensure your patient has the best chance of recovery?
 - a. Administer antibiotics to prevent infections, as well as cover the burn.
 - b. Assist the patient with excretion since fluid loss has been inhibited.
 - c. Increase the amount of electrolytes provided to the patient through an IV.
 - d. Perform a full-thickness skin graft to cover the burn with skin containing the epidermis and both layers of the dermis.

6. Which of the following membranes forms the inner lining of joint cavities?
 - a. Serous membranes
 - b. Mucous membranes
 - c. Synovial membranes
 - d. Cutaneous membranes

7. Which of the following correctly matches an epidermal cell type to its function?
 - a. Keratinocytes: absorb UV light
 - b. Melanocytes: waterproof the skin
 - c. Langerhans cells: participate in immune responses
 - d. Merkel cells: protect the skin

8. Which of the following does **NOT** normally occur with aging?
 - a. Blood supply to dermis decreases
 - b. Thinner hair is produced from follicles
 - c. Skin becomes drier
 - d. Stem cell activity increases

9. What are the 3 layers of the hair root?
 - a. Bulb, matrix, base
 - b. Medulla, cortex, cuticle
 - c. Bulb, cortex, cuticle
 - d. Medulla, matrix, base

10. What part of the fingernail secures the nail to the fingertip?
 - a. Eponychium
 - b. Hyponychium
 - c. Nail root
 - d. Lunula

11. The ability for a muscle to return to its resting state after contraction is known as?
 - a. Contractility
 - b. Elasticity
 - c. Extensibility
 - d. Excitability

12. About what percentage of the energy released from skeletal muscle contraction is released as heat?
 - a. 10%
 - b. 25%
 - c. 40%
 - d. 60%

13. What structure runs down the middle of the sarcomere, roughly bisecting it in equal halves?
- M line
 - Z disk
 - Thick filament
 - Thin filament
14. Which of the following statements is **FALSE** regarding the sliding filament model?
- The thin filaments are composed primarily of actin
 - ATP binds to myosin heads in the thick filaments
 - The thick filaments are pulled along thin filaments during contraction
 - The myosin head must be bound to actin for contraction to occur
15. The fascia is a layer of tissue that surrounds and protects what structures?
- Muscles
 - Fascicles
 - Muscle fibers
 - Myofibrils
16. If you were to observe smooth muscle tissue under the microscope, what features would you likely see?
- Branched cell morphology
 - Multiple large nuclei
 - Presence of striations
 - Tight packing of cells
17. After an intense workout, muscles must return to resting state by doing all of the following **EXCEPT** for:
- Replenishing oxygen reserves
 - Resynthesizing ATP
 - Replenishing glycogen reserves
 - Resynthesizing lactic acid
18. Muscular dystrophies can be caused by the breakdown of dystrophin proteins that help anchor the thin filaments in a sarcomere. What is the usual culprit for these disorders such as Duchenne's muscular dystrophy?
- Viral infection
 - Bacterial infection
 - Inherited mutation
 - Autoimmune disorder
19. What is the name given to the progressive loss of muscle mass usually attributed to aging?
- Atherosclerosis
 - Sarcopenia
 - Myasthenia gravis
 - Myositis
20. Which of the following muscles is **NOT** found in the legs?
- Trapezius
 - Sartorius
 - Pectineus
 - Soleus

21. Mature bone cells are known as:
- Osteoblasts
 - Osteocytes
 - Osteogenic cells
 - None of the above
22. Which of the following correctly describes the epiphysis of long bones?
- The interior is compact bone, the exterior is spongy bone
 - The entire epiphysis is composed of compact bone
 - The interior is spongy bone, the exterior is compact bone
 - The entire epiphysis is composed of spongy bone
23. Which of the following bones is the most **distal** to the ribs?
- Sternum
 - Humerus
 - Clavicle
 - Tibia
24. How many lumbar vertebrae are in the typical spine?
- 7
 - 12
 - 5
 - 24
25. Which of the following is true regarding cartilage?
- Cartilage heals quickly
 - Cartilage is formed from chondrocytes
 - Cartilage is vascular
 - Cartilage has no nerves
26. What is the most common type of arthritis?
- Rheumatoid arthritis
 - Gouty arthritis
 - Osteoarthritis
 - None of the above
27. Which of the following bone markings does **NOT** attach to muscles, tendons, or ligaments?
- Ramus
 - Tubercle
 - Line
 - Trochanter
28. Which of the following bones is found in the arm?
- Tibia
 - Humerus
 - Hyoid
 - Sacrum

Use the following cartoon depiction of a fracture to answer questions 29-30:



29. What type of fracture is depicted?
- a. Transverse
 - b. Linear
 - c. Comminuted
 - d. None of the above
30. Which of the following statements is true regarding the occurrences of this type of fracture?
- a. This type of fracture is very common in the elderly.
 - b. This type of fracture is very common in children.
 - c. This type of fracture is most common in long bones.
 - d. This type of fracture is most common in porous bones.

ANSWER KEY

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|-----|----------|-----|----------|-----|----------|
| 1. | C | 15. | A | 29. | D |
| 2. | A | 16. | D | 30. | C |
| 3. | C | 17. | D | | |
| 4. | A | 18. | C | | |
| 5. | B | 19. | B | | |
| 6. | C | 20. | A | | |
| 7. | C | 21. | B | | |
| 8. | D | 22. | C | | |
| 9. | B | 23. | D | | |
| 10. | B | 24. | C | | |
| 11. | B | 25. | D | | |
| 12. | D | 26. | C | | |
| 13. | A | 27. | A | | |
| 14. | C | 28. | B | | |



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