A&P Exam 3 Practice Test

1. Mix and match about thirty.

2. Contrast smooth, cardiac, and skeletal muscle. (97)

Type	Striated	Intercalated disks	Neurogenic/ myogenic	Contraction speed	Multi-nucleate?
Skeletal					
Smooth					
Cardiac					

3A. Draw a long bone and label at least six structures. (74 & 75)
(Epiphysis, diaphysis, nutrient artery, periostenum, articular cartilage, spongy bone, epiphyseal plates/lines, compact bone, medullary cavity)

3B. Draw and label the parts of a Haversian system. (76 & 77)
(Central canals, Lamellae, Osteocytes, Canaliculi, Lacunae)

4. Compare and contrast intramembranous ossification with endochondral ossification. (79)

Intramembranous ossification:

- _____
  _____
- _____
  _____
- _____
  _____

Endochondral ossification:

- _____
  _____
- _____
  _____
- _____
  _____

5. Explain bone development in long bones. How does interstitial growth occur and how does appositional growth occur? (80&81)

Interstitial growth:

- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____

Appositional growth:

- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____

6. Define the following and give their functions: (79)

6A. Osteoprogentor cells:

_____

_____

6B. Osteoblasts

_____

_____

6C. Osteoclasts

_____

_____

6D. Osteocytes

_____

_____

7. Explain how bone remodeling occurs. (81)

- _____
  _____
- _____
  _____
- _____
  _____

- _____
  _____
- _____
  _____

8. Explain how bone repair occurs. (82 & 83)

- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____

9. Explain the effects of parathyroid hormone and calcitonin in the regulation of calcium levels and bone formation. (81 & 82)

- **Parathyroid hormone**
  - _____
    _____
  - _____
    _____
  - _____
    _____
  - _____
    _____
  - _____
    _____
- **Calcitonin**
  - _____
    _____

- _____
- _____
- _____

10. Contrast the following types of joint movements: (82&84)

10A. Gliding _____

_____

10B. Flexion _____

_____

10C. Extension _____

_____

10D. Rotation _____

_____

10E. Abduction _____

_____

10F. Adduction _____

_____

10G. Circumduction _____

_____

11. Contrast the following types of joints: (84)

11A. Fibrous _____

_____

11B. Cartilaginous _____

_____

11C. Synovial_____

_____

12. Contrast the following types of joints: (88&89)

12A. Synarthroses _____

_____

12B. Amphiarthroses _____

_____

12C. Diarthroses _____

_____

13. Contrast the following types of Synarthroses joints: (88)

13A. Suture _____

_____

13B. Gomphosis _____

_____

13C. Synchondrosis _____

_____

14. Contrast the following types of Amphiarthroses joints: (88)

14A. Syndesmosis_____

_____

14B Symphysis_____

_____

15. Contrast the following types of Diarthroses: (91-93)

15A. Gliding joints _____

_____

15B. Hinge joints_____

_____

15C. Pivot joints_____

_____

15D. Condyloid joint _____

_____

15E. Saddle joint _____

_____

15F. Ball and socket joint_____

_____

16. Explain the stages of integument repair. (98&99)

- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____

17A. In skeletal muscle what is stored in the sarcoplasmic reticulum? What is the function of the transverse tubules of the sarcolemma? (100 & 103)

- _____
  _____
  _____
  _____
- _____
  _____
  _____
  _____

17B. On a diagram of a sarcomere be able to identify the following: H-zone, M-line, Z-line, A-band, and I-band. (103)

18. Explain what is happening at different points on an action potential diagram for a skeletal muscle cell. How and where are ions moving? Why do ion gates open or close? (104-105)

A.

- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____

B.

- _____
  _____
- _____
  _____
- _____
  _____

C.

- _____
- _____
- _____
- _____
- _____

D.

- _____
- _____
- _____

E.

- _____

19. Using the terms myosin, Actin, Troponin, and Tropomyosin where appropriate answer the following questions: (106-110)

19A. Draw the 4 muscle proteins listed above showing their position when NO calcium is present in the cell cytoplasm (label the muscle proteins and the bonding sites).

19B. Draw the 4 muscle proteins listed above showing their position when calcium is present in the cell cytoplasm. Be sure to clearly show anything that has bonded (label the muscle proteins and the bonding sites).

19C. Draw a diagram and explain how myosin heads move. Be sure to tell what is necessary to allow them to move forward again. (106-111)

19D. Clearly explain why rigor mortis occurs a few hours after death?

- _____
  _____
  _____
  _____
  _____
  _____
  _____
  _____

19E. In smooth muscle where does most of the calcium that causes muscle contraction come from? (117)

_____
_____
_____
_____
_____
_____

19F. Explain in detail how calcium in smooth muscle cells leads to their contraction. (117)

19G. What causes muscle fatigue? (114)

-
-
-

20. Contrast white muscle and red muscle. (112-113)

	Fast/Slow	Myooglobin	Speed	Blood supply	SR Size	Mito Chondria	Diameter	Aerobic?
White								

Red								

21. How are contractions in cardiac muscle different from skeletal muscle contractions? (118)

- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____