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**Integrative Biology 131- Human Anatomy
Examination I - October 7, 1998**

Part I. Choose the correct answer.

1. A muscle used to adduct the arm is the
 - a. brachioradialis
 - b. pectoralis major
 - c. deltoid
 - d. trapezius

2. The facial muscle that wrinkles the forehead is the
 - a. orbicularis oculi
 - b. mentalis
 - c. frontalis
 - d. occipitalis

3. A muscle in a group that performs the desired action is referred to as the
 - a. protagonist
 - b. synergist
 - c. prime mover
 - d. antagonist

4. A muscle which turns the palm upward or anterior is a
 - a. adductor
 - b. abductor
 - c. pronator
 - d. supinator

5. The trapezius is named on the basis of
 - a. size
 - b. location
 - c. shape
 - d. action

6. During muscle contraction
 - a. the belly of the muscle remains unchanged
 - b. the insertion usually moves toward the origin
 - c. the origin usually moves toward the insertion
 - d. both the bands of myosin and actin become reduced in size

7. All of the following are flexors of the knee except the
 - a. biceps femoris
 - b. rectus femoris
 - c. semitendinosus
 - d. semimembranosus

8. Myofilaments are stacked in definite patterns partitioned by Z bands. Such a partition is called
 - a. sarcoplasm
 - b. sarcoplasmic reticulum
 - c. sarcosome
 - d. sarcomere

9. One of the most distinguishing features of cardiac muscle is
 - a. sarcolemma which surround the fiber
 - b. sarcoplasm which fills the fiber
 - c. multinucleated cells
 - d. intercolated discs which facilitate contraction

10. The longest muscle fibers in the body are found in the
 - a. latissimus dorsi
 - b. quadratus lumborum
 - c. gracilis
 - d. sartorius

11. All of the following flex the forearm except the
 - a. triceps brachii
 - b. brachioradialis
 - c. biceps brachii
 - d. brachialis

12. According to the sliding filament theory
 - a. Z lines move away from the A lines
 - b. Z bands move toward each other
 - c. A bands move away from each other
 - d. thick myofilaments move away from each other

13. A movement in which the distal end of the bone moves in a circle while the proximal end remains relatively stable is called
 - a. supination
 - b. rotation
 - c. circumduction
 - d. protraction

14. A cord of dense fibrous connective tissue that attaches skeletal muscle to periosteum is a/an
 - a. aponeurosis
 - b. deep fascia
 - c. ligament
 - d. tendon

15. Fascia refers to
 - a. thin sheets of elastic fibrous, connective tissue
 - b. strong cords of reticular fibers
 - c. rows of fat cells synonymous with fatsia
 - d. thin sheets of collagenous fibrous connective tissue which invests muscles and other organs

16. The inguinal ligament extends from the pubic tubercle to the
 - a. posterior iliac spine
 - b. ischial tuberosity
 - c. greater trochanter
 - d. anterior iliac spine

17. A Pott's fracture involves the lateral bone of the leg which is the
 - a. fibula
 - b. tibia
 - c. tibula
 - d. tarsal

18. The knee joint differs from other synovial joints by having
 - a. hyaline cartilage
 - b. menisci of hyaline cartilage
 - c. synovial membrane
 - d. fibrocartilage menisci

19. Bursae are
 - a. hyaline cartilage spurs
 - b. made of synovial membrane and reduce friction
 - c. elastic cartilage
 - d. found in all joints

20. The following symptoms fit what diseased condition?
inflammation of synovial membrane, accumulation of synovial fluid, pain, tenderness, some immobility...
 - a. slipped disc
 - b. osteoarthritis
 - c. rheumatoid arthritis
 - d. Meyer's arthritis

21. The framework of spongy bone is called
 - a. Haversian system
 - b. Volkmann's canals
 - c. trabeculae
 - d. hyaline cartilage

22. The pacemaker (SA node) of the heart is found in the:
 - a. left atrium
 - b. right auricle
 - c. left ventricle
 - d. right atrium

23. The first heart sound is due to
 - a. opening of AV valves
 - b. closing of semilunar valves
 - c. closing of AV valves
 - d. opening of semilunar valves

24. The AV node is found in the
 - a. interventricular septum
 - b. interatrial septum
 - c. left ventricle
 - d. right auricle

25. The inner lining of the heart wall is called
- pericardium
 - endocardium
 - myocardium
 - endomysium
26. The first branches off the ascending aorta are the
- brachiocephalic arteries
 - common carotids
 - subclavians
 - coronary arteries
27. The vagus nerve (a parasympathetic nerve)
- slows the heart
 - speeds the heart
 - closes the mitral valve
 - opens the semilunar valves
28. Which of the following is not an elastic artery?
- ascending aorta
 - left common carotid
 - left subclavian
 - internal carotid
29. A callus is a
- thickened area of skin
 - meshwork of bone formed in a blood clot during healing of a broken bone
 - a venous sinus between two layers of dura mater
 - a modified capillary
30. Formed elements which initiate clotting are called
- erythrocytes
 - leukocytes
 - monocytes
 - platelets
31. A plasma protein formed in the liver is a
- globulin
 - megakaryocyte
 - polymorphonuclear cell type
 - phagocyte

32. Which of these vessels does not lead into the chamber called an atrium of the heart?
- superior vena cava
 - coronary sinus
 - coronary artery
 - inferior vena cava
33. The most actively moving white blood cells are neutrophils. What is their function?
- form heparin
 - form antibodies
 - form plasma cells
 - phagocytize bacterial or other foreign substances
34. The process of red blood cell formation is called
- hemopoiesis
 - anemia
 - erythropoiesis
 - leukocytosis
35. What is the parent cell of blood platelets?
- megakaryocyte
 - polymorphocyte
 - normoblast
 - none of the above
36. In which region would cells that phagocytize RBC not be found?
- bone marrow
 - spleen
 - liver
 - thymus
37. A reticulocyte is a precursor of a
- RBC
 - WBC
 - platelet
 - basophil
38. What characteristic is not true of a monocyte?
- forms antibodies
 - is phagocytic
 - lives in connective tissue
 - is larger than a lymphocyte

39. What is not a function of an acidophil?
a. increases in allergic reactions
b. phagocytosis
c. produces a histaminase
d. receives an antigen marker in the thymus
40. The percentage of reticulocytes in the blood indicates the rate of production of
a. erthrocytes
b. leukocytes
c. platelets
d. agranular lymphocytes

Part II. Choose the correct answer. True = a False = b

41. The liver forms RBC in the fetus.
42. In endochondral bone formation bone is laid down on top of cartilage.
43. The Haversian system is the structural and functional unit of spongy bone.
44. Parathormone stimulates osteoclasts to lay down bone and thyrocalcitonin destroys the bone.
45. The axial skeleton includes the hyoid, skull, vertebrae and pelvis.
46. The following bones articulate with the maxilla: mandible, lacrimal, palatine, temporal, zygomatic.
47. The gracilis, sartorius, quadriceps femoris and hamstrings all act on both the hip and knee joints.
48. An epiphyseal disc grows throughout life.
49. The clavicle articulates with the acromion and manubrium.
50. THE WORD DOCTOR MEANS TEACHER.