1. Contrast the axial vs. appendicular skeleton.

2. Bone-forming cells are called ______________________ . Bone-destroying cells are called ______________________.

3. Name 3 nutrients that are important to normal bone formation and growth.

4. Label the bones in the diagram below:

5. What are the 5 different regions of the vertebrae and how many vertebrae are in each region?

6. Describe the following types of skeletal system disorders:
   a. Arthritis
   b. Leukemia
   c. Osteoporosis
   d. Scoliosis
   e. Spina bifida

7. Contrast fibrous, cartilaginous, and synovial joints. What is an example of each type of joint?

8. List and describe the 3 types of muscles.
9. A ___________ is a muscle cell.

10. The cell membrane of a muscle cell is called the ____________________.

11. The complex organelle composed of bundles of myofilaments is called a _______________.

12. A _______________ is the contractile unit, composed of actin and myosin myofilaments.

13. What neurotransmitter is released by axon terminals at the neuromuscular junction to stimulate the contraction of a muscle cell?

14. Contrast isometric vs. isotonic contractions.

15. Contrast endurance vs. resistance exercises.

16. Know the location and action of the following muscles:
   - Masseter
   - Deltoid
   - Biceps brachii
   - Triceps brachii
   - External oblique
   - Rectus abdominus
   - Pectoralis major
   - Trapezius
   - Latissimus dorsi
   - Diaphragm
   - Intercostals
   - External oblique
   - Quadriceps
   - Hamstrings
   - Gluteus maximus
   - Gastrocnemius

17. Compare the central nervous system vs. peripheral nervous system.

18. Label the parts of the neuron below.

![Neuron Image]

19. Chemicals called _________________________ are released by the axon terminals of neurons and travel across a gap between neurons called the ____________________.

20. List 5 examples of neurotransmitters.

21. What is the main function of the 4 main lobes of the cerebrum?

22. What is the blood-brain barrier? What substances can/cannot cross this barrier?

23. List the 5 basic components of a reflex arc.
24. Label the parts of the eye.

25. Describe the following nervous system disorders:
   a. Alzheimer’s disease
   b. Meningitis
   c. Multiple sclerosis
   d. Stroke

26. Describe the composition of blood.

27. List the 3 cell types found in blood and describe the major functions of each type.

28. John has Type B- blood. What types of blood can he receive in a transfusion? Who can he donate blood to?

29. Label the diagram of the heart below. Include the following: superior vena cava, inferior vena cava, right atrium, left atrium, right ventricle, left ventricle, pulmonary arteries, pulmonary veins, aorta, tricuspid valve, bicuspid valve, pulmonary valve, aortic valve, septum.

30. List the elements of the intrinsic conduction system and the pathway of impulses through the heart.
31. Label the parts of an electrocardiograph below. What is occurring at each main part?

![Heart Beat Diagram]

32. Compare and contrast arteries, veins, and capillaries.

33. Be able to describe the following circulatory system disorders:
   - Anemia
   - Sickle-cell disease
   - Leukemia
   - Embolus
   - Hemophilia
   - Myocardial infarction (heart attack)
   - Fibrillation
   - Heart murmur
   - Hypertension
   - Atherosclerosis

34. List the structures involved in the respiratory system, starting at the nose/mouth.

35. Explain how the respiratory muscles are involved in breathing.

36. How are oxygen and carbon dioxide transported in blood?

37. Describe the following respiratory system disorders:
   a. Asthma
   b. Bronchitis
   c. COPD
   d. Lung cancer

38. List the pathway of food through the digestive system, starting at the mouth.

39. Explain where these macromolecules are digested:
   - Carbohydrate
   - Proteins
   - Fats

40. Describe the location of the glands and the substances they secrete:
   - Salivary glands
   - Liver
   - Gall bladder
   - Pancreas

41. Describe the following terms or structures:
   - Epiglottis
   - Bolus
   - Peristalsis
   - Chyme
   - Villi/microvilli
   - Appendix

42. Describe the following digestive system disorders:
   a. Gallstones
   b. Gastric ulcer
   c. Cirrhosis
   d. Hepatitis
   e. Appendicitis