1. List the three major functions of blood and state specific examples of each.
2. State what blood is composed of and what is the major portion of the total blood volume.
3. List the formed elements of blood.
4. Describe an immature and a mature erythrocyte.
5. What is the hemoglobin molecule composed of and where are oxygen and carbon dioxide carried on the molecule?
6. Define oxyhemoglobin, deoxyhemoglobin, carbaminohemoglobin.
7. State how the majority of oxygen and carbon dioxide is carried in the blood.
8. Define erythropoiesis and state where it occurs.
9. Describe erythropoiesis and the functions of the hemocytoblast, proerythroblast, erythroblast, normoblast, reticulocyte.
10. State where reticulocytes mature into erythrocytes.
11. Describe the breakdown of old erythrocytes and state where it occurs.
12. State the function of erythropoietin, where it is found, where it is produced, and what increases and decreases its production.
14. List the two major groups of leukocytes and how they are divided.
15. List the three types of granulocytes, the shape of their nucleus, the types of granules they contain in the cytoplasm and their functions.
16. What are the most numerous leukocytes and the largest leukocytes.
17. List the two types of agranulocytes, the shape of their nucleus, and their functions.
18. What are the functions of the T lymphocytes and B lymphocytes?
19. Describe leukopoiesis and state the functions of the hemocytoblast, myeloid stem cell, myeloblast, monoblast, lymphoid stem cell, lymphoblast.
20. Describe platelets and state their function.
21. Describe thrombopoiesis and state how it differs from erythropoiesis and leukopoiesis.
22. What stem cell gives rise to all of the formed elements?
23. Define plasma and state what it is composed of.
24. Define hemostasis and list and describe the three stages involved.
25. State the function of serotonin and adenosine diphosphate (ADP) in hemostasis.
26. List the two pathways for coagulation and state where they occur.
27. What is needed and produced by both pathways and describe the four major stages common to both pathways.
29. State the function of plasminogen in fibrinolysis.
30. Define antigen or agglutinogen, antibody or agglutinin.
31. List the two major blood groups and the agglutinogens and agglutinins found in each blood type.
32. State the blood types that are the universal recipient and the universal donor.
33. Where is the heart located.
34. Define pericardium and list and describe the two layers.
35. State the location of the pericardial cavity, what it contains, and its function.
36. List and state the function of the three layers of the heart wall.
37. Define and describe auricle, atria, ventricle, pectinate muscles, papillary muscles, chordae tendineae, interatrial septum, interventricular septum.
38. List the veins associated with the right and left atrium.
39. List the vessels associated with the right and left ventricles.
40. Define coronary sulcus or atrioventricular groove, anterior and posterior interventricular sulcus.
41. List the two sets of heart valves, where they are located and their functions.
42. Define pulmonary circuit and systemic circuit and trace the pathway of oxygenated and deoxygenated blood in each circuit.
43. State the vessel that supplies blood to the myocardium.
44. List the branches of the right and left coronary arteries and their functions.
45. List the three cardiac veins, their location and functions and what they drain.
46. Define and describe the cardiac cycle.
47. Define systole, diastole, cardiac output, stroke volume, end diastolic volume, end systolic volume.
48. State what causes cardiac output to increase or decrease.
49. Define Frank Starling's Law of the heart.
50. List the components of the intrinsic cardiac conduction or nodal system of the heart, where they are located and their functions.
51. List and state the location and function of the cardiac centers and where nerve fibers from the centers synapse.
52. Define electrocardiogram (ECG) and state what occurs during the P wave, QRS complex, and T wave.