

PRETEST 2TTO UNIT 1 THE CIRCULATORY SYSTEM

- 1.** Arteries and veins each have their own function.
 - a. List four differences between arteries and veins
 - b. Explain how arteries can help to keep the blood flowing in the veins.
 - c. Explain why an embolus from a leg vein never gets stuck in another blood vessel than the arteries of the lungs.

- 2.** Capillaries are the smallest blood vessels. Explain exactly how the exchange of substances goes in the capillary network in the tissues.

- 3.** The heart is the all important centre of our circulation system.
 - a. Which parts of the heart carry deoxygenated blood?
 - b. Where does this blood come from? Also name the blood vessels that carry it to the heart.
 - c. Where does this blood go to?
 - d. How can you identify these heart parts when you have a dead heart in front of you (to dissect it)?

- 4.** In rest your heart pumps about 75 times per minute, so the cardiac cycle will take about 0,8s.
 - a. Name the three parts of the cardiac cycle.
 - b. In which of these will the heart valves close?

- 5.** Each ml of blood contains \pm five million red blood cells. To 600 red blood cells we have 50 platelets and 1 white blood cell. The rest is plasma.
 - a. What is the function of the platelet?
 - b. Red blood cells have no nucleus, how does this feature help a red blood cell to carry out its function effectively?
 - c. List five substances that are carried in the plasma.

- 6.** Heart and circulation can suffer from several problems.
 - a. Explain cause and effect of a heart attack.
 - b. Explain why an embolus always gets stuck in the arteries of the lungs.

- 7.** Our body can defend itself against harmful micro-organisms.
 - a. Which ways to defend ourselves do we have except our lymphocytes?
 - b. You can get antibodies in a passive, natural way. Explain when this happens and how long this kind of immunity lasts.

- 8.** You can become immune against a disease by vaccination. This method of protection is called artificial active immunity.
 - a. What's injected into your blood when you get vaccinated?
 - b. Explain why lymphocytes need to have DNA to produce antibodies.
 - c. Explain the function of the so called memory cells.

- 9.** If you need a blood transfusion it's important to know your blood group.
 - a. Suppose you have you've got A+. Which antibodies do you have?
 - b. Could you also have anti-Rhesus? Explain your answer.