

PRETEST 2TTO UNIT 1 THE CIRCULATORY SYSTEM – ANSWERS

1a. Arteries: from heart to organs, high pressure, no valves, walls thick, muscular and strong / veins: from organs to heart, low pressure, valves, walls less thick and not muscular

b. Arteries running next to veins empty the compartments of the veins (between the valves) by their pulse

c. The embolus goes into larger vein > RA > RV > lung arteries

2. In the start of the network the blood pressure is high enough to form tissue fluid (pressed through the very thin walls) - exchange takes place with the cells. At the end tissue fluid is sucked up into the blood again.

3a. RA and RV

b. Comes from all organs via vena cava superior and inferior

c. To the lungs

d. Right half has thinner walls which you can feel

4. In rest your heart pumps about 75 times per minute, so the cardiac cycle will take about 0,8s.

a. Contraction atria, contraction ventricles, diastole

b. Nr 2

5a. Start the clotting of blood / close off tiny wounds by sticking together

b. More space for the hemoglobin which carries the oxygen

c. Water, hormones, proteins, glucose, amino-acids, urea, ...

6a. Cause: narrowing of coronary arteries (cholesterol or blood clot or ...) / effect: no oxygen to a part of the heart > heart can stop beating > heart tissue dies and is replaced by connective tissue

b. The embolus goes into larger vein > RA > RV > lung arteries

7a. Skin, stomach acid, lysozyme (tears and nose) and hygiene

b. From your mother at birth (through small holes in placenta) and via mother milk

8a. Dead or weak strains of micro-organisms or toxins

b. The DNA is adapted ('gene technology') to form special recipes to produce antibodies.

c. Memory cells are the specialised lymphocytes (that can produce specific antibodies) that remain in the blood after the fighting of the disease - their number will slowly decrease over time. They are called memory cells because they carry the recipe for the antibodies.

9a. Only anti-B.

b. No: if you've got the Rh antigen you won't ever produce anti-Rh.