1. Name two tissues that are present in the walls of arteries and veins and give a function of each of these tissues.

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1. Veins contain valves whereas arteries do not. What is the function of the valves?

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1. What is the average resting rate of the human heart in beats per minute?

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1. State one factor that decreases heart rate and one factor that increases it.

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1. To where does the pulmonary artery carry blood?

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1. What is the function of the bicuspid valve?

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1. Name the artery that supplies the heart muscle with blood.

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1. Name the liquid part of blood.

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1. Name two substances that are dissolved in the liquid part of blood.

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1. State one function of the liquid part of blood.

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1. Blood contains red cells and white cells. State one function for each of these.

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1. Name two common blood-grouping systems.

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1. Which chamber of the heart has the greatest amount of muscle in its wall?

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1. Describe how you dissected a mammalian heart in order to investigate the internal structure of atria and ventricles.

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1. State the procedure that you followed to expose a semilunar valve.

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1. What is the function of a semilunar valve?

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1. Where in your dissection did you find the origin of the coronary artery?

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1. The hepatic portal vein carries blood from the alimentary canal to the …

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1. What is the average pulse rate at rest?

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1. State a possible effect of smoking on the pulse resting rate.

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1. How did you measure the pulse resting rate?

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1. Describe how you investigated the effect of exercise on the pulse rate.

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1. Name the major blood vessels that carry blood 1. from the heart to the lungs 2. from the lungs to the heart.

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1. Valves are present in veins. What is their function?

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1. Why are valves not needed in arteries?

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1. Which has the bigger lumen (cavity), an artery or a vein?

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1. The wall of capillaries is only one cell thick. How is this related to their function?

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1. How does a portal vein differ from other veins?

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1. Name the following blood vessels: 1. the vessels that carry blood from the aorta to the kidneys. 2. the vessels that supply the heart’s muscle with blood.

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1. State the precise location of the liver in the human body

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1. State a precise location in the human body at which red blood cells are made.

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1. Name the chamber of the heart that receives blood back from the lungs.

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1. Name the blood vessels that bring this blood back from the lungs.

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1. Answer the following in relation to the dissection of a heart. (i) What instrument did you use for the dissection? (ii) Describe how you carried out the dissection.

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1. Describe the structure of the lymphatic system.

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1. Give an account of three functions of the lymphatic system.

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1. Name the blood vessel that returns blood to the heart from the lungs.

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1. Is the blood in the Aorta oxygenated or deoxygenated?

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1. Give one reason why the wall of the left ventricle is thicker than the wall of the right ventricle.

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1. What is the role of the bicuspid valve?

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1. At the start of the investigation of the effect of exercise on the pulse rate of a human you asked the person who was about to do the exercise to sit down for a few minutes. Explain the purpose of this.

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1. How did you measure the pulse?

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1. Describe how you conducted the investigation of the effect of exercise on the pulse rate after the period of rest.

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1. State the results of your investigation of the effect of exercise on the pulse rate.

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1. What is blood plasma? Give a role for blood plasma.

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1. Name two types of cell found in the blood and give a function for each of them.

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1. The ABO blood group system has four blood groups. What are these four groups?

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1. Suggest a reason why it is important to know a person’s blood group.

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1. The human circulatory system has two circuits. (i) Give the name of each of these circuits (ii) Which of these circuits involves the pumping of blood by the left ventricle?

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1. Write a short note on each of the following: 1. Pulse 2. Blood pressure.

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1. Comment on the effect of each of the following on the circulatory system: 1. Diet 2. Exercise.

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1. Name the liquid part of blood.

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1. Give two components of plasma.

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1. Give the function of (i) Red blood cells (ii) White blood cells (iii) Platelets.

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1. Name the blood vessel referred to in each of the following cases: (i) The vein connected to the lungs (ii) The artery connected to the kidneys (iii) The vein that joins the intestine to the liver.

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1. Give the precise location of the heart in the human body.

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1. What structure(s) protects the heart?

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1. Name the upper chambers of the heart.

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1. Name the valve between the upper and lower chambers on the left-hand side.

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1. What is the average resting human heart rate?

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1. Give two factors which cause an increase in heart rate.

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1. Name the blood vessels that bring oxygen to the heart muscle.

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1. Explain why the walls of the lower chambers of the heart are thicker than the walls of the upper chambers.

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1. Name the cavity of the body in which the heart and lungs are located.

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1. State one way in which heart muscle differs from other muscles in the body.

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1. Describe the steps that you followed in order to identify and display the inner structures of the heart. Use suitably labelled diagrams if necessary.

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1. What did you do in order to expose a semi-lunar valve?

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1. In the course of your practical studies you found that heart rate and breathing rate increase with exercise. Explain why this is the case.

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1. Name the liquid part of the blood.

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1. Different lifestyle factors have an effect on the health of our circulatory system. Name any two of these factors.

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1. Name the blood vessel that brings blood from the heart to the body.

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1. Why is the wall of the right ventricle thicker than the wall of the left ventricle?

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1. Name the arteries that supply the heart wall with blood.

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1. What is the role of valves in the heart?

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1. The lymphatic system is another series of vessels carrying fluid in the body. Give any two functions of the lymphatic system.

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1. How did you expose the semi-lunar valves when dissecting the sheep’s or ox’s heart?

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1. Blood is made up of plasma and blood cells. What is plasma?

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1. What is the function of white blood cells?

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1. Where in the body are white blood cells produced?

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1. Some people may have the blood group B Positive (B+).What factor is present in their blood that makes it positive?

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1. The heart pumps blood around the body. 1. Name the structure in the heart that controls the heartbeat. 2. Where is this structure located in the heart?

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1. What causes the sound of a heartbeat?

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1. Name the blood vessels that supply the heart cells with blood.

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1. Mention two ways to maintain a healthy heart.

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1. If a transverse section of an arteriole were viewed under the microscope state one way in which it would differ from a transverse section through a venule.

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1. Name a major blood vessel that returns blood in veins to the heart.

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1. When dissecting a mammalian heart where, precisely, did you locate the tricuspid valve?

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1. Briefly describe how you carried out the dissection to expose the tricuspid valve.

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1. Where did you find the semilunar valves during the dissection of the heart?

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1. When you investigated the effect of exercise on the human pulse rate or breathing rate what did you first establish?

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1. How did you measure pulse rate or breathing rate?

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1. Give two functions of the lymphatic system.

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1. Give one way in which lymph differs from blood.

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1. What is the purpose of the valves in the heart?

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1. What structure separates the right side of the heart from the left side?

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1. How did you distinguish between the left side and the right side of the heart when doing the dissection?

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1. What was the main instrument that you used for the actual dissection of a heart?

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1. Describe how you carried out the heart dissection.

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1. Name the valves found at the base of both the aorta and the pulmonary artery.

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1. Carbon dioxide levels are usually higher in venous blood than in arterial blood. Name a blood vessel which is an exception to this. Give a reason for the exception.

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1. Heart disease is a major problem in Ireland. State two ways to keep your heart healthy.

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1. Why is the muscle of the left side of the heart thicker than the muscle of the right side?

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1. To which organs does the pulmonary artery carry blood?

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1. Is the blood in the Aorta oxygenated or deoxygenated?

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1. Name the arteries that supply the muscle in the heart wall with blood.

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1. The pacemaker controls heartbeat. In which chamber of the heart is the pacemaker located?

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1. What is the average number of heartbeats per minute in a resting adult?

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1. What causes the sound of the heartbeat?

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