G11 Biology: Class 13 Homework

1. What are the functions of the circulatory system? **[5 marks]**

2. Explain the difference between the pulmonary circuit and the systemic circuit. What structural feature of the heart makes a two-circuit system possible? **[3 marks]**

3. How are erythrocytes different from other cells of the body? **[3 marks]**

4. Emergency vehicle may carry O-negative blood for use at the scene of an accident. Explain why this is a common practice. **[2 marks]**

5. How does gravity affect the circulation of blood? What structures in the blood vessels are designed to counteract the effect of gravity? **[2 marks]**
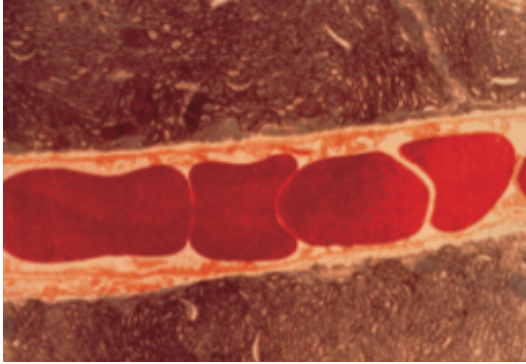
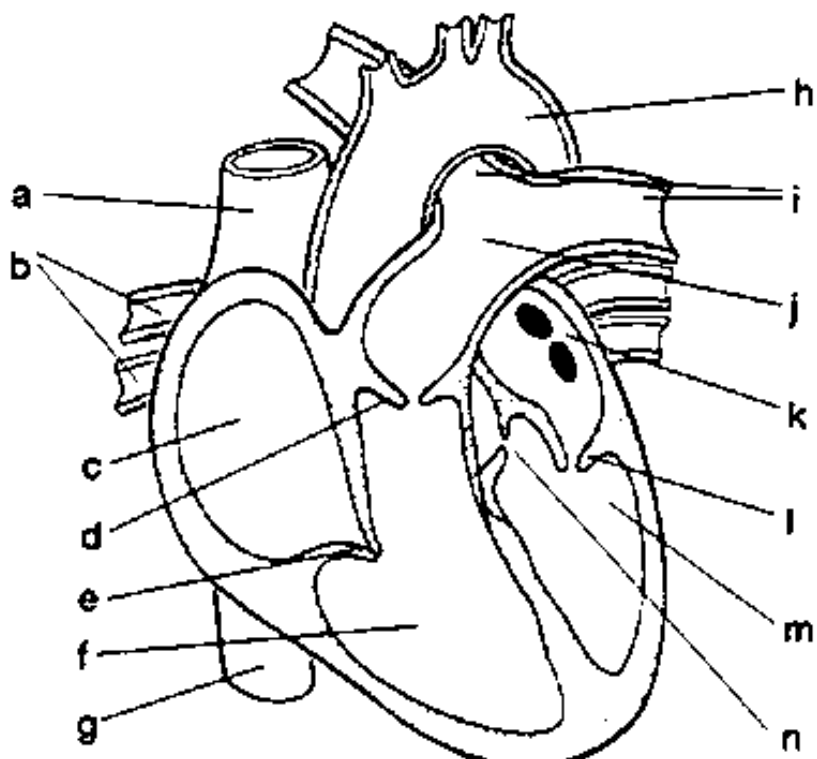6. What type of blood vessel is shown in the figure below? Explain your answer. **[2 marks]**

7. Why is it advantageous for the rate of blood flow to decrease in the capillary networks? **[2 marks]**

8. Nicotine is a drug that acts as a vasoconstrictor. Would a smoker likely have high blood pressure or low blood pressure? Explain why. **[2 marks]**

9. Suggest two possible effects if the spleen were to be removed. **[2 marks]**

10. Explain why there is a difference in the thickness of the walls of the atria and the walls of the ventricles. **[2 marks]**

11. Label the following diagram. **[14 marks]**

A	
B	
C	
D	
E	
F	
G	
H	
I	
J	
K	
L	
M	
N	

12. What is the purpose of the Purkinje fibres in the heart? **[2 marks]**

13. How does cholesterol contribute to coronary artery disease? Why is LDL cholesterol referred to as bad cholesterol and HDL cholesterol as good cholesterol? **[3 marks]**

14. Compare and contrast CT and PET scans. **[3 marks]**

15. Arrange the following blood vessels in order form those vessels with greatest pressure to those with the least: venules, arteries, veins, arterioles, capillaries. **[5 marks]**

16. Explain what causes the Lub-Dub sound from a heartbeat. **[2 marks]**

17. The doctor tells you that your blood pressure is consistently 140/90. What does this mean and what lifestyle changes will you need to make? **[4 marks]**