

B4 - heart	Answer
1. 1.What is the role of the heart and what is it made from?	It pumps blood around the body and is made from muscle
2. What is the role of the circulatory system?	To transport substances around the body
3. What are the four main chambers of the heart?	Left and right atria, left and right ventricles
4. How does blood enter and leave the heart?	Enters into the atria, they contract and force blood to the ventricles, they contract and force blood out of the heart
5. How is the heart designed so that blood flows in the right direction?	It contains valves
6. What is the role of arteries and veins?	Blood flows from the heart to the body via arteries, blood flows into the heart via veins (Arteries – Away, veINs – IN)
7. Why is there a double circulatory system?	One to the lungs for gas exchange and one to the rest of the body to deliver and collect substances
8. To where does the left side of the heart pump blood?	To the body, via the aorta
9. To where does the right side of the heart pump?	To the lungs, via the pulmonary artery
10. Which blood vessel transports oxygenated blood from the lungs into the heart?	Pulmonary vein
11. Which vein brings blood into the heart from all around the body?	Vena cava
12. What are special features of arteries ?	Arteries have thick walls containing muscle and elastic fibres. They have small lumen. The blood flows at high pressure.
13. What are the special features of veins?	Veins have wide lumen and valves to stop blood flowing in the wrong direction. The blood is at low pressure.
14. Why are stents used?	If arteries become narrow due to a build up of fatty material in coronary heart disease, stents keep them open
15. Why may some people take statins?	They reduce blood cholesterol levels.
16. What are the vessels called that travel through organs and allow substances to move in and out?	Capillaries – they have very thin walls
17. What could be done to help a patient with a faulty heart valve?	It could be replaced by a biological or mechanical replacement.
18. When might an artificial heart be used?	During a transplant, to help keep the patient alive.
19. Why may some people object to heart surgery?	Some people with religious views may not think it is right to use human or animal tissue to replace faulty valves.
20. What is the role of plasma?	It is the 'straw' coloured liquid that carries proteins and other chemicals around the body, dissolved in it.
21. How are red blood cells adapted to their function?	They have no nucleus to carry as much haemoglobin as possible to bind to oxygen and transport it from the lungs to the tissues.
22. What is the role of white blood cells?	To protect the body against infection
23. What is the role of platelets?	They are fragments of cells that help clots to form at a cut.

