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Revision

The heart

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1 Explain how a heart beat is initiated and coordinated. (6 marks)

2 The table shows the pressures in the left atrium, left ventricle and aorta during a cardiac cycle.

Stage	Pressure/kPa		
	Left atrium	Left ventricle	Aorta
1	0.5	0.4	10.6
2	1.2	0.7	10.6
3	0.3	6.7	10.6
4	0.4	17.3	16.0
5	0.8	8.0	12.0

Give the number of one stage where:

(a) blood flows into the aorta

(b) the valve between the atrium and the ventricle is open (2 marks)

3 (a) Use your knowledge of pressure to explain why blood flows from the left atrium to the right atrium. (2 marks)

(b) The blood in the right atrium of a person with a hole in the heart is different in its oxygen concentration from the blood in the right atrium of a healthy person.

(i) In what way is it different? (1 mark)

(ii) Explain what causes this difference. (2 marks)

(c) The blood pressure in the pulmonary arteries of a person with a hole in the heart is different from that in the pulmonary arteries of a healthy person.

(i) In what way is it different? (1 mark)

(ii) Explain what causes this difference. (2 marks)