

9. Transport in animals

9.2 Heart

Paper 1 and 2

Question Paper

Paper 1

Questions are applicable for both core and extended candidates

- 1 What are methods for monitoring the activity of the heart?

	ECG	measuring pulse rate	listening to sounds of valves closing
A	✓	✗	✗
B	✗	✓	✓
C	✓	✗	✓
D	✓	✓	✓

key

✓ = yes

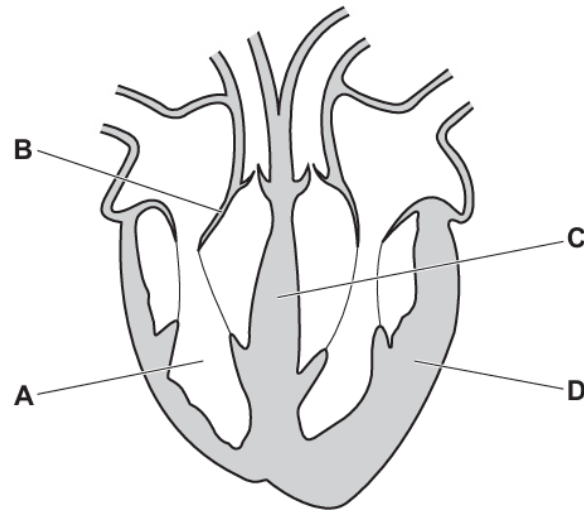
✗ = no

- 2 What ensures the one-way flow of blood in the human circulatory system?

- A** capillaries
- B** muscles
- C** valves
- D** ventricles

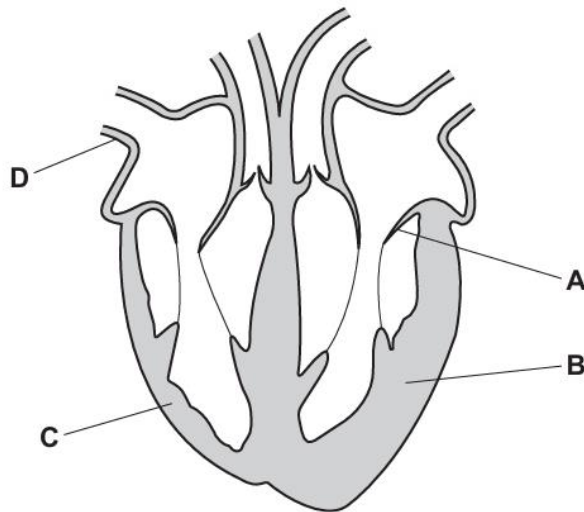
- 3 The diagram shows a section through the heart.

Which part is the septum?



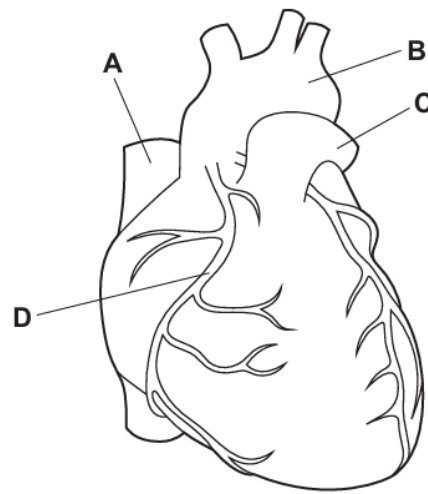
- 4 The diagram shows the human heart.

Which label shows the left ventricle?

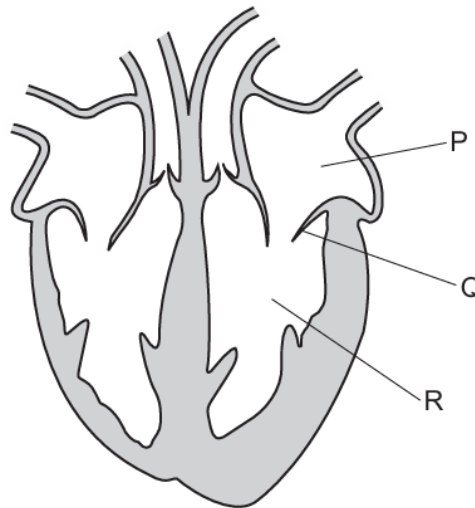


- 5 The diagram shows the outside of a human heart.

Which structure is a coronary artery?



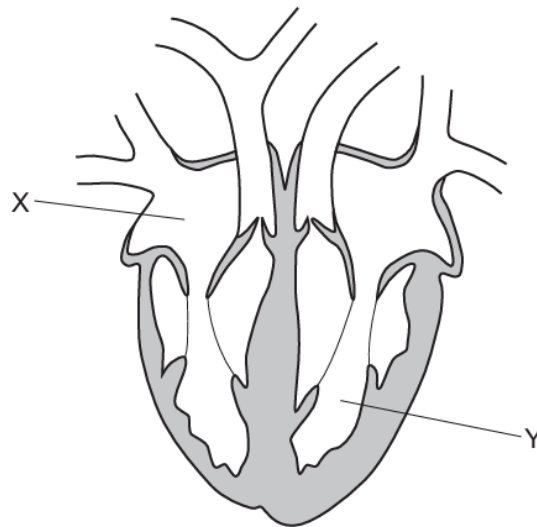
- 6 The diagram shows a cross-section through the heart of a mammal.



Which row correctly identifies P, Q and R?

	P	Q	R
A	valve	right atrium	right ventricle
B	left atrium	valve	left ventricle
C	left ventricle	left atrium	valve
D	right atrium	valve	right ventricle

- 7 How does blood enter the heart?
- A through arteries into the atria
 - B through arteries into the ventricles
 - C through veins into the atria
 - D through veins into the ventricles
- 8 Which blood vessel carries blood to the muscle of the heart?
- A coronary artery
 - B pulmonary artery
 - C renal vein
 - D vena cava
- 9 The diagram shows a vertical section through a human heart.



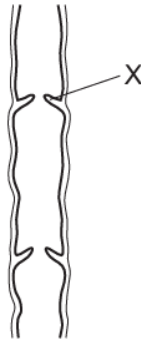
What are X and Y?

	X	Y
A	left atrium	right ventricle
B	left ventricle	right atrium
C	right atrium	left ventricle
D	right ventricle	left atrium

10 Which factor increases the risk of developing coronary heart disease?

- A low fat diet
- B regular exercise
- C relaxation
- D smoking

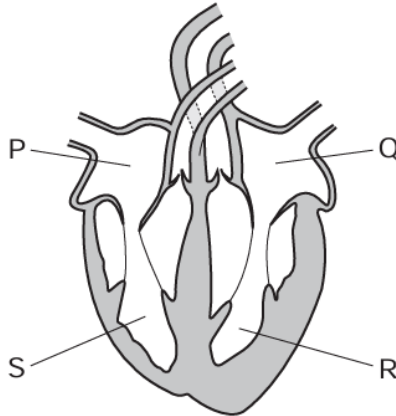
11 The diagram shows a section of a human vein.



What is the function of the part labelled X?

- A to make sure the blood flows to the heart
- B to make sure the blood flows to the kidneys
- C to make sure the blood flows to the brain
- D to make sure the blood flows to the lungs

12 The diagram shows the human heart.



In which order does blood pass through the chambers during a complete circuit of the body after it returns from the lungs?

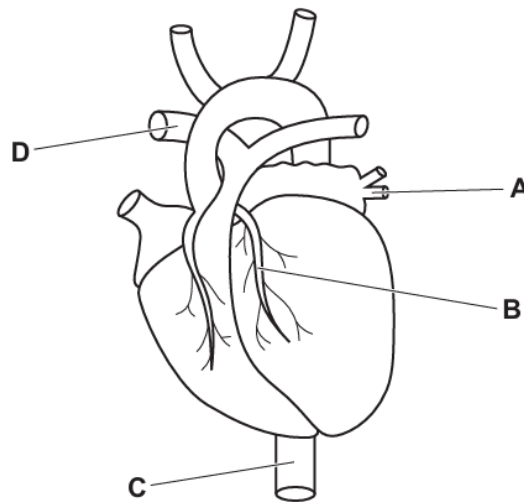
- A** $Q \rightarrow R \rightarrow S \rightarrow P$
- B** $Q \rightarrow R \rightarrow P \rightarrow S$
- C** $P \rightarrow S \rightarrow Q \rightarrow R$
- D** $P \rightarrow S \rightarrow R \rightarrow Q$

Paper 2

Questions are applicable for both core and extended candidates unless indicated in the question

- 13 The diagram shows the external structure of the human heart.

Which part is blocked in coronary heart disease?



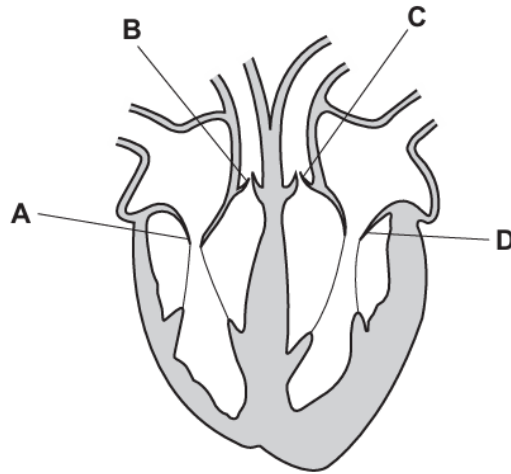
- 14 Which factors increase the risk of developing coronary heart disease?

- 1 increased age
- 2 regular exercise
- 3 smoking
- 4 stress

A 1, 2 and 3 **B** 1, 2 and 4 **C** 1, 3 and 4 **D** 2, 3 and 4

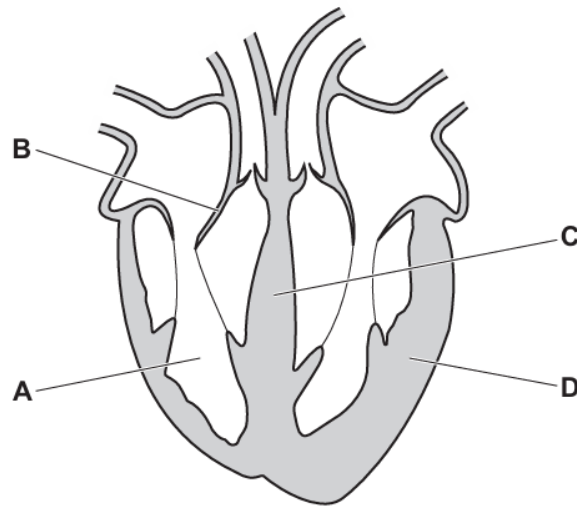
- 15 The diagram shows a section through the human heart.

Which valve is the right atrioventricular valve? **(extended only)**



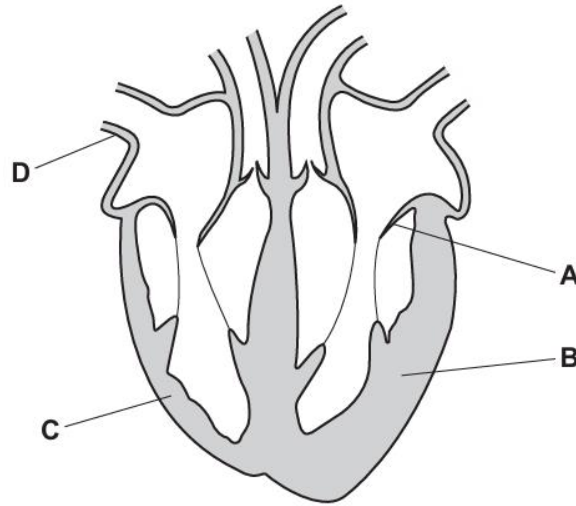
- 16 The diagram shows a section through the heart.

Which part is the septum?



- 17 The diagram shows the human heart.

Which label shows the left ventricle?



- 18 What is the function of the septum in the heart? **(extended only)**

- A to contract in order to pump blood to the body
- B to prevent back flow of blood when the ventricles contract
- C to prevent oxygenated and deoxygenated blood mixing
- D to provide the heart muscle itself with oxygenated blood

- 19 How does blood enter the heart?

- A through arteries into the atria
- B through arteries into the ventricles
- C through veins into the atria
- D through veins into the ventricles