

# 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?

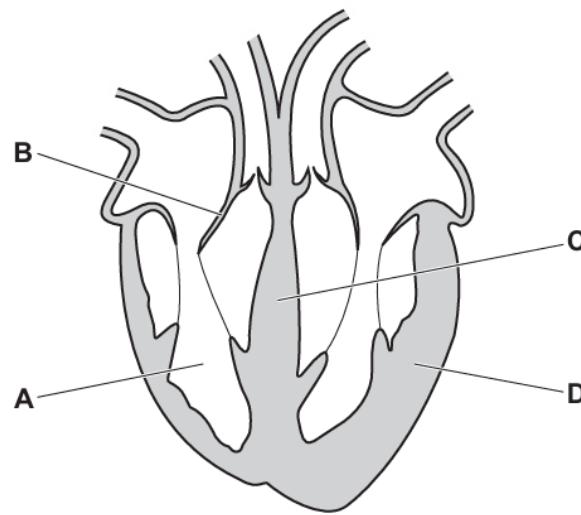
	ECG	measuring pulse rate	listening to sounds of valves closing	
<b>A</b>	✓	✗	✗	key
<b>B</b>	✗	✓	✓	✓ = yes
<b>C</b>	✓	✗	✓	✗ = no
<b>D</b>	✓	✓	✓	

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

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

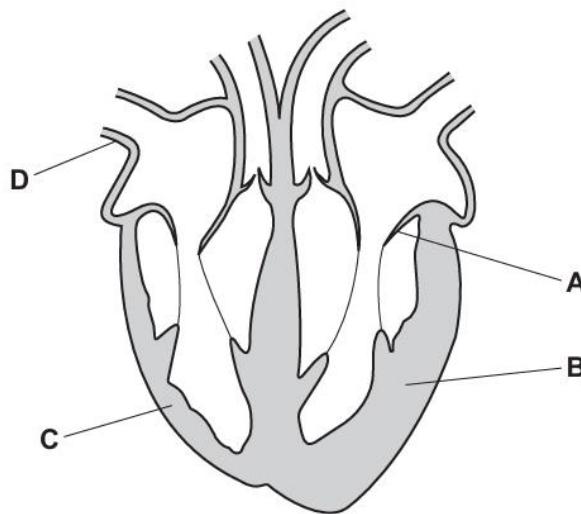
3 The diagram shows a section through the heart.

Which part is the septum?



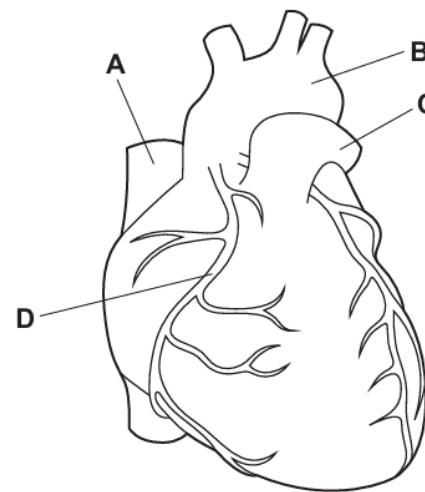
4 The diagram shows the human heart.

Which label shows the left ventricle?

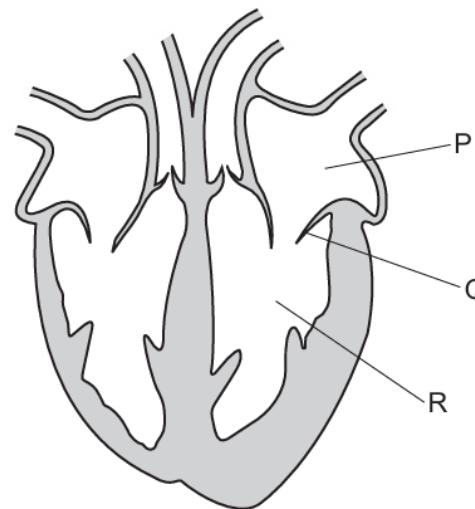


5 The diagram shows the outside of a human heart.

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
<b>A</b>	valve	right atrium	right ventricle
<b>B</b>	left atrium	valve	left ventricle
<b>C</b>	left ventricle	left atrium	valve
<b>D</b>	right atrium	valve	right ventricle

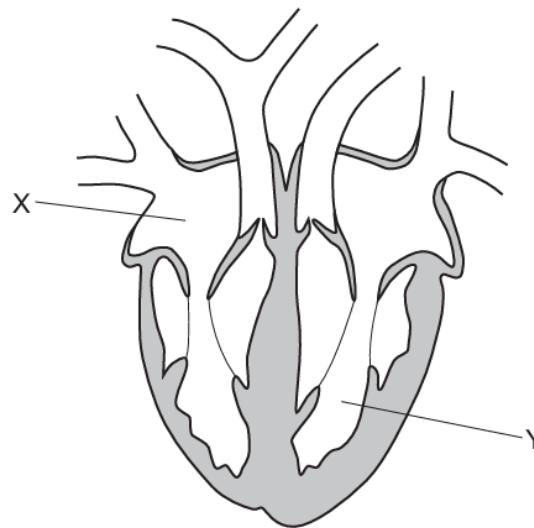
7 How does blood enter the heart?

- 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.



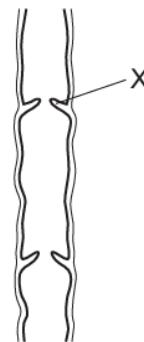
What are X and Y?

	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

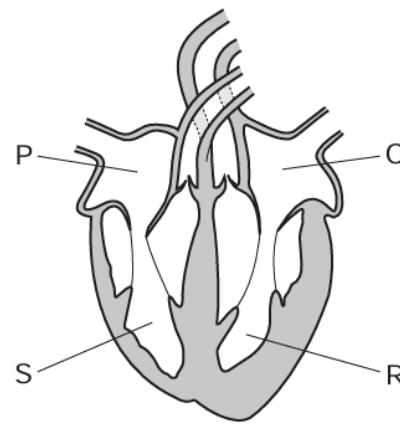
11 The diagram shows a section of a human vein.



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?

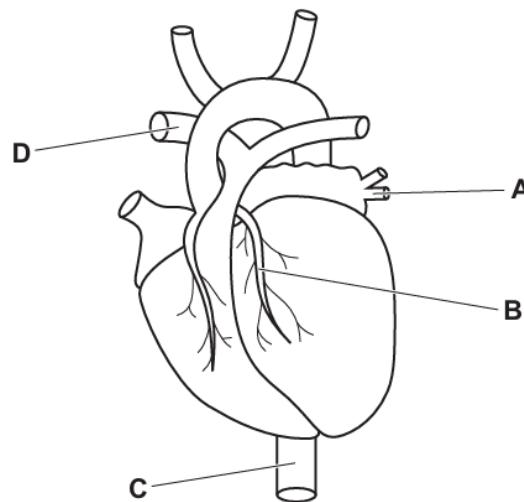
- A** Q → R → S → P
- B** Q → R → P → S
- C** P → S → Q → R
- D** P → S → R → Q

## 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?



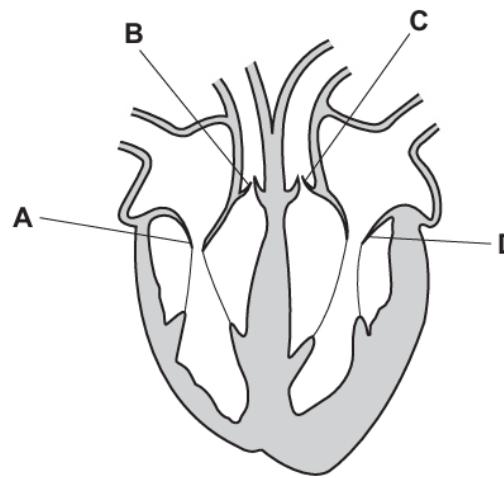
14 Which factors increase the risk of developing coronary heart disease?

- 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

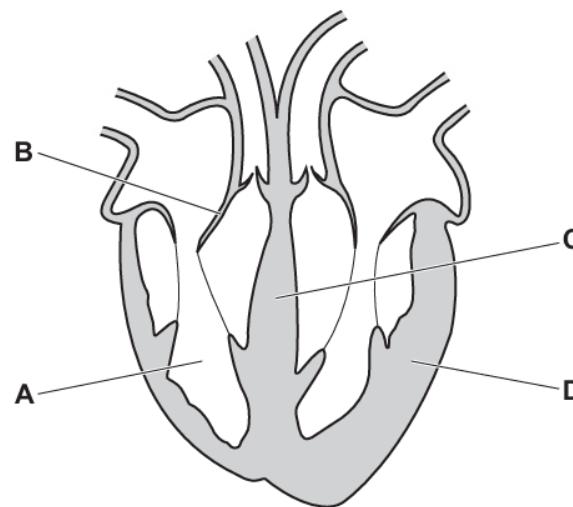
15 The diagram shows a section through the human heart.

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



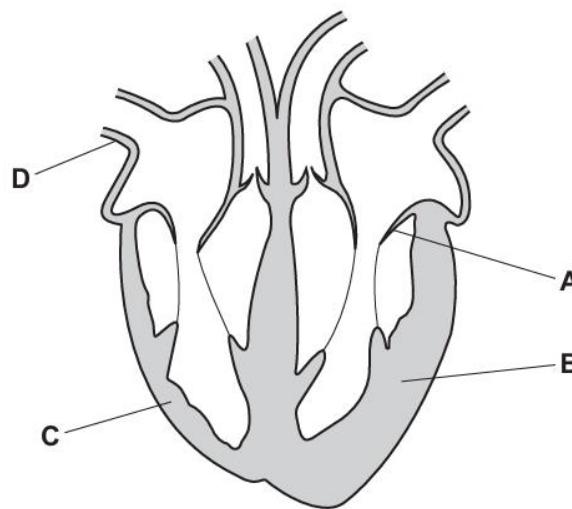
16 The diagram shows a section through the heart.

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