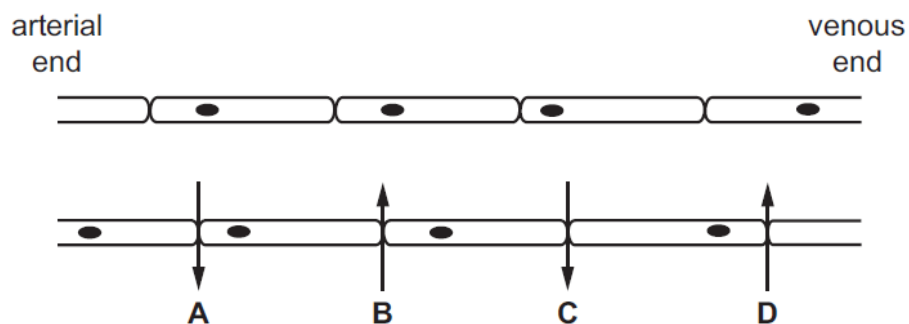


Transport in humans – 2020 O Level 5090

1. Nov/2020/Paper_11/No.14

The diagram shows a section of capillary.

Which arrow represents tissue fluid formation?



2. Nov/2020/Paper_11/No.15

Which row shows possible causes of coronary heart disease?

	diet high in saturated fats	diet low in salt	regular exercise
A	✓	✓	x
B	✓	x	x
C	x	✓	✓
D	x	x	✓

key
✓ = yes
x = no

3. Nov/2020/Paper_12/No.13

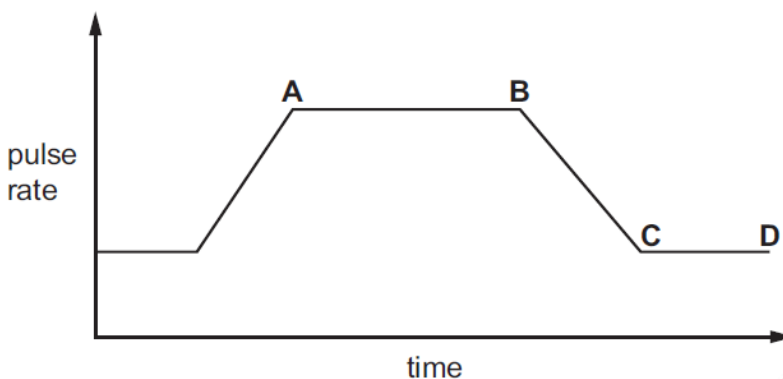
Which pathway does oxygenated blood follow in the human body?

- A pulmonary artery → left and right atria → left and right ventricles
- B pulmonary artery → left atrium → left ventricle → aorta
- C pulmonary vein → left and right atria → left and right ventricles
- D pulmonary vein → left atrium → left ventricle → aorta

4. Nov/2020/Paper_12/No.14

The graph shows a person's pulse rate over a period of time during which they rest, pedal an exercise bike and then rest again.

At which point did the person stop pedalling?



5. Nov/2020/Paper_12/No.15

Which row shows the blood pressures in an artery, a capillary and a vein?

	pressure / kPa		
	artery	capillary	vein
A	0.6	4.0	13.0
B	4.0	0.6	13.0
C	13.0	0.6	4.0
D	13.0	4.0	0.6

7. Jun/2020/Paper_11/No.14

Which blood vessels contain valves?

	capillary	renal artery	renal vein
A	✓	x	x
B	x	x	✓
C	✓	✓	x
D	x	✓	✓

key

✓ = contains valves

x = does not contain valves

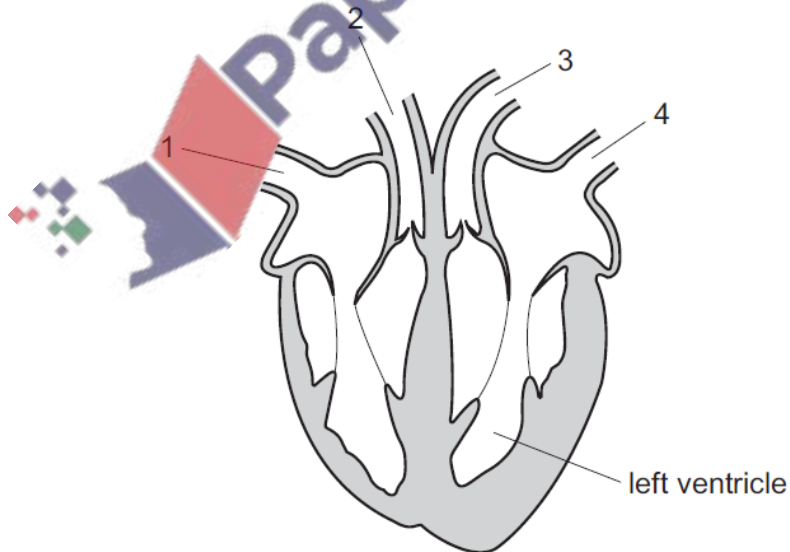
8. Jun/2020/Paper_11/No.15

Which chamber of the heart would be the first to receive nicotine absorbed into the blood in the lungs of a cigarette smoker?

- A left atrium
- B left ventricle
- C right atrium
- D right ventricle

9. Jun/2020/Paper_12/No.13

The diagram shows a section through the heart.



Which two numbered parts contain oxygenated blood?

- A 1 and 2
- B 2 and 3
- C 2 and 4
- D 3 and 4

10. Jun/2020/Paper_12/No.14

Which blood vessels contain valves?

	capillary	renal artery	renal vein
A	✓	x	x
B	x	x	✓
C	✓	✓	x
D	x	✓	✓

key

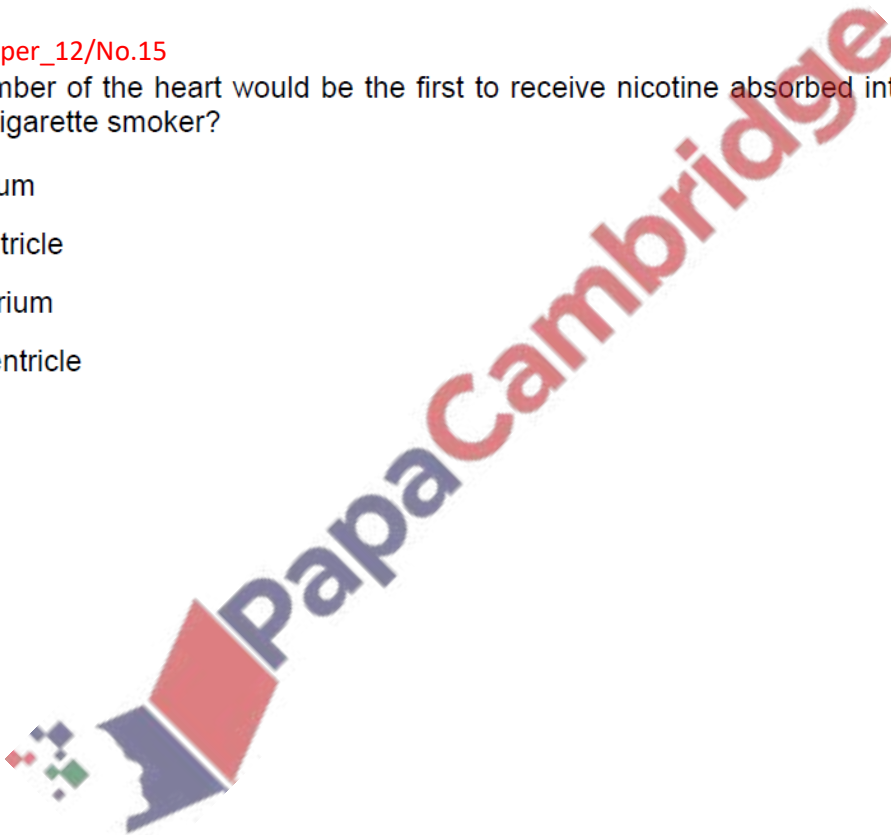
✓ = contains valves

x = does not contain valves

11. Jun/2020/Paper_12/No.15

Which chamber of the heart would be the first to receive nicotine absorbed into the blood in the lungs of a cigarette smoker?

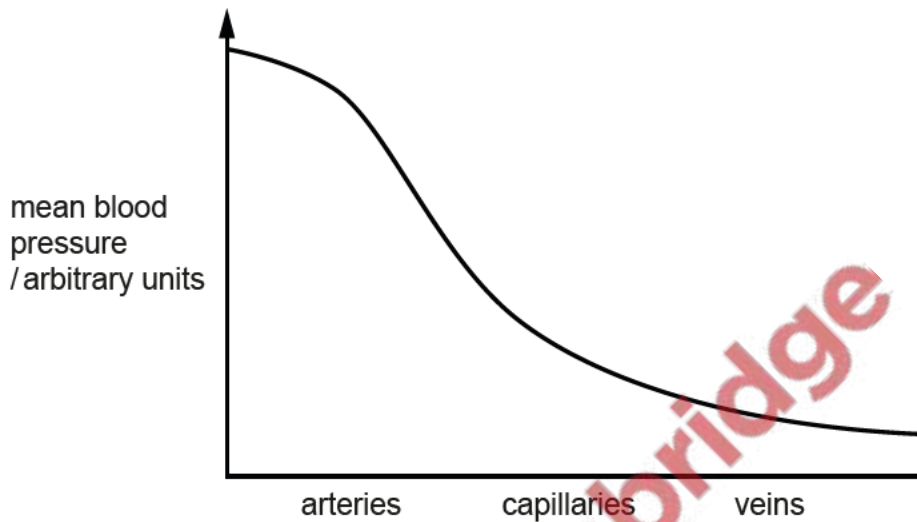
- A left atrium
- B left ventricle
- C right atrium
- D right ventricle



The human double circulation has both

- a circulation taking blood to and from the body tissues, and
- a circulation taking blood to and from the tissues of the lungs.

The graph shows the change in mean blood pressure in the blood vessels as blood passes to and from the **body tissues**.



(a) Name, for the circulation shown in the graph

(i) the first artery that blood enters with the highest mean blood pressure

..... [1]

(ii) the last vein that blood enters with the lowest mean blood pressure.

..... [1]

(b) Explain, using your knowledge of the structures of arteries and veins, the change in mean blood pressure shown in the graph.

.....
.....
.....
.....
.....
..... [3]

(c) Describe, with reference to the movement of **named** substances, the process that takes place as blood passes through the capillaries of the body tissues.

.....

.....

.....

.....

.....

..... [3]

(d) Draw on the graph on page 8 a line to show the change in the mean blood pressure as blood passes to and from the **tissues of the lungs**.

[2]

[Total: 10]

