

Blood vessels: practice questions

7 questions • 19 marks • mark scheme at the back

For Cambridge IGCSE Biology 0610 (and 0970, which has the same content). **Supplement** is Extended content, only examined on Papers 2 and 4.

Name

Total / 19

1 Which type of blood vessel contains valves? [1 mark]

- A. ☐ Artery
- B. ☐ Capillary
- C. ☐ Vein
- D. ☐ Aorta

2 Describe three differences between the structure of an artery and the structure of a vein. [3 marks]

3 **Supplement** [4 marks]

Explain how the structure of arteries and veins is related to the pressure of the blood they carry.

4

Supplement

[4 marks]

State the function of capillaries and explain how their structure is related to this function.

5

Which blood vessel carries oxygenated blood from the lungs to the heart?

[1 mark]

- A. ☐ Pulmonary artery
- B. ☐ Pulmonary vein
- C. ☐ Vena cava
- D. ☐ Aorta

6

Name the blood vessel that (a) carries blood from the left ventricle to the body, (b) carries blood to the kidney, (c) carries deoxygenated blood from the right ventricle to the lungs. [3 marks]

7

Supplement

[3 marks]

Name the blood vessel that (a) brings oxygenated blood to the liver, (b) brings blood from the small intestine to the liver, (c) takes blood away from the liver.

Mark scheme

One mark for each point unless a maximum is given. Words in brackets are not needed for the mark.

1. [1]

C C (1) Veins have valves

2. [3]

- artery wall thicker than vein wall (1)
- artery lumen narrower than vein lumen (1)
- veins have valves, arteries do not (1)

3. [4] **Supplement**

- arteries carry blood at high pressure (1)
- thick walls with muscle and elastic fibres withstand the pressure (1) allow narrow lumen maintains pressure
- veins carry blood at low pressure so walls are thinner / lumen is wide (1)
- valves in veins stop backflow (1)

4. [4] **Supplement**

- exchange of substances between blood and cells (1)
- wall one cell thick (1)
- short diffusion distance (1)
- large network / permeable walls (1)

5. [1]

B B (1) Pulmonary vein

6. [3]

- (a) aorta (1)
- (b) renal artery (1)
- (c) pulmonary artery (1)

7. [3] **Supplement**

- (a) hepatic artery (1)
- (b) hepatic portal vein (1)
- (c) hepatic vein(s) (1)