1.13 The Circulatory System and Heart: 10-minute Pack

AQA 8464 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 The heart has four chambers, each with a specific role in pumping blood around the body.

(a) Which chamber of the heart pumps oxygenated blood to the rest of the body (not including the lungs)? **(1)**

- ☐ A) Right atrium
- ☐ B) Right ventricle
- ☐ C) Left atrium
- ☐ D) Left ventricle

(Total for Question 1 is 1 mark)

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2 Blood vessels carry blood to and from the heart.

(a) Name the blood vessel that carries deoxygenated blood from the body into the right atrium. **(1)**

(b) Name the blood vessel that carries oxygenated blood away from the left ventricle to the rest of the body. **(1)**

(c) Name the blood vessel that carries deoxygenated blood from the right ventricle to the lungs. **(1)**

(d) Name the blood vessel that carries oxygenated blood from the lungs into the left atrium. **(1)**

(Total for Question 2 is 4 marks)

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3 A student drew a scientific diagram of a red blood cell as seen using a light microscope. The diagram was 28 mm wide. The actual diameter of the red blood cell is 7 micrometres (7 µm).

(a) Calculate the magnification of the student's diagram. Use the equation: magnification = image size / actual size. **(3)**

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(b) State why a red blood cell must be viewed using a microscope, rather than with the naked eye. **(1)**

(Total for Question 3 is 4 marks)

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Mark scheme · 1.13 The Circulatory System and Heart: 10-minute Pack

Question 1

(a) D (left ventricle) **B1**

(a) Answer: D (left ventricle)

Question 2

(a) vena cava oe **B1**

(a) Answer: Vena cava

(b) aorta oe **B1**

(b) Answer: Aorta

(c) pulmonary artery oe **B1**

(c) Answer: Pulmonary artery

(d) pulmonary vein oe **B1**

(d) Answer: Pulmonary vein

Question 3

(a) converts both measurements to the same units, e.g. 28 mm = 28000 µm, oe **M1**

(a) magnification = 28000 / 7, oe **M1**

(a) x4000 (magnification has no units) cao **A1**

(a) Answer: x4000

(b) a red blood cell is far too small to be seen/resolved with the naked eye, oe **B1**

(b) Answer: It is far too small to be seen with the naked eye.

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