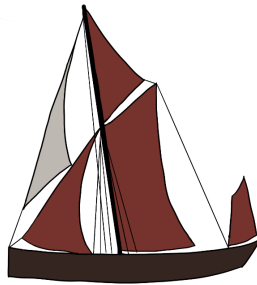

EDEXCEL CIRCULATORY SYSTEM PAST PAPER QUESTIONS 1

Science Exams Sorted

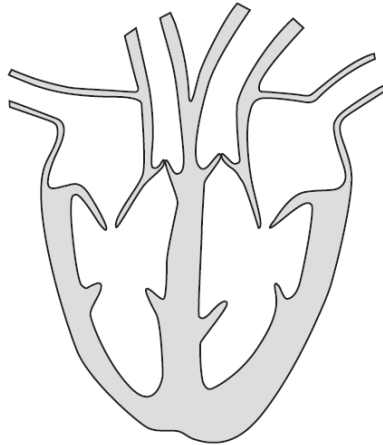


Name:		
Mark: (50)	%	Grade:

2020

Edexcel The Circulatory System Past Paper Questions 1

1. The diagram shows a human heart.



a. Use a straight line and the letter X to label the left atrium on the diagram. (1)

b. Describe how blood is moved from the right ventricle to the lungs.

.....
.....
.....
.....

(2)

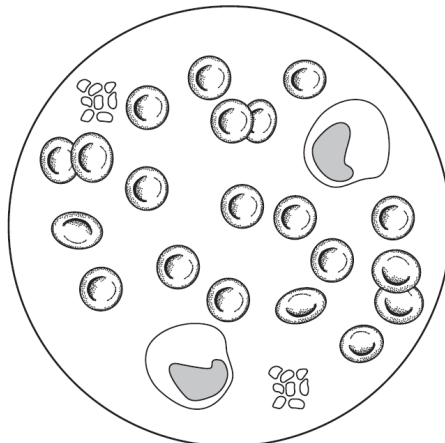
c. Which blood vessel transports blood from the lungs to the heart?

Put a cross in the box next to your answer.

- A** aorta
- B** pulmonary artery
- C** vena cava
- D** pulmonary vein

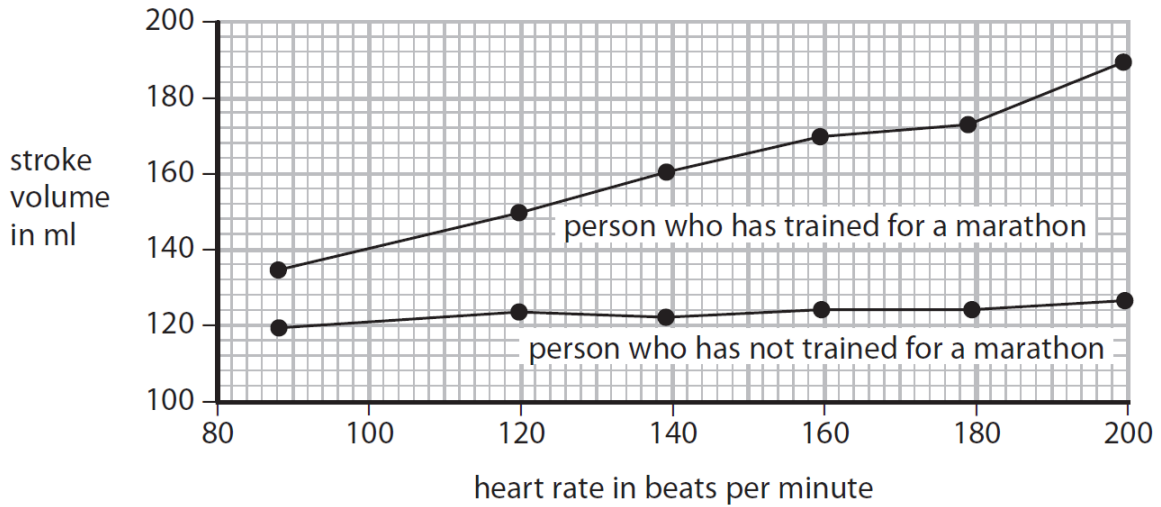
(1)

The diagram shows some components in a sample of blood.



Edexcel The Circulatory System Past Paper Questions 1

2. The figure below shows the stroke volume at different heart rates of a person who has trained for a marathon and of a person who has not trained for a marathon.



- a. Compare the effect of heart rate on stroke volume of the person who has trained for a marathon with the person who has not trained for a marathon.

.....

 (2)

- b. Calculate the cardiac output for the person who has trained for a marathon when the heart rate is 160 beats per minute.
 Give the units in your answer.

.....

 (3)

- c. Blood from the body enters the heart through the vena cava.
 Describe how this blood flows through the heart and lungs to leave the heart through the aorta.
 Include references to the chambers of the heart and the relevant valves in your answer.

Edexcel The Circulatory System Past Paper Questions 1

3. The table below shows the estimated blood flow through some parts of the body when a person is at rest and during exercise.

Part of the body	Estimated rate of blood flow in cm ³ per minute	
	At rest	During exercise
Brain	750	748
Heart muscle	350	1150
Digestive system	2500	1200
Other muscles	1200	14500
All other organs (except lungs)	1423	1420

- a. Compare the rate of blood flow through the body when this person is at rest and during exercise.

.....

.....

.....

(3)

- b. Explain why there is a change in the rate of blood flow through the digestive system during exercise.

.....

.....

.....

(2)

- c. The stroke volume is the amount of blood leaving one chamber of the heart per beat. From which chamber of the heart does this volume of oxygenated blood flow?

- A** left atrium
 - B** left ventricle
 - C** right atrium
 - D** right ventricle
- (1)

Edexcel The Circulatory System Past Paper Questions 1

d. A person has a cardiac output of 4.9 litres per minute. The stroke volume of each heart beat is 70 ml. Calculate the heart rate.

.....

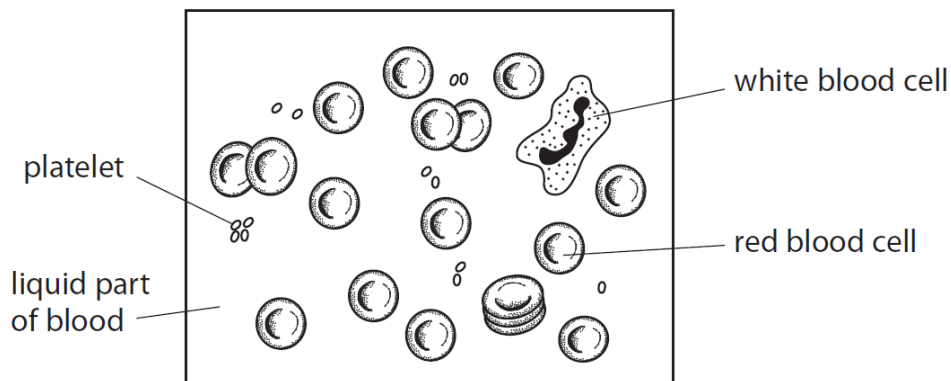
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.....

.....beats per minute
(2)

Edexcel 2018 Higher Paper 2 Q5

3. The diagram shows a sample of human blood.



The table shows the minimum and maximum numbers of each type of cell in 1mm³ of human blood.

human blood cells	number of cells / mm ³ of human blood	
	minimum	maximum
white blood cells	5.0×10^3	1.1×10^4
red blood cells	4.4×10^6	4.9×10^6
platelets	1.4×10^5	4.0×10^5

a. State the most common type of cell in human blood.

.....
(1)

b. Explain why the number of blood cells will change if a person has a bacterial infection.

.....

.....

.....
(2)

Edexcel The Circulatory System Past Paper Questions 1

c. Complete the sentence by putting a cross in the box next to your answer. People with low numbers of platelets are more likely to have

- A** problems clotting blood if they are cut
- B** problems removing carbon dioxide from muscles
- C** blood clots causing heart attacks
- D** a higher oxygen debt during exercise (1)

d. Describe the function of the liquid part of the blood.

.....
.....
.....
(2)

e. Adult stem cells make red blood cells.

State one similarity between adult stem cells and embryonic stem cells.

.....
.....
(1)

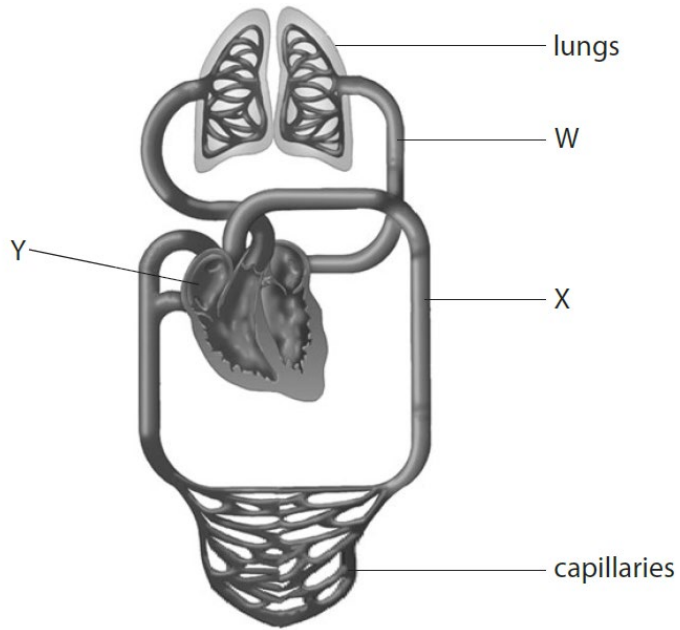
f. State one difference between adult stem cells and embryonic stem cells.

.....
.....
(1)

Edexcel 2017 Higher Paper 2 Q1

Edexcel The Circulatory System Past Paper Questions 1

4. The diagram shows the human circulatory system.



a. Name blood vessel W.

Put a cross in the box next to your answer.

- A** aorta
- B** pulmonary artery
- C** pulmonary vein
- D** vena cava

(1)

b. Deoxygenated blood enters the heart in the chamber labelled Y.

Explain how blood is moved from chamber Y to the lungs.

.....

.....

.....

.....

(3)

c. The blood vessel labelled X carries blood to capillaries.

Explain how substances are exchanged between capillaries and body cells.

.....

.....

.....

.....

(2)

