Transport in Humans

Question Paper

Level	O Level
Subject	Biology
Exam Board	Cambridge International Examinations
Topic	Transport in Humans
Sub Topic	
Booklet	Question Paper 2

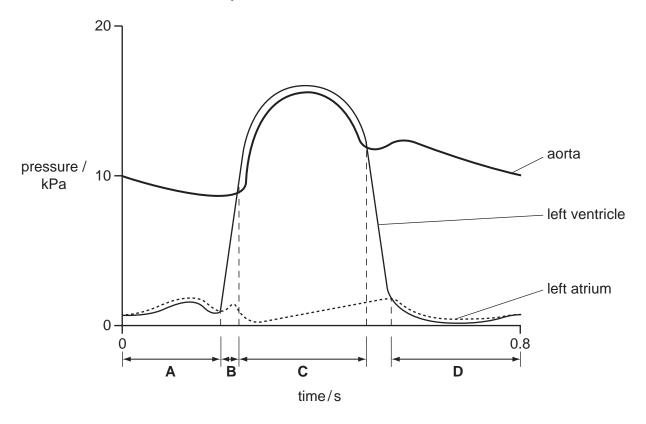**Time Allowed:**   **17**   minutes

Score: /14

Percentage: /100

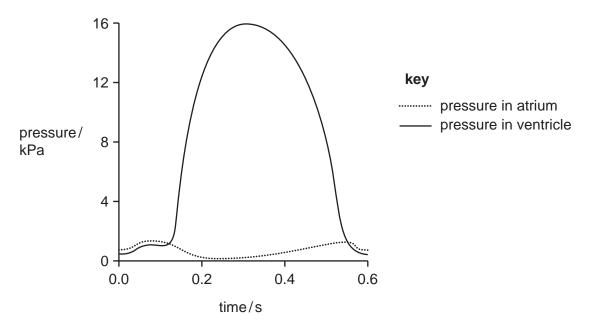**1** Which description correctly applies to blood in the pulmonary circulation?

	pulmonary artery	pulmonary vein
A	deoxygenated	high pressure
B	deoxygenated	low pressure
C	oxygenated	high pressure
D	oxygenated	low pressure

2 The diagram shows the pressures in the left side of the heart during one heart beat.

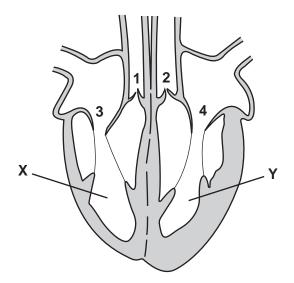At which time in the heart beat cycle are all four of the heart valves closed?

3 Which chambers of the human heart contain oxygenated blood?

    A   left atrium and left ventricle

    B   left atrium and right ventricle

    C   right atrium and left ventricle

    D   right atrium and right ventricle

4 How does tissue fluid differ from blood plasma?

    A   Tissue fluid contains dissolved food.

    B   Tissue fluid contains less protein.

    C   Tissue fluid does not contain dissolved oxygen.

    D   Tissue fluid does not contain white blood cells.

5 The graph shows pressure changes in the left side of the heart, while at rest, during a single heart beat.

What is the number of times that this person's heat beats in one minute, while at rest?

  A 60   **B** 70   **C** 100   **D** 120

6 Which statement explains why humans are said to have a double circulation?

    A   As blood circulates it passes twice through the heart.

    B   Each side of the heart has two chambers.

    C   Each side of the heart has two valves.

    D   There are two different sets of arteries leaving the heart.

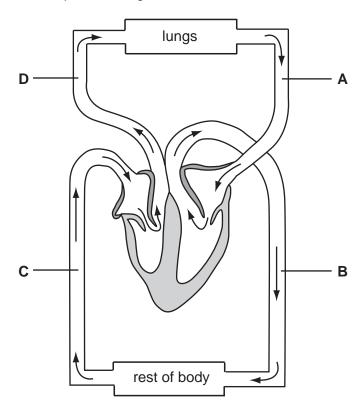**7** The diagram shows a section through the heart.

While chambers **X** and **Y** are emptying of blood, which valves are open and which are closed?

	valves **1** and **2**	valves **3** and **4**
A	closed	closed
B	closed	open
C	open	closed
D	open	open

8   The diagram shows part of the human circulatory system.
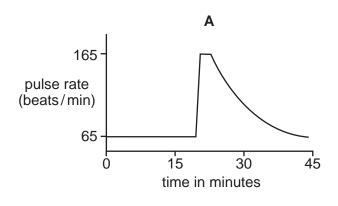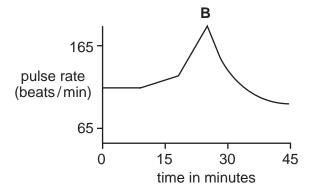
In which vessel is the blood pressure highest?

9   The graph shows changes in a person's pulse rate over a period of 45 minutes.
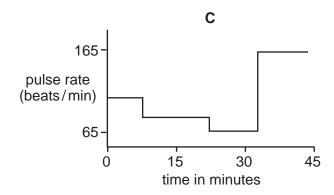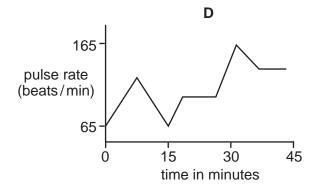
The sequence of events involves:

- waiting in a queue
- entering a sports stadium
- seeing a goal scored
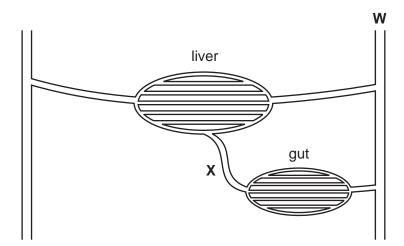- relaxing during half time.

Which graph shows this sequence of events?

A

B

C

D

10   When the skin is cut the blood clots.

In which order would the components of the blood become involved?

	first			last
A	fibrin	platelets	red blood cells	fibrinogen
B	fibrinogen	red blood cells	platelets	fibrin
C	platelets	fibrin	fibrinogen	red blood cells
D	platelets	fibrinogen	fibrin	red blood cells

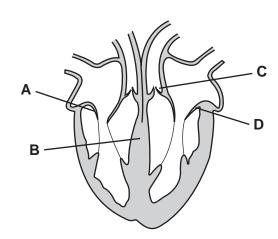11   The diagram shows the liver and its blood supply.

What is the name of blood vessel **X** and which substance increases in concentration between vessels **W** and **X**?

	name	subst
A	hepatic artery	carbon dioxide
B	hepatic portal vein	carbon dioxide
C	renal artery	oxygen
D	renal vein	oxygen

12   The diagram shows a vertical section through the human heart.

Which structure separates oxygenated blood from deoxygenated blood?

13   The coronary arteries carry blood to the

    A   brain tissue.

    B   heart muscle.

    C   liver cells.

    D   walls of alveolus.

14   What is the shortest route that can be taken by the blood travelling from a leg to an arm in the human body?

    A   leg $\rightarrow$ heart $\rightarrow$ lungs $\rightarrow$ heart $\rightarrow$ arm

    B   leg $\rightarrow$ heart $\rightarrow$ lungs $\rightarrow$ liver $\rightarrow$ arm

    C   leg $\rightarrow$ liver $\rightarrow$ heart $\rightarrow$ lungs $\rightarrow$ arm

    D   leg $\rightarrow$ liver $\rightarrow$ stomach $\rightarrow$ heart $\rightarrow$ arm