

Name: _____

1.2 The Cardio-Respiratory System

Date:

Time: 40 minutes

Total marks available: 30

Total marks achieved: _____

Percentage: _____

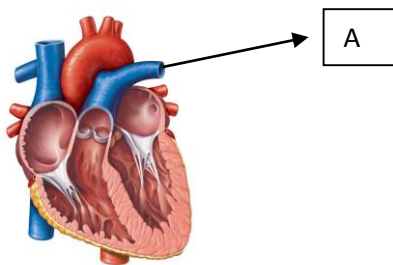
Q1. Which of the following is a feature of the arteries in the body? **(1)**

- A** Carry blood back to the heart
- B** They have thin walls
- C** They have thick walls
- D** They carry blood at low pressure

Q2. Which **one** of the following describes residual volume? **(1)**

- A.** The maximal amount of additional air that can be drawn into the lungs by determined effort after normal inspiration
- B.** The maximum amount of air that can be forcibly inhaled and exhaled
- C.** The amount of air that remains in a person's lungs after fully exhaling.
- D.** The additional amount of air that can be expired from the lungs by determined effort after normal expiration

Q3.



The figure above shows a cross-section of the heart. Complete the following statements about the labelled structures of the heart in Figure 7. The structure labelled A in Figure 7 is the This blood vessel carries blood out of the heart to the

(3 marks)

Q4. Blood pressure can be used to help monitor the health of an individual.

(i) Systole refers to the stage of the cardiac cycle when the ejection of blood occurs at the heart. What is the name of the stage when the heart is filling with blood?

(1)

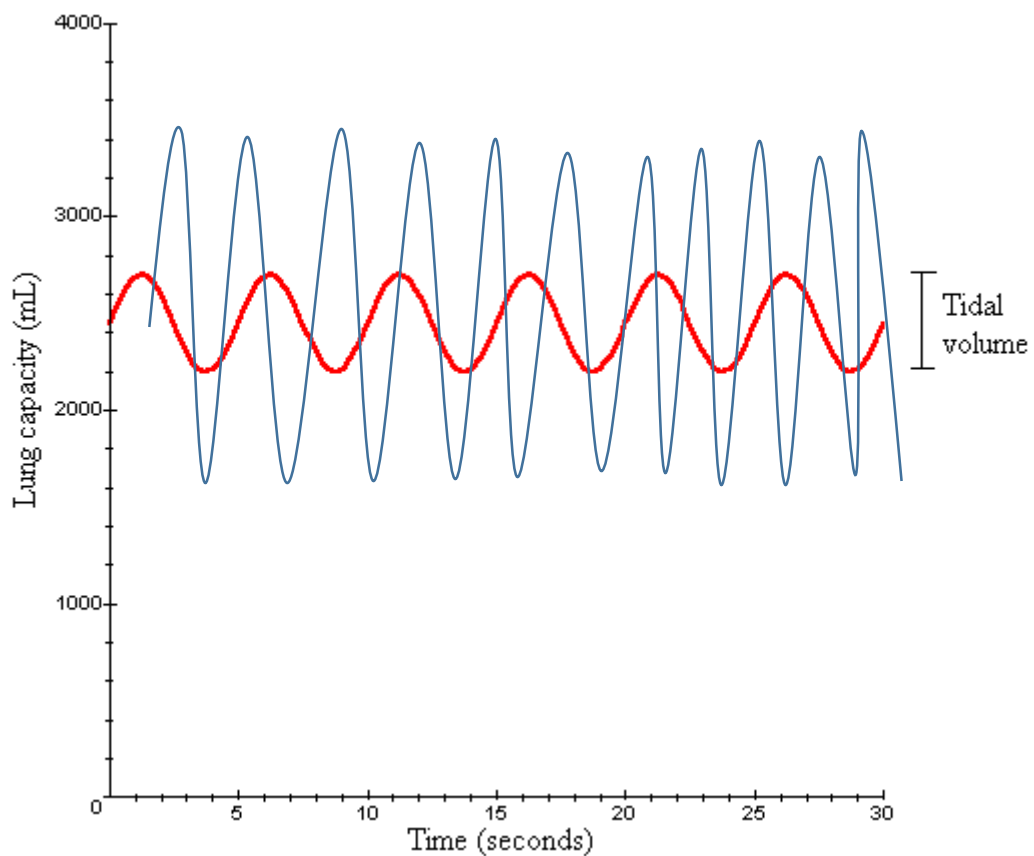
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(ii) Veins contain valves but arteries do not. Explain why this is the case.

(2)

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Q5. The graph below shows tidal volume for an individual whilst they are at rest.



The red line on the graph shows tidal volume at rest whereas the blue line shows tidal volume during exercise. Explain two reasons why the lines on the graph differ.

Explanation One:

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(2)

Explanation Two:

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(2)

Q6. Explain the role that the diaphragm plays during inspiration and expiration. **(4 marks)**

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Q7. State two features of the alveoli that aid the process of gas exchange **(2 marks)**

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