

Biology

The Human Heart Test

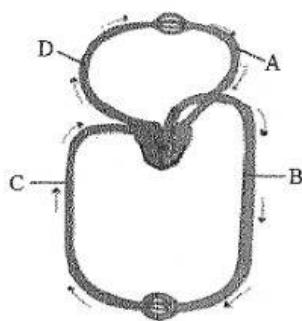
Instruction: Answer the questions in the spaces provided.

1. For which condition could the risk be reduced by taking regular exercise and eating a balanced, low-fat diet?
 - a. asthma
 - b. heart attack
 - c. iron deficiency anemia
 - d. weight loss

2. Which blood vessel, if it were to become blocked, could lead **directly** to a heart attack?
 - a. coronary artery
 - b. pulmonary artery
 - c. pulmonary vein
 - d. vena cava

3. In which of the following structures is blood pressure greatest?
 - a. aorta
 - b. jugular vein
 - c. pulmonary artery
 - d. vena cava

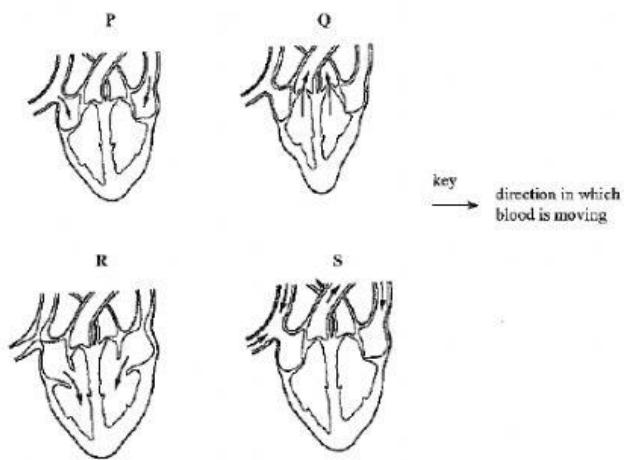
4. The diagram shows a double circulatory system.



Which vessels carry oxygenated blood?

- a. A and B
- b. A and D
- c. B and C
- d. C and D

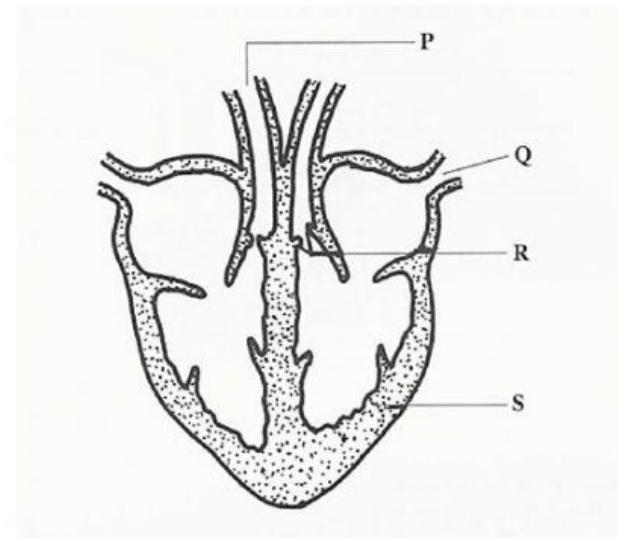
5. The diagram shows four different stages in **one** heartbeat.



What is the correct order for the stages after stage P?

- a. Q → R → S
- b. R → Q → S
- c. R → S → Q
- d. S → R → Q

6. The following diagram represents a model of the human heart.



a. Label parts Q, R and S. [3]

Q _____ R _____ S _____

b. What is the function of R? [1]

c. Explain how the wall of S is specially suited for its function. [2]

d. What is double circulation? [2]

e. Which type of blood is found on the left side of the heart? [1]

f. What does the term myogenic mean? [1]

g. Fill in the blanks to complete the description for the steps of the **cardiac cycle** or a **heartbeat**. [7]

During atrial _____, the atria contract together to force blood into the ventricles. The _____ and _____ valves are closed during this phase. Then ventricles _____, pushing blood into the arteries. This phase is called ventricular diastole. The next phase is _____ when all parts of the heart are relaxed. The _____ and _____ valves are open to allow blood to fill in the atria and ventricles.

h. Heart rate is affected by weight, age, activity and diet. Briefly state how exercise/activity can affect the heart rate. [1]

i. Name **TWO** common disorders of the circulatory system that are related to a diet high in animal fats. [2]
