Name: _____ *Date:* _____ *Grade:* _____

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

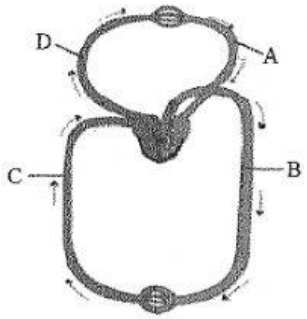
    b. jugular vein

    c. pulmonary artery

    d. vena cava

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4. The diagram shows a double circulatory system.



Which vessels carry oxygenated blood?

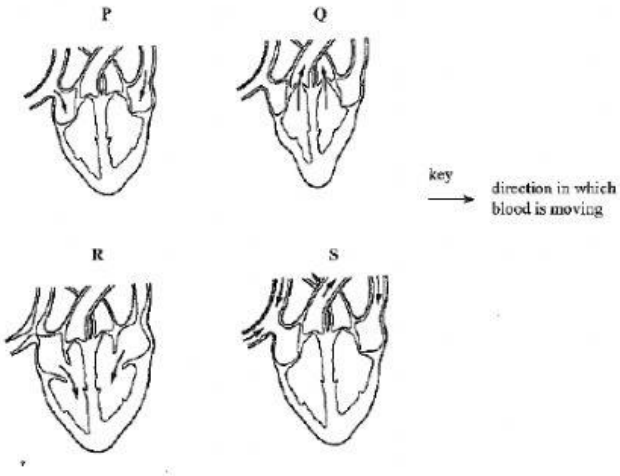
a. A and B

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

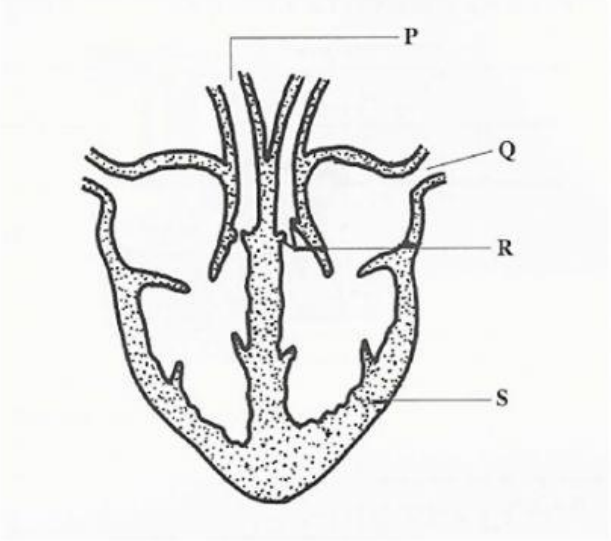
b. R→Q→S

c. R→S→Q

d. S→R→Q

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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]

_____

_____

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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]

_____

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