



**Biology 12
Resource Exam B
Response Booklet**

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PART B: WRITTEN RESPONSE

Value: 23 marks

Suggested Time: 40 min

INSTRUCTIONS: 1. Answer the following questions in the space provided in this **Response Booklet**.
2. Use a pen for this part of the examination unless otherwise instructed.
3. You may not need all of the space provided to answer each question.

1. Explain how an increase in both substrate concentration and temperature could affect an enzyme's reaction rate. (4 marks)

2. List the sequence of structures that a red blood cell passes through as it moves from the left ventricle of the fetal heart to the inferior vena cava in order to increase the oxyhemoglobin concentration of the blood.

(4 marks)

3. Describe the role of the diaphragm, pleural membranes and rib muscles during inhalation.

4. Explain how the hypothalamus and the adrenal glands function to increase heart rate when the brain receives sensory signals indicating danger to the body.

(5 h)

5. Describe three processes that make use of active transport in the nephron, and **give their locations.**

1st process (2 marks) _____

2nd process (2 marks) _____

3rd process (2 marks) _____

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