



For Supervisor's use only

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90176



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA



National Certificate of Educational Achievement
TAUMATA MĀTAURANGA Ā-MOTU KUA TAEA

Level 1 Human Biology, 2005

90176 Describe how humans respond to pathogens

Credits: Two

9.30 am Thursday 24 November 2005

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should answer ALL the questions in this booklet.

If you need more space for any answer, use the page(s) provided at the back of this booklet and clearly number the question.

Check that this booklet has pages 2–6 in the correct order and that none of these pages is blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

<i>For Assessor's use only</i>		Achievement Criteria		
Achievement		Achievement with Merit		Achievement with Excellence
Describe how humans respond to pathogens.	<input type="checkbox"/>	Explain how humans respond to pathogens.	<input type="checkbox"/>	Discuss how humans respond to pathogens.
Overall Level of Performance <input type="checkbox"/>				

You are advised to spend 20 minutes answering the questions in this booklet.

QUESTION ONE

- (a) Describe what is meant by the term **pathogen**.

- (b) Describe THREE common **symptoms** that indicate pathogens have entered the body.

1. _____

2. _____

3. _____

QUESTION TWO

John cuts his hand on a rusty nail in the backyard. Pathogens **have entered** the blood stream.

- (a) Explain how the body responds to pathogens in the blood.

John's hand becomes infected.

- (b) Explain why **lymph nodes** under his **armpit** have become swollen.

- (c) Explain why John is advised to have a tetanus **vaccination**.

QUESTION THREE

Young children are vaccinated against polio.

- (a) Explain how the human body achieves **active immunity** from this vaccination.

A child has recovered from measles. She has immunity from measles and is unlikely to suffer measles again.

- (b) Explain how the child's immune system is now able to provide her with immunity from measles.
