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NEW ZEALAND QUALIFICATIONS AUTHORITY
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Level 1 Biology, 2018

90928 Demonstrate understanding of biological ideas relating to the life cycle of flowering plants

9.30 a.m. Tuesday 27 November 2018
Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of biological ideas relating to the life cycle of flowering plants.	Demonstrate in-depth understanding of biological ideas relating to the life cycle of flowering plants.	Demonstrate comprehensive understanding of biological ideas relating to the life cycle of flowering plants.

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 attempt ALL the questions in this booklet.

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

Check that this booklet has pages 2–12 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.

TOTAL

ASSESSOR'S USE ONLY

QUESTION ONE: PHOTOSYNTHESIS

The process of photosynthesis is essential to the life cycle of a flowering plant. Photosynthesis occurs mainly in the leaf. The rate of photosynthesis is affected by a number of environmental factors. Study the information below to help you answer the question.

Figure 1: The effects of environmental factors on the rate of photosynthesis



www.juntadeandalucia.es/averroes/centros-tic/18010185/helvia/aula/archivos/repositorio/0/149/html/Unidad2_bilingue/Natural_Sciences/plantkfungik/01plants/plants05nutri.html

Figure 2: Cross section of a leaf



<http://www.tutorvista.com/biology/cross-section-of-a-leaf-diagram>

Discuss the importance of environmental factors and the structure of a leaf in allowing the process of photosynthesis to occur.

In your answer:

- describe the process and the purpose of photosynthesis
- explain how environmental factors can affect the rate of photosynthesis
- discuss how environmental factors and the structure and function of the leaf work together to maximise the rate of photosynthesis.

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The examination continues on the following page.**

