

91156



NEW ZEALAND QUALIFICATIONS AUTHORITY  
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SUPERVISOR'S USE ONLY

## Level 2 Biology, 2016

### 91156 Demonstrate understanding of life processes at the cellular level

9.30 a.m. Friday 18 November 2016  
Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of life processes at the cellular level.	Demonstrate in-depth understanding of life processes at the cellular level.	Demonstrate comprehensive understanding of life processes at the cellular level.

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 page(s) provided at the back of this booklet and clearly number the question.

Check that this booklet has pages 2–11 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

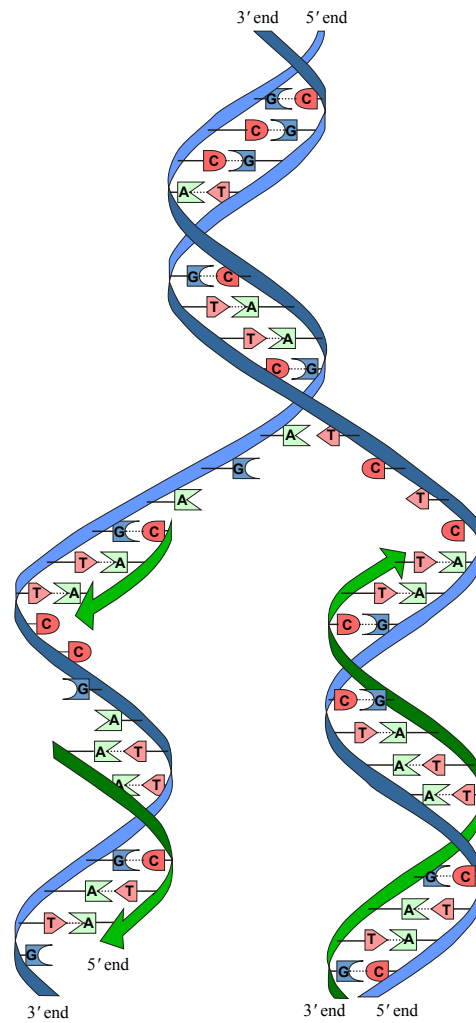
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## QUESTION ONE: DNA REPLICATION

(a) The model below shows DNA replication.

Label the following on the diagram:

- nucleotide
- nitrogen base
- hydrogen bond
- parent strand
- daughter strand
- sugar-phosphate backbone.



(b) Explain the purpose of DNA replication.

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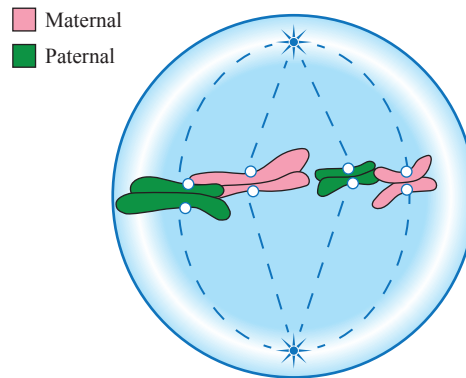
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**QUESTION TWO: MITOSIS AND MOVEMENT OF MATERIALS**ASSESSOR'S  
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adapted from: <https://www.bio.purdue.edu/BCBLab/?p=1093>

- (a) Describe what is happening in the diagram above during mitosis.

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- (b) Explain the purpose of mitosis, and how this type of cell division occurs.

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