



Oxford Cambridge and RSA

GCSE Biology B (Twenty First Century Science)

J257/03 Breadth in Biology (Higher)

Question Set 23

1 Growth in multicellular organisms involves an increase in the number of body cells. New cells are made by mitosis, which is part of the cell cycle.

There are two main phases in the cell cycle.

(a) The statements in the table describe events in the cell cycle.

For each statement tick (✓) **one** box to show which phase of the cell cycle is being described.

Event in the cell cycle	Takes place in interphase	Takes place in mitosis
Each chromosome is copied.		
The cell grows larger.		
The chromosome copies separate.		
The nucleus divides.		
The number of organelles increases.		

[2]

(b) Amir is observing the stages of mitosis in cells found in the root tips of garlic.

To prepare his slide he follows this method.

1. Cut a thin section of the root tip.
2. Place on the microscope slide.
3. Add a coverslip.

Describe how Amir would use the light microscope to view his slide.

[3]

(c) When Amir looks at the slide using a light microscope, the chromosomes are still not clear.

Suggest **one** improvement he could make when preparing his slide that will make the chromosomes more visible.

[1]

Total Marks for Question Set 23: 6

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