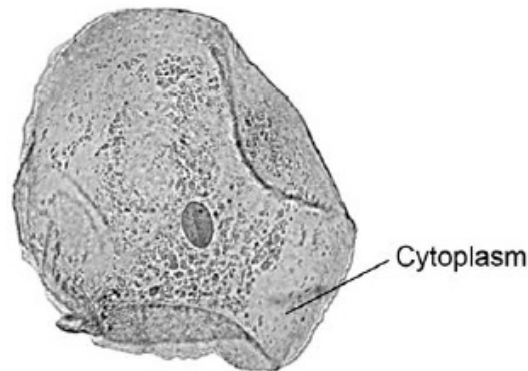


Cell Biology Exam Questions

1. **Figure 1** shows a human cheek cell viewed under a light microscope.

Figure 1



Label the nucleus **and** cell membrane on **Figure 1**.

[2 marks]

2. Cheek cells are a type of body cell.

Body cells grow through cell division.

What is the name of this type of cell division?

[1 mark]

Tick **one** box.

Differentiation

Mitosis

Specialisation

3. Ribosomes and mitochondria are **not** shown in **Figure 1**.

What type of microscope is needed to see ribosomes and mitochondria?

[1 mark]

4. What is the advantage of using the type of microscope you named in question 3?

[1 mark]

Tick **one** box.

Cheaper

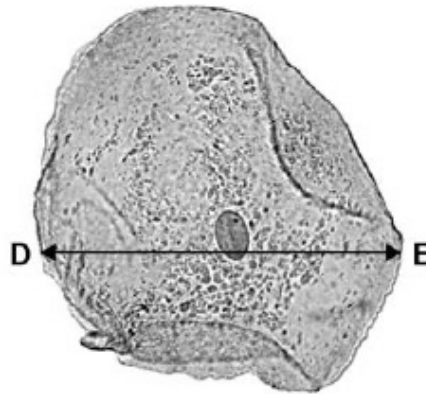
Higher magnification

Lower resolution

5. The cheek cell in **Figure 2** is magnified 250 times.

The width of the cell is shown by the line **D** to **E**.

Figure 2



Calculate the width of the cheek cell in micrometres (μm).

Complete the following steps.

Measure the width of the cell using a ruler _____ mm

Use the equation to work out the real width of the cell in mm:

$$\text{real size} = \frac{\text{image size}}{\text{magnification}}$$

_____ mm

Convert mm to μm _____ mm

[3 marks]

6. A red blood cell is $8\ \mu\text{m}$ in diameter.

A bacterial cell is 40 times smaller.

Calculate the diameter of the bacterial cell.

[1 mark]

Tick **one** box.

$0.02\ \mu\text{m}$

$0.2\ \mu\text{m}$

$2.0\ \mu\text{m}$

$20.0\ \mu\text{m}$

| |
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| 9 |