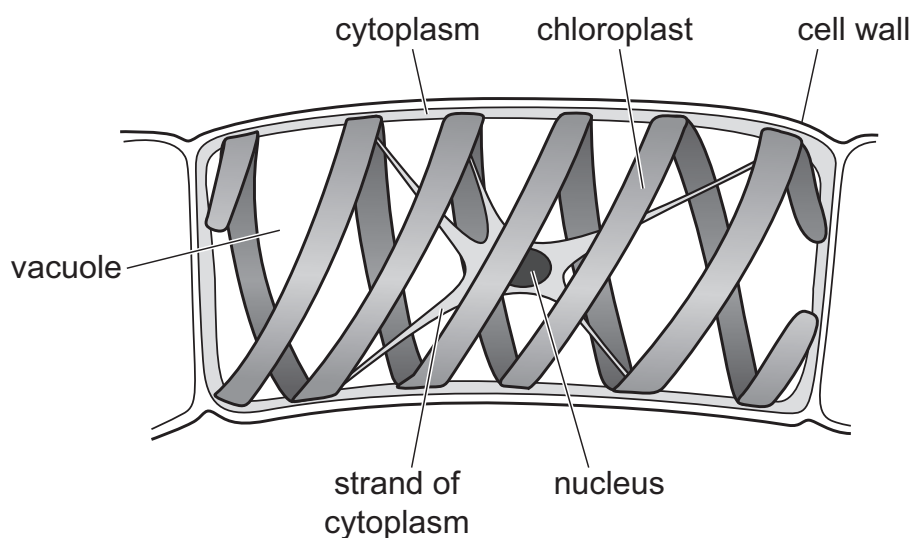


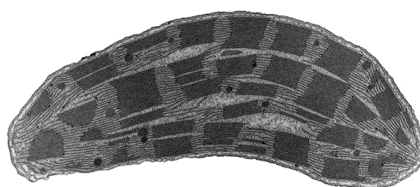
- 3 The diagram shows a single cell from an organism called *Spirogyra*.



Which features does *Spirogyra* share with plant cells?

	cell wall	chloroplast	cytoplasm	nucleus	vacuole
A	yes	yes	yes	yes	yes
B	yes	yes	no	no	yes
C	yes	no	yes	yes	no
D	no	yes	yes	no	yes

- 4 The diagram shows an image of a chloroplast. The image is 5 cm long.



The actual length of the chloroplast is 5 μm .

What is the magnification of the image?

- A** $\times 10$ **B** $\times 1000$ **C** $\times 10\,000$ **D** $\times 100\,000$

4 Which term describes each structure?

	structure		
	brain	liver	neurone
A	organ	organ	cell
B	organ	tissue	cell
C	tissue	organ	tissue
D	tissue	cell	organ

3 A palisade cell and a neurone are observed under a light microscope.

Which cell component is found only in the palisade cell?

- A** cell membrane
- B** cell wall
- C** cytoplasm
- D** nucleus

4 In a human, the diameter of the aorta as it leaves the heart is 36 mm.

The thickness of the wall of the aorta at this point is 9 mm.

What is the diameter of the lumen of the aorta at this point?

- A** 1800 m **B** 2700 μm **C** 18 000 μm **D** 27 000 μm

3 Which structures are found in both plant and animal cells?

- A** cell walls and cell membranes
- B** nuclei and cell walls
- C** cytoplasm and chloroplasts
- D** cell membranes and nuclei

5 A student measured the length of a structure using a microscope.

The magnification used was $\times 250$.

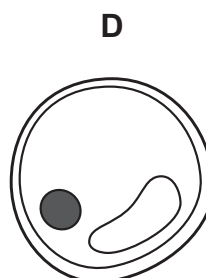
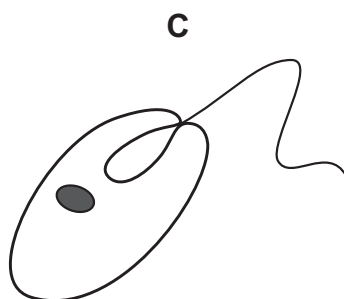
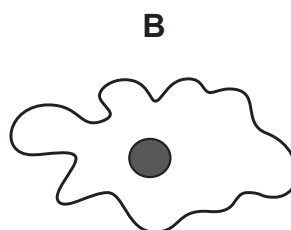
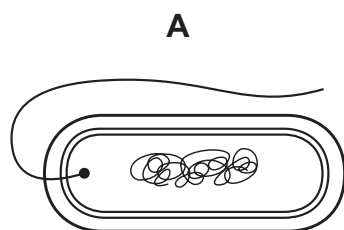
The image size of the structure was 5.00 mm.

What was the actual length of the structure?

- A 1.25×10^3 mm
- B $1.25 \times 10^3 \mu\text{m}$
- C $2.00 \times 10^1 \mu\text{m}$
- D $2.00 \times 10^{-5} \mu\text{m}$

2 The diagrams show four organisms.

Which organism is a prokaryote?



NOT TO
SCALE

3 Which structures are found in both plant cells and bacterial cells?

	cell membrane	cell wall	plasmid	ribosomes
A	yes	yes	yes	no
B	no	yes	yes	yes
C	yes	no	yes	yes
D	yes	yes	no	yes

4 A cell is $65\text{ }\mu\text{m}$ across.

What is this measurement in mm?

- A** 0.00065 mm **B** 0.0065 mm **C** 0.065 mm **D** 0.65 mm