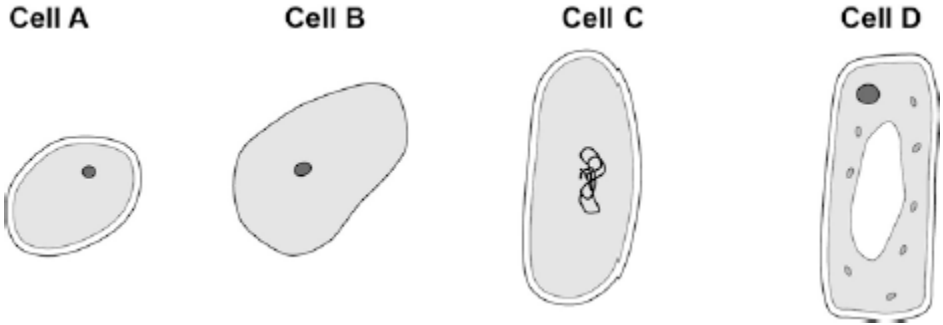


1

The figure below shows four different types of cell.



(a) Which cell is a plant cell?

Give **one** reason for your answer.

Cell

Reason

(2)

(b) Which cell is an animal cell?

Give **one** reason for your answer.

Cell

Reason

(2)

(c) Which cell is a prokaryotic cell?

Give **one** reason for your answer.

Cell

Reason

(2)

(d) A scientist observed a cell using an electron microscope.

The size of the image was 25 mm.

The magnification was $\times 100\,000$

Calculate the real size of the cell.

Use the equation:

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

Give your answer in micrometres.

.....
.....
.....

Real size = micrometres

(3)
(Total 9 marks)

Mark schemes

1

(a) **D**

1

any **one** from:

- has chloroplasts
- has a (large) vacuole
ignore has a (cell) wall

1

(b) **B**

1

does **not** have a (cell) wall

*allow has only a nucleus, (cell) membrane **and** cytoplasm*

1

(c) **C**

1

any **one** from:

- genetic material is not in a nucleus
allow no nucleus
- has a single loop of DNA

1

(d) real size = 25 / 100 000

1

0.00025

1

(conversion to) 0.25 (μm)

*allow 0.25 (μm) with no working shown for **3** marks*

1

[9]