

# Plant & Animal Cells

## Question Paper

Level	O Level
Subject	Biology
Exam Board	Cambridge International Examinations
Topic	Cell Structure and Organisation
Sub Topic	Plant & Animal Cells
Booklet	Question Paper

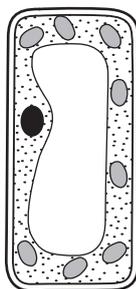
**Time Allowed:** 23 minutes

**Score:** /19

**Percentage:** /100

- 1 Which two structures are found in all plant epidermal cells?
- A cell wall and chloroplasts
  - B cell wall and nucleus
  - C chloroplasts and starch grains
  - D nucleus and starch grains
- 2 Which organelles are found in both animal and plant cells?
- 1 cell membrane
  - 2 cell wall
  - 3 nucleus
  - 4 sap vacuole
- A 1 and 3      B 1 and 4      C 2 and 3      D 2 and 4
- 3 In a practical lesson, a student makes the following observations about some organisms.
- ‘They are spherical, unicellular organisms which are visible with the light microscope. Diameter is 0.01 mm. Cytoplasm is present and, after staining, a nucleus can be seen. A vacuole is present.’
- What is being described?
- A bacterium
  - B fungus
  - C plant
  - D virus

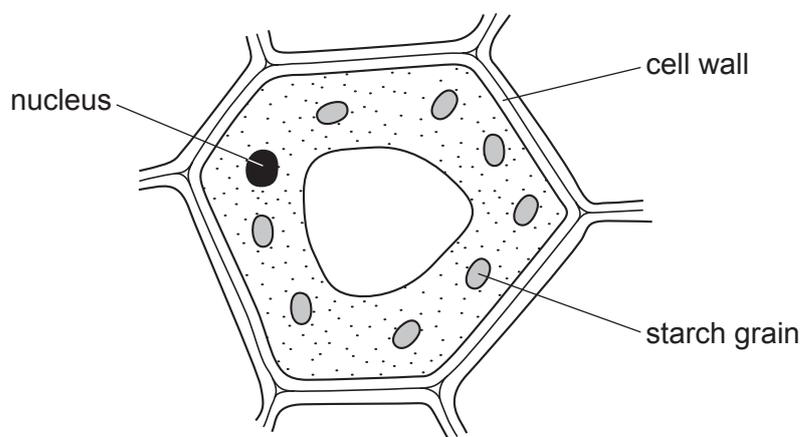
4 The diagram shows a plant cell.



Which structure identifies this as a plant cell rather than an animal cell?

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

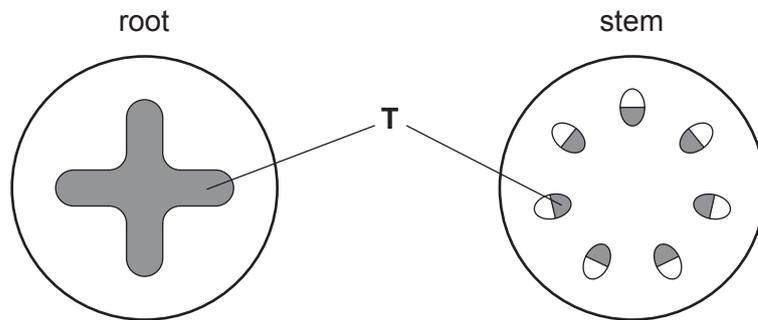
5 The diagram shows a plant cell. The cell is stained with iodine solution.



After staining with iodine solution, what are the colours of the cell wall and the starch grain?

	cell wall	starch grain
A	blue-black	blue-black
B	blue-black	orange-brown
C	orange-brown	blue-black
D	orange-brown	orange-brown

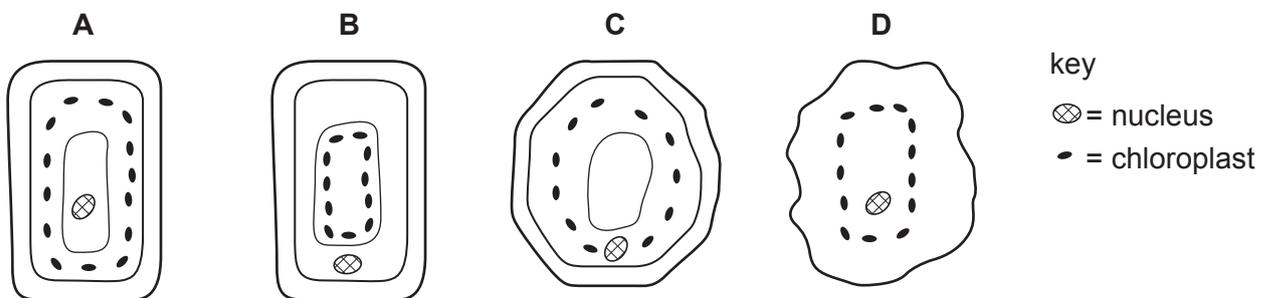
6 The diagram shows cross-sections through the root and stem of the same plant.



What is tissue T?

- A epidermis
- B mesophyll
- C phloem
- D xylem

7 Which diagram shows the positions of the chloroplasts and the nucleus in a cell?



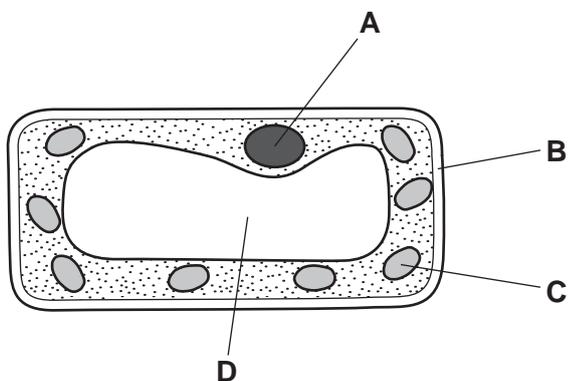
8 What are found in plant cells but **not** in animal cells?

- 1 cell membrane
- 2 nucleus
- 3 cell wall
- 4 chloroplast

- A 1 and 2
- B 1 and 4
- C 2 and 3
- D 3 and 4

- 9 A plant is grown in bright sunlight. The diagram shows what is seen when a cell from this leaf is placed under a microscope. After a few hours, a leaf from this plant is stained with iodine solution.

What will be stained blue/black?



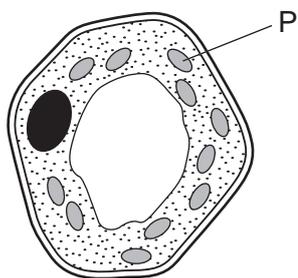
- 10 Some structures found in cells are listed.

- 1 cell wall
- 2 cell membrane
- 3 chloroplast
- 4 cytoplasm
- 5 nucleus

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

- A** 1 2 4  
**B** 1 2 3  
**C** 2 3 5  
**D** 2 4 5

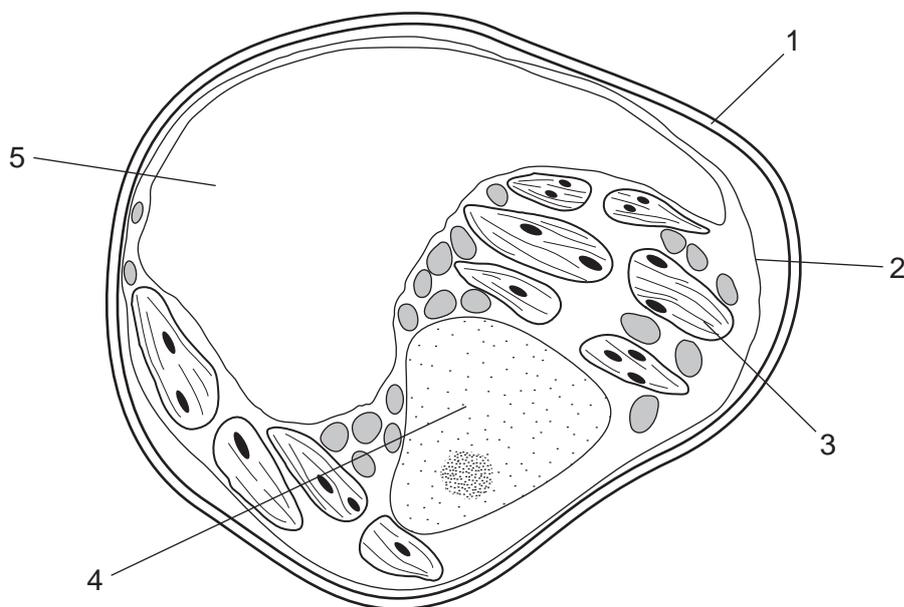
11 The diagram shows a plant cell.



Compared with the rest of the cell, which row describes the concentrations of oxygen and magnesium inside structure P during the daytime?

	oxygen	magnesium
<b>A</b>	high	high
<b>B</b>	high	low
<b>C</b>	low	high
<b>D</b>	low	low

12 The diagram shows a plant cell.



Which features are **not** found in animal cells?

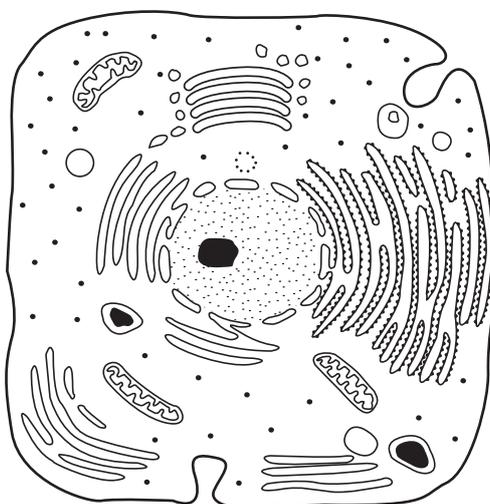
- A** 1 and 2      **B** 1 and 3      **C** 2 and 4      **D** 2 and 5

13 A human cheek cell and a spongy mesophyll cell from a leaf are examined under a microscope.

Which structures are seen in both cells?

- A cell membrane, nucleus and cytoplasm
- B cell wall, cell membrane and nucleus
- C cytoplasm, cell wall and cell membrane
- D nucleus, cytoplasm and cell wall

14 The diagram represents a cell as seen under the electron microscope.

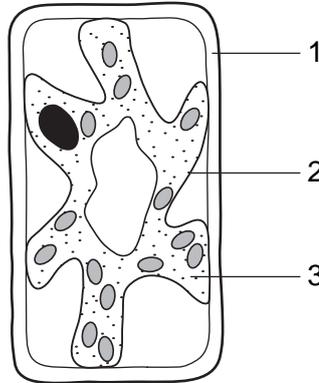


What type of cell is this?

	type of cell	reason
A	animal cell	outer layer is the cell membrane
B	bacterium	no chromosomes are visible
C	plant cell	cytoplasm is visible
D	plant cell	cell wall is visible

15 The diagram shows a typical plant cell after being placed in a concentrated salt solution for ten minutes.

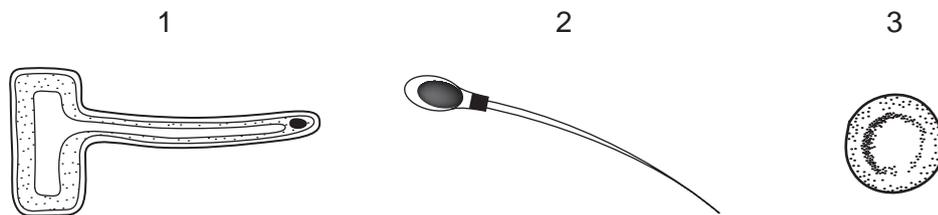
- A cell membrane
- B cell wall
- C cytoplasm
- D vacuole



Which numbered structures are partially permeable?

- A 1 and 2 only
- B 1 and 3 only
- C 1 only
- D 2 only

16 The diagram shows three different cells, not drawn to the same scale.



Which are animal cells?

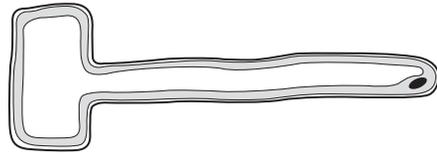
- A 1 and 2 only
- B 1 and 3 only
- C 2 and 3 only
- D 1, 2 and 3

17 When a red stain is added to a culture containing both living and dead cells, only the dead cells take up the stain.

Which structure prevents the stain entering the living cells?

- A cell membrane
- B cell wall
- C cytoplasm
- D vacuole

18 The diagram shows two plant cells.



cell X



cell Y

Plant cells become turgid when they take up water by osmosis.

In which of these cells does being turgid provide support?

	cell X	cell Y
<b>A</b>	no	no
<b>B</b>	no	yes
<b>C</b>	yes	no
<b>D</b>	yes	yes

19 The diagram shows a plant cell.

Which labelled structure controls the passage of substances into and out of the cell?

