

## Chapter 2

# Organisation of the organism

### 2.1 Cell structure and organisation

01. 0610\_m22\_qp\_22 Q: 4

Two types of cell, one animal and one plant, were examined using a light microscope.

Which row shows the correct combination of structures that would be observed in the cells?

	cell structure observed			
	animal cell		plant cell	
<b>A</b>	chloroplast	membrane	vacuole	cytoplasm
<b>B</b>	cytoplasm	nucleus	chloroplast	membrane
<b>C</b>	membrane	cell wall	cytoplasm	nucleus
<b>D</b>	nucleus	chloroplast	cell wall	membrane

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02. 0610\_s21\_qp\_22 Q: 4

Which part of a cell makes glucose?

- A** cell membrane
- B** chloroplast
- C** nucleus
- D** vacuole

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03. 0610\_s21\_qp\_23 Q: 4

In which part of a cell does photosynthesis take place?

- A** vacuole
  - B** nucleus
  - C** chloroplast
  - D** cytoplasm
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04. 0610\_w21\_qp\_21 Q: 3

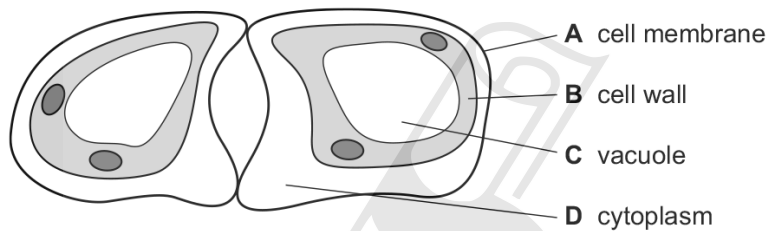
Which row shows the structure on the outside of a plant cell and the location of the chloroplasts in the cell?

	structure on the outside of a plant cell	location of chloroplasts
<b>A</b>	cell membrane	in the cytoplasm
<b>B</b>	cell membrane	in the vacuole
<b>C</b>	cell wall	in the cytoplasm
<b>D</b>	cell wall	in the vacuole

05. 0610\_w21\_qp\_23 Q: 3

The diagram shows two guard cells.

Which label is correct?



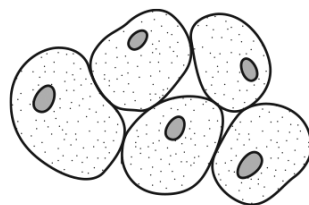
06. 0610\_m20\_qp\_22 Q: 4

What structures can be 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

07. 0610\_p20\_qp\_20 Q: 1

The diagram shows some liver cells as they appear under a microscope.



How many cell walls can be seen?

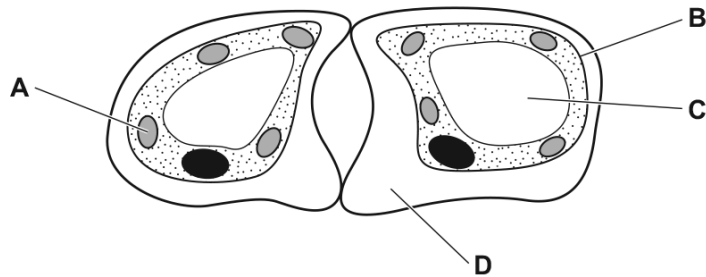
- A** 0
- B** 2
- C** 5
- D** 10

2.1. CELL STRUCTURE AND ORGANISATION

08. 0610\_s20\_qp\_21 Q: 3

The diagram shows two guard cells.

Which label shows the cell wall?

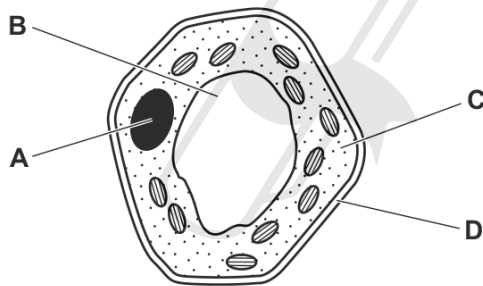


09. 0610\_s20\_qp\_22 Q: 3

The diagram shows a plant cell.

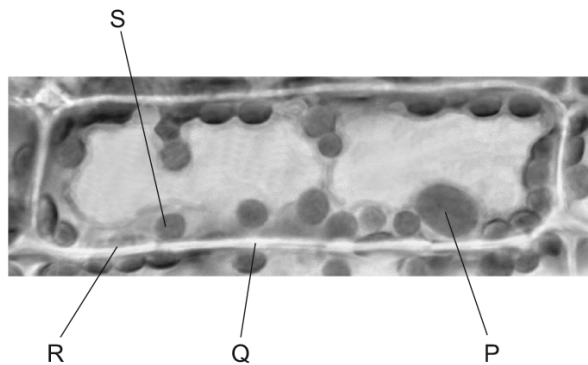
A biologist wants to find out the number of chromosomes it contains.

Which labelled part should be examined more closely?



10. 0610\_w20\_qp\_21 Q: 3

The photomicrograph shows a cell from a type of aquatic plant.

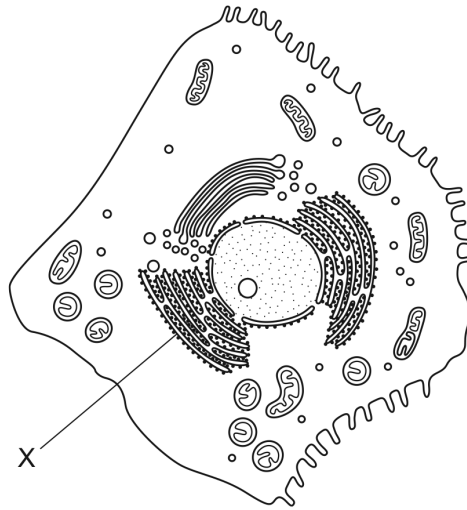


Which parts labelled on the photomicrograph indicate that this is a plant cell?

- A** P and R      **B** P and S      **C** Q and R      **D** Q and S

11. 0610\_m19\_qp\_22 Q: 3

The drawing is of a magnified human liver cell.



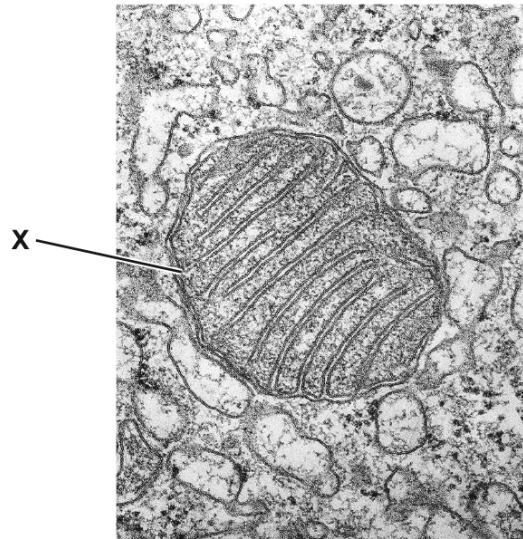
What is structure X?

- A cytoplasm
- B mitochondrion
- C nucleus
- D rough endoplasmic reticulum

2.1. CELL STRUCTURE AND ORGANISATION

12. 0610\_s19\_qp\_21 Q: 3

The photomicrograph shows part of an animal cell.



What is the structure labelled X?

- A chloroplast
- B mitochondrion
- C ribosome
- D vacuole

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13. 0610\_s19\_qp\_21 Q: 4

Which features are possessed by **all** plant cells?

	a cell wall	chloroplasts
<b>A</b>	✓	✓
<b>B</b>	✓	x
<b>C</b>	x	✓
<b>D</b>	x	x

key

✓ = present

x = absent

14. 0610\_s19\_qp\_22 Q: 3

Heart muscle cells have a high rate of metabolism.

Which structure do they require to be present in high numbers?

- A chloroplasts
- B mitochondria
- C cell walls
- D vacuoles

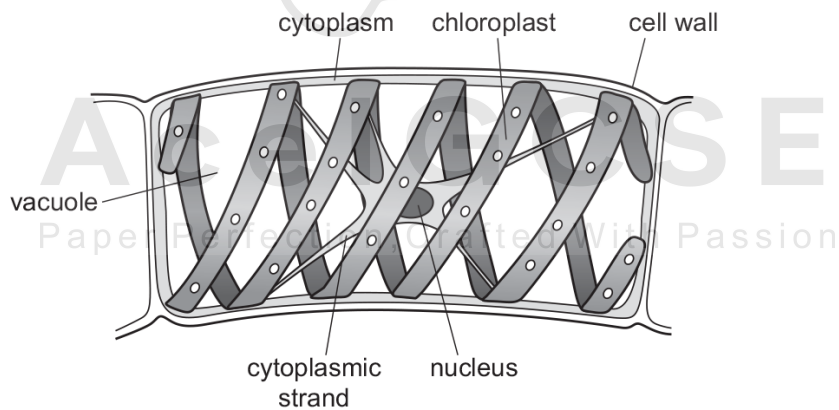
15. 0610\_s19\_qp\_23 Q: 3

In cells with a high respiration rate, what would be found in the cytoplasm in increased numbers?

- A mitochondria
- B ribosomes
- C rough endoplasmic reticulum
- D vesicles

16. 0610\_m18\_qp\_22 Q: 4

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
<b>A</b>	✓	✓	✓	✓	✓
<b>B</b>	✓	✓	x	x	✓
<b>C</b>	✓	x	✓	✓	x
<b>D</b>	x	✓	✓	x	✓

2.1. CELL STRUCTURE AND ORGANISATION

17. 0610\_s18\_qp\_21 Q: 5

In which part of the cell does aerobic respiration occur?

- A cytoplasm
  - B mitochondrion
  - C ribosome
  - D vesicle
- 

18. 0610\_s18\_qp\_21 Q: 8

Which part of a plant root hair is partially permeable?

- A the cell sap
  - B the cell surface membrane
  - C the cell vacuole
  - D the cell wall
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19. 0610\_w18\_qp\_21 Q: 3

Which part of a plant cell controls the movement of substances into and out of the cell?

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

20. 0610\_w18\_qp\_23 Q: 3

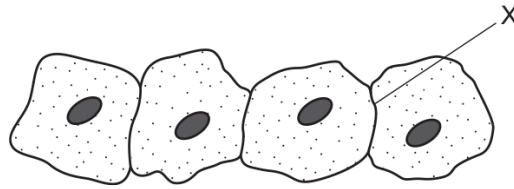
Sunflowers have yellow flowers.

Which cell structure is found in sunflower leaves but **not** in the petals of the flowers?

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

21. 0610\_s17\_qp\_21 Q: 2

The diagram shows some animal cells, as seen under the microscope.



What will be present at X?

- A one cell membrane
  - B one cell wall
  - C two cell membranes
  - D two cell walls
- 

22. 0610\_s17\_qp\_23 Q: 3

Which structures are present in large numbers in cells with high rates of metabolism?

- A chromosomes
  - B mitochondria
  - C ribosomes
  - D vacuoles
- 

23. 0610\_w17\_qp\_21 Q: 11

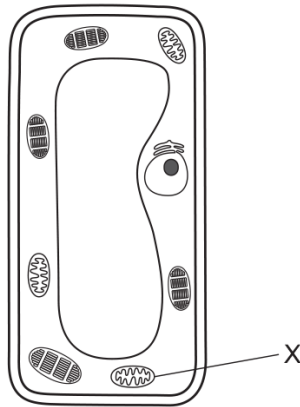
Which structure would be found in large numbers in cells that have a high energy requirement?

- A chloroplast
  - B endoplasmic reticulum
  - C large vacuole
  - D mitochondrion
-

2.1. CELL STRUCTURE AND ORGANISATION

24. 0610\_m16\_qp\_22 Q: 4

The diagram shows the detailed structure of a plant cell.



What is organelle X?

- A chloroplast
- B mitochondrion
- C nucleus
- D vacuole

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25. 0610\_s16\_qp\_21 Q: 4

Which organelles are present in large numbers in cells that produce insulin?

- A nuclei and mitochondria
- B ribosomes and mitochondria
- C rough endoplasmic reticulum and cell walls
- D vesicles and nuclei

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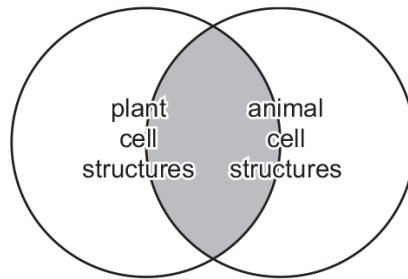
26. 0610\_s16\_qp\_21 Q: 33

Which structures are present in a bacterial cell?

	cell wall	nucleus
A	✓	✓
B	✓	x
C	x	✓
D	x	x

27. 0610\_s16\_qp\_23 Q: 3

The shaded area of the diagram represents structures found in both plant and animal cells.

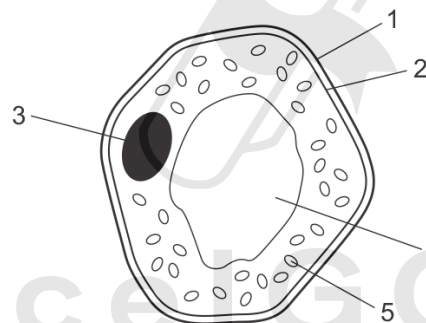


Which cell structure is from the shaded area?

- A cell membrane
- B cell wall
- C chloroplast
- D large vacuole

28. 0610\_w16\_qp\_21 Q: 4

The diagram shows a spongy mesophyll cell from a green leaf.



Which labelled structures are **not** found in animal cells?

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

29. 0610\_w16\_qp\_21 Q: 5

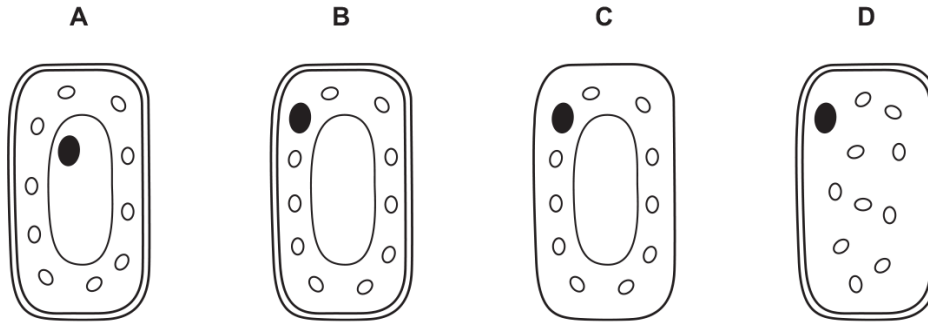
What are the features of the cell walls in a xylem vessel?

	end wall	side wall
A	absent	thick
B	absent	thin
C	present	thick
D	present	thin

2.1. CELL STRUCTURE AND ORGANISATION

30. 0610\_w16\_qp\_22 Q: 4

Which diagram represents a typical plant cell?



31. 0610\_w16\_qp\_22 Q: 5

A student draws a diagram of a mitochondrion.

The diagram has a magnification of  $\times 20\,000$ .



The diagram is 5 cm long.

What is the actual size of the mitochondrion?

- A 0.00025  $\mu\text{m}$     B 0.0025  $\mu\text{m}$     C 0.025  $\mu\text{m}$     D 2.5  $\mu\text{m}$

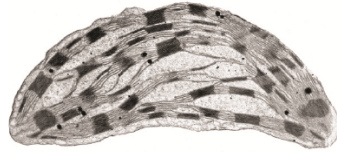
32. 0610\_w16\_qp\_23 Q: 4

Which feature shows that a cell is a plant cell?

- A cell membrane  
B cell wall  
C cytoplasm  
D nucleus

33. 0610\_w16\_qp\_23 Q: 5

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



The actual length of the chloroplast is  $5\ \mu\text{m}$ .

What is the magnification of the image?

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



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Paper Perfection, Crafted With Passion

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SN	Paper	Q. No.	Answer
01	0610_m22_qp_22	4	B
02	0610_s21_qp_22	4	B
03	0610_s21_qp_23	4	C
04	0610_w21_qp_21	3	C
05	0610_w21_qp_23	3	C
06	0610_m20_qp_22	4	D
07	0610_p20_qp_20	1	A
08	0610_s20_qp_21	3	D
09	0610_s20_qp_22	3	A
10	0610_w20_qp_21	3	D
11	0610_m19_qp_22	3	D
12	0610_s19_qp_21	3	B
13	0610_s19_qp_21	4	B
14	0610_s19_qp_22	3	B
15	0610_s19_qp_23	3	A
16	0610_m18_qp_22	4	A
17	0610_s18_qp_21	5	B
18	0610_s18_qp_21	8	B
19	0610_w18_qp_21	3	A
20	0610_w18_qp_23	3	C
21	0610_s17_qp_21	2	C
22	0610_s17_qp_23	3	B
23	0610_w17_qp_21	11	D
24	0610_m16_qp_22	4	B
25	0610_s16_qp_21	4	B
26	0610_s16_qp_21	33	B
27	0610_s16_qp_23	3	A
28	0610_w16_qp_21	4	B
29	0610_w16_qp_21	5	A
30	0610_w16_qp_22	4	B
31	0610_w16_qp_22	5	D
32	0610_w16_qp_23	4	B
33	0610_w16_qp_23	5	C