



CHEMISTRY ONLINE
— **TUITION** —

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BIOLOGY

CELLS

Level & Board	AQA (A-LEVEL)
TOPIC:	CELL STRUCTURE & MICROSCOPY
PAPER TYPE:	QUESTION PAPER-2
TOTAL QUESTIONS	6
TOTAL MARKS	31

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Cell Structure and Microscopy - 2

1.

(a) The components of plant, algae, fungal, and prokaryotic cell walls are displayed in the table.

Place a checkmark (✓) in the table whenever a component of the cell wall is present.

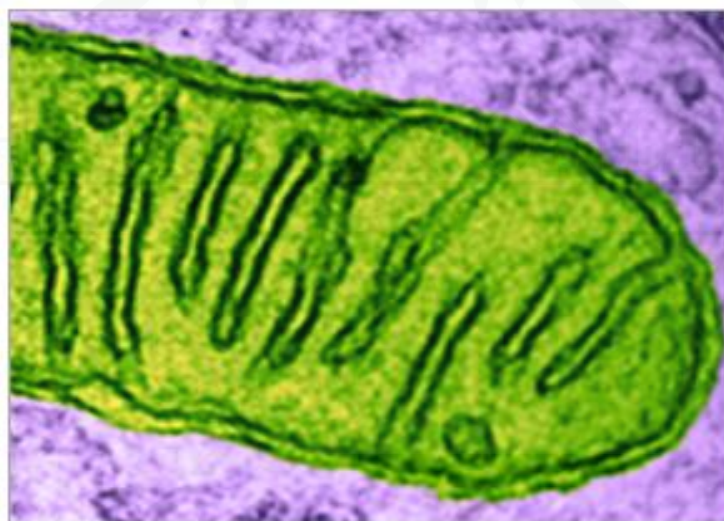
(3)

Cell wall component	Plants	Algae	Fungi	Prokaryotes
Cellulose				
Murein				
Chitin				

2.

(a) Figure 2 shows a photograph of part of a mitochondrion from a mouse liver cell taken using a transmission electron microscope at $\times 62\,800$ magnification. (4)

Figure 2



Create a scientific drawing in the box below of the mitochondrion shown in Figure 2.

On your sketch, indicate the following mitochondrion components.

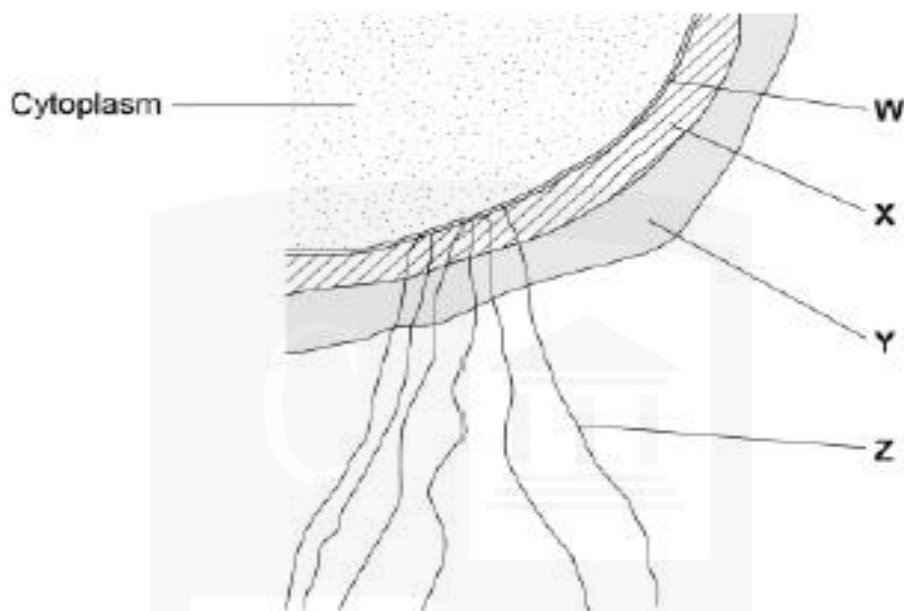
- Matrix
- Crista



I am Sorry !!!!!

3.

The schematic depicts a portion of a prokaryotic cell.



(a) Name the structures in the diagram that are labelled W through Z. (2)

W

X

Y

Z

(b) Identify the primary biological component in: (2)

W

X

(c) Identify the division process of prokaryotic cells. (1)

4.

(a) Plant cells are made up of Structures A through E.

A Cell Wall

B Chloroplast

C Nucleus

D Mitochondrion

E Golgi Apparatus

Put the appropriate letter A, B, C, D, or E in the box next to each statement to finish the table. (3)

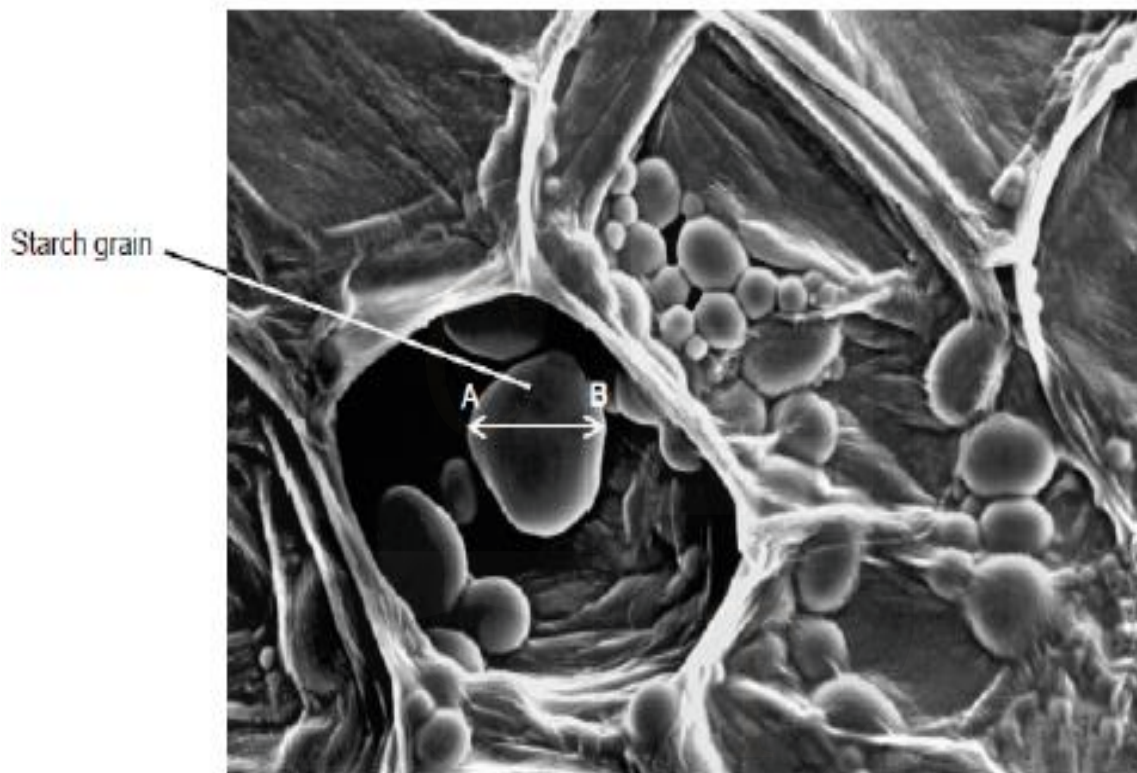
Statement	Letter
Has stacked membranes arranged in parallel and contains DNA.	
Is made of polysaccharide.	
Is an organelle and is not surrounded by two membranes.	

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5.

(a) A section through a plant tissue at $\times 500$ magnification is depicted in the diagram.



Determine the starch grain true diameter between points A and B. (2)

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Answer = _____ μm

(b) Which kind of microscope was used to capture the image depicted in the above diagram?

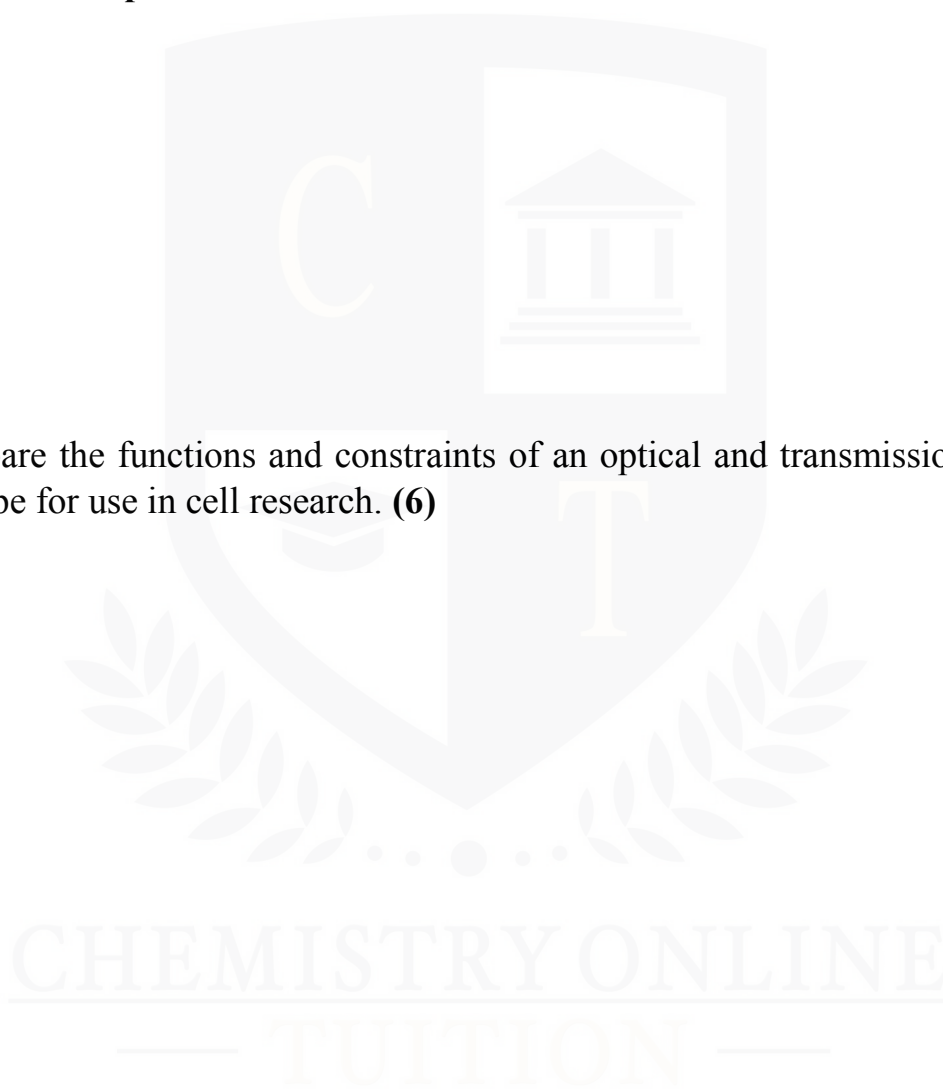
Provide a single example to back up your response. **(2)**

Type of microscope

Evidence

6.

(a) Compare the functions and constraints of an optical and transmission electron microscope for use in cell research. **(6)**



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- Founder & CEO of Chemistry Online Tuition Ltd.
- Completed Medicine (M.B.B.S) in 2007
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