Title

O-Level Topical Biology (PAPER-1)

MCQ's

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PREFACE

IN THE NAME OF ALLAH, MOST GRACIOUS AND MOST MERCIFUL.

Biology is a fascinating subject that helps us explore the wonders of life - from the tiniest cell to the most complex ecosystems. Understanding this subject not only strengthens scientific thinking but also inspires curiosity about the world around us.

This book, O Level Biology (5090) Topical Unsolved Past Papers with Mark Scheme, has been carefully designed to help students practice and master every topic of the updated syllabus (2025–2027). Each question has been organized sub topic by sub topic, **19 Topics and 52 sub topics** enabling learners to focus on one concept at a time and build confidence step by step.

To further support preparation, all variants have been included along with detailed mark schemes. This approach allows students to understand how examiners award marks and how to present answers effectively in the actual examination.

We hope this book will serve as a reliable study companion for both teachers and students. Consistent practice, clear concepts, and self-assessment through this resource will surely lead to success in the Cambridge O Level Biology examination, Insha'Allah.

Wishing you all the best in your learning journey and future achievements!

Rabbani Publications

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Quality Policy

- Customer satisfaction is our priority and achieve this goal we will always, work as a team.
- Produce and supply finest quality goods meeting all the specification including Environmental concern and safety
- Every employee will influence to contribute towards
- Quality improvement to sustain through ideas and innovation.

- گاہک کا اطمینان ہماری اولین ترجیح ہے۔
- اپنے مقصد کے حصول کیلئے ہم ہمیشہ بحیثیت ایک ٹیم کام کرتے ہیں۔
- گاہک کی ضروریات اور ماحولیاتی حالات اور احتیاطی تدابیر کہ مدنظر رکھتے ہوئے معیاری اشیاء فراہم کرتے ہیں۔
- ہر فرد اپنے خیالات اور تخلیقات کے ذریعے بہتر کوالٹی اور اس کو برقرار رکھنے کیلئے موثر کردار ادا کرتا ہے۔

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Q27/12/M/J/18

1 Some young plants were put into the soil and grew well for a few weeks. They then began to show signs of disease. Samples of the diseased leaves were examined using a microscope.

Which observations of the organism causing the disease show that it could be a fungus?

	long and thread-like structure	chloroplasts not present	cell walls present	nuclei surrounded by a membrane
A	✓	✓	✓	✓
B	✓	✓	✓	✗
C	✓	✗	✗	✓
D	✗	✓	✓	✓

key
✓ = yes
✗ = no

Q26/11/O/N/18

2 Which statement is correct for all viruses but **not** for all bacteria and fungi?

A Most of the cell is cytoplasm.

B Their outer layer is cellulose.

C They are all parasites.

D They have a nucleus containing DNA or RNA.

Q1/12/O/N/18

3 A cell is observed under a microscope.

Which feature identifies it as a plant cell?

A The cell contains a single large sap vacuole.

B The cell contains glucose and amino acids.

C The cell contains stored fat.

D The cell surface membrane is partially permeable.

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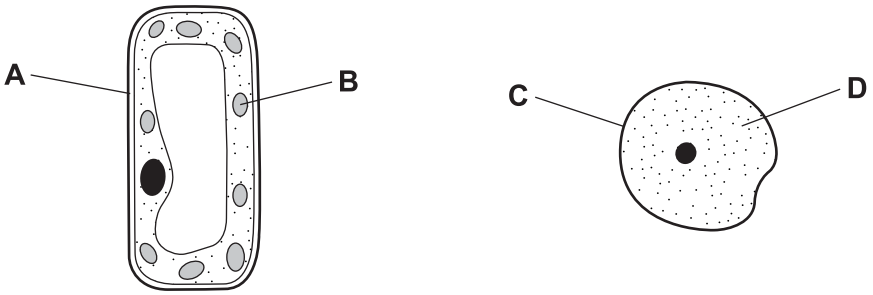
Q1/11/M/J/19

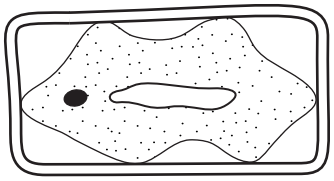
4 The diagram shows a cell from a plant leaf and a cell from an animal's skin.

Which part will stain blue-black with iodine solution?



Q2/11/M/J/19

5 The diagram shows a plant cell after being placed in a solution for an hour.



What provides the explanation for the appearance of this cell?

A The cell has gained water and is turgid.

B The cell has gained water and is no longer turgid.

C The cell has lost water and is turgid.

D The cell has lost water and is no longer turgid.

Q26/11/M/J/19

6 What are characteristics of bacteria?

	contain cytoplasm	have DNA	nuclear membrane present
A	✓	✓	✓
B	✓	✓	✗
C	✓	✗	✓
D	✗	✓	✓

key
✓ = yes
✗ = no

RABBANI BROTHERS & SON's

Q1/12/M/J/19

7 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

Q1/11/O/N/19

8 During a lesson about animal and plant cells, a student reads out a number of statements about cell structure. Only three of his statements are correct.

1 All cells have a cell wall.
2 Cell walls are made of cellulose.
3 Chromosomes carry DNA.
4 Cell walls contain starch.
5 All cells have a cell membrane.
6 A sap vacuole helps an animal cell maintain its turgor.
7 Chromosomes are found in the cytoplasm.

Which three statements are correct?

A 1, 3 and 7 **B** 2, 3 and 5 **C** 2, 4 and 6 **D** 4, 5 and 7

Q1/12/O/N/19

9 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

Q1/12/M/J/20

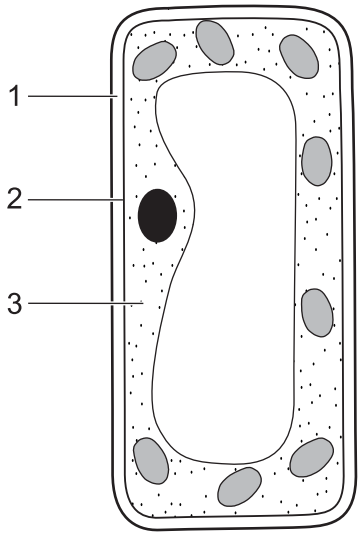
10 Starting with the smallest, and ending with the largest, what is the correct sequence of these parts of an organism?

A chromosome → gene → nucleus → cell → tissue
B chromosome → gene → nucleus → tissue → cell
C gene → chromosome → nucleus → cell → tissue
D gene → chromosome → nucleus → tissue → cell

RABBANI BROTHERS & SON's

Q1/11/O/N/20

11 The diagram shows the structure of a cell from a leaf of a green plant.



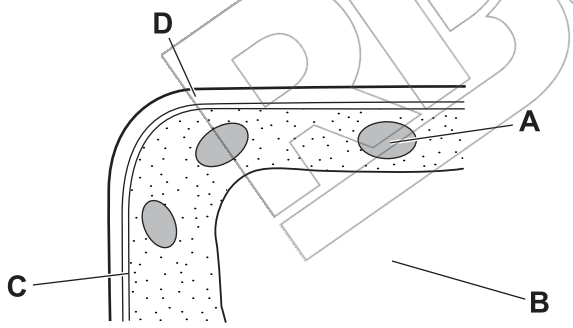
What are the numbered parts of the cell?

	1	2	3
A	cell membrane	cell wall	cytoplasm
B	cell membrane	cytoplasm	cell wall
C	cell wall	cytoplasm	cell membrane
D	cell wall	cell membrane	cytoplasm

Q1/12/O/N/20

12 The diagram shows part of a plant cell.

Which part controls the entry of substances into the cell?



RABBANI BROTHERS & SON's

Q1/11/M/J/21

13 Which structures are present in plant cells but **not** in animal cells?

A cell membrane, cytoplasm, chloroplasts

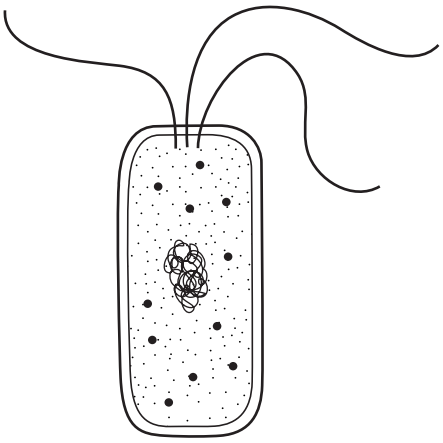
B cell wall, chloroplasts, sap vacuole

C cell wall, cell membrane, cytoplasm

D cytoplasm, nucleus, chloroplasts

Q26/11/M/J/21 Q26/12/M/J/21

14 The diagram shows the structure of a bacterium.



In what way does this differ from a cell of a fungus?

A The bacterium has a cell membrane.

B The bacterium has a cell wall.

C The bacterium has cytoplasm.

D The bacterium has no true nucleus.

Q1/12/M/J/21

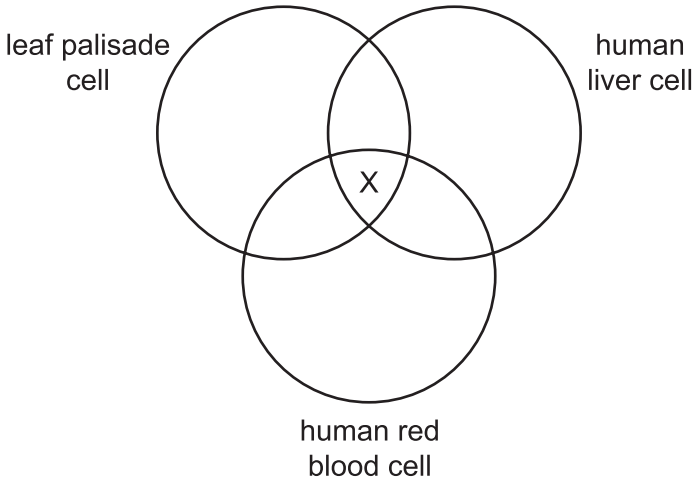
15 Which row is correct?

	cell	tissue	organ	organ system
A	chloroplast	mesophyll	liver	digestive
B	sap vacuole	red blood cell	blood	nervous
C	red blood cell	sap vacuole	stomach	liver
D	neurone	vascular bundle	leaf	excretory

RABBANI BROTHERS & SON's

Q1/11/O/N/21

16 The diagram represents the cell structures of a human liver cell, a leaf palisade cell and a human red blood cell.



Which cell structure is X?

A cell wall
B chloroplast
C cytoplasm
D nucleus

Q26/11/O/N/21

17 What is a feature of all bacteria?

A They are parasites.
B They have a nucleus.
C They are made of hyphae.
D They are single-celled organisms.

Q1/12/O/N/21

18 Four features found in cells are listed.

1 cell membrane
2 chloroplasts
3 nucleus
4 starch grains

Which two features are found in animal cells?

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

RABBANI BROTHERS & SON's

Q26/12/O/N/21

19 What is a feature of all bacteria?

A They are parasites.

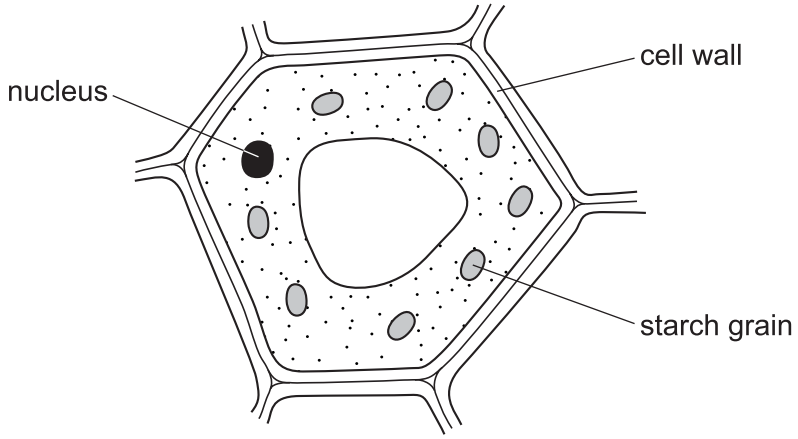
B They have a nucleus.

C They are made of hyphae.

D They are single-celled organisms.

Q1/11/M/J/22 Q1/12/M/J/22

20 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

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