This is a Class 1 exam

Lebanon Evangelical School
for Boys and Girls — Loueizeh - Baabda

Stage Exam 01
06NOV2023

Do NOT write in this box. Your MARK will be placed here.

Subject :	Biology
Class :	9A
Teacher :	Miss Rahmeh Hilal
Duration :	1 hour

Your name :		*Time taken to complete exam*
Your Class :		
Exam Room :		
How many sheets, including cover sheet :		

- Do not open this paper until the teacher in charge instructs you to do so.
- The most important thing to remember in taking an exam is NEVER PANIC.
- If you are caught cheating in this exam, you will be awarded zero for ALL exams that are taken on this day.

Q1.

Complex carbohydrates are broken down in the human digestive system.

(a) Name the elements present in a carbohydrate molecule.

(1)

.....

(b) Starch and glucose are carbohydrates found in living organisms.

Complete the table to show some of the properties of starch and glucose.
Insert a tick (✓) if the property applies or a cross (x) if it does not.

(3)

Carbohydrate	Soluble in water	Found in animal cells	Broken down by amylase	Small molecule	Absorbed in the stomach
starch			✓		X
glucose			X		✓

(Total for question = 4 marks)

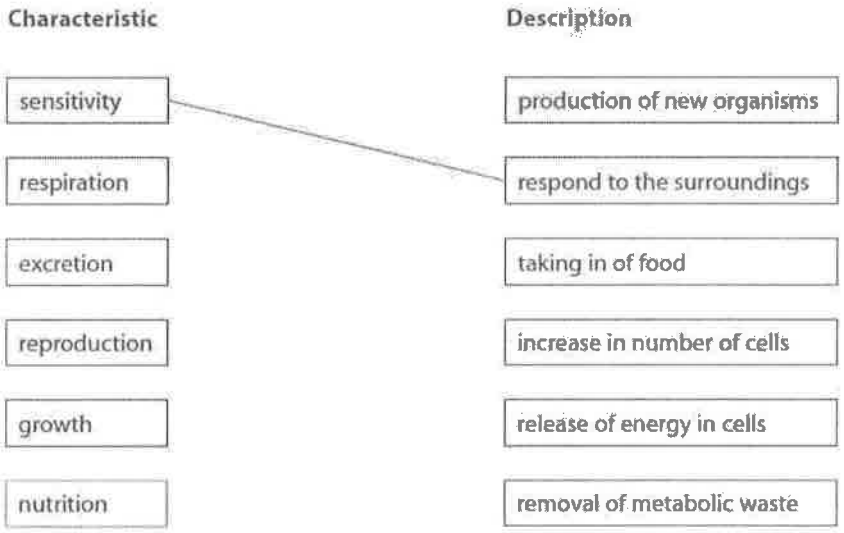
Q2.

Living organisms share some basic characteristics.

Draw a straight line from each characteristic to its correct description.

The first has been done for you.

(4)



(Total for question = 4 marks)

Q3.

All living cells contain enzymes.

(a) Describe the role of enzymes in cells.

(2)

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.....

(b) Explain how changes in temperature affect the activity of an enzyme.

(4)

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(Total for question = 6 marks)

Q4.

(a) The table shows four different groups of organisms.
Complete the table to give an example for each group.

(4)

Group	Example
animals	
fungi	
bacteria	
protoctists	

(b) Different groups have different features.
Complete the table below to show if the feature is present in all, some or none of each group.

Some of the table has been completed for you.

(3)

Group	Are multicellular	Cells have nucleus	Cells contain chloroplasts	Cells have cell walls
fungi		all		all
bacteria			some	all
protoctists	none		some	

(c) (i) Give one way in which the structure of a virus differs from a bacterium.

(1)

.....

.....

.....

(ii) Bacteria and viruses can act as pathogens. Give an example of a disease caused by a virus.

(1)

.....

(Total for question = 9 marks)

Q5.

All organisms share common basic characteristics. Some of these are given below with a simple description.

(a) Complete the table by adding the missing characteristics and the missing descriptions.

(4)

Characteristic	Description
nutrition	
	releasing energy in cells
	producing offspring
growth and development	

(b) Organisms can be classified into different groups depending on their structure.

State **two** ways in which

(i) a typical plant cell differs from a typical animal cell

(2)

.....

.....

.....

.....

(ii) a bacterium differs from a virus

(2)

.....

.....

.....

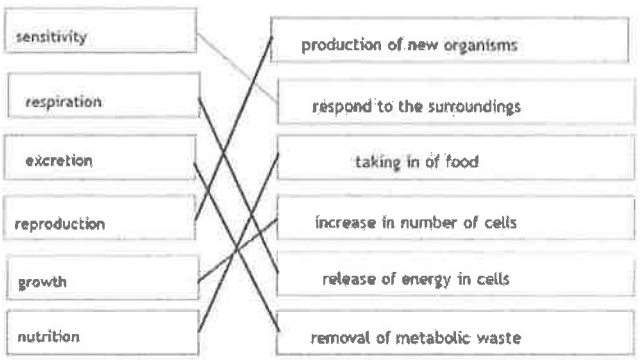
.....

(Total for question = 8 marks)

Q1.

<table>
<tr><th>Question number</th><th>Answer</th><th>Marks</th></tr>
<tr><td>(a)</td><td>C H O only / carbon, hydrogen and oxygen only;</td><td>1</td></tr>
<tr><td>(b)</td><td>
<table>
<tr><th>Carbohydrate</th><th>Soluble</th><th>Found in animal cells</th><th>Broken down by amylase</th><th>Small molecule</th><th>Absorbed in the stomach</th></tr>
<tr><td>Starch</td><td>X</td><td>X</td><td>√</td><td>X</td><td>X</td></tr>
<tr><td>Glucose</td><td>√;</td><td>√;</td><td>X;</td><td>√;</td><td>X;</td></tr>
</table>
A tick cross = zero
</td><td>5</td></tr>
</table>

Q2.

<table>
<tr><th>Question number</th><th>Answer</th><th>Notes</th><th>Marks</th></tr>
<tr><td></td><td>


</td><td>5 = 4
4 = 3
3 or 2 = 2
1 = 1</td><td>4</td></tr>
</table>

Total 4 marks

Q3.

<table>
<tr><th>Question number</th><th>Answer</th><th>Notes</th><th>Marks</th></tr>
<tr><td>(a)</td><td>1. catalyse / speed up / increase rate / lower activation energy / eq;

2. (chemical) reactions / (metabolic) reactions;</td><td>allows reactions at lower temperature = 2

2. Ignore examples e.g, respiration / breakdown of large molecules into small molecules</td><td>2</td></tr>
<tr><td>(b)</td><td>
<table>
<tr><th>Enzyme</th><th>Where produced</th><th>Function</th></tr>
<tr><td>amylase</td><td>salivary gland</td><td>digest / breakdown <u>starch</u>;</td></tr>
<tr><td>protease</td><td>stomach / pancreas;
allow small intestine</td><td>digest / breakdown <u>proteins</u> / <u>peptides</u>;</td></tr>
<tr><td>restriction;</td><td>bacteria</td><td>cutting DNA at certain points</td></tr>
<tr><td>ligase</td><td>cell nucleus</td><td>joining DNA / genes /eq;</td></tr>
</table>
</td><td>Turns starch into maltose = 0</td><td>5</td></tr>
</table>

Q4.

<table>
<tr><th>Question number</th><th>Answer</th><th>Notes</th><th>Marks</th></tr>
<tr><td>(a)</td><td>
<table>
<tr><th>Group</th><th>Example</th></tr>
<tr><td>animals</td><td>human / eq;</td></tr>
<tr><td>fungi</td><td>Mucor / eq;</td></tr>
<tr><td>bacteria</td><td>Lactobacillus / Pneumococcus / Salmonella / eq;</td></tr>
<tr><td>protoctists</td><td>Amoeba / Chlorella / Plasmodium / seaweed / algae / eq;</td></tr>
</table>
</td><td>allow mammals / birds / eq
allow mushroom / yeast / mould toadstool / ignore named disease / athlete's foot
ignore malaria</td><td>4</td></tr>
<tr><td>(b)</td><td>
<table>
<tr><th>Group</th><th>Are multicellular</th><th>Cells have nucleus</th><th>Cells contain chloroplasts</th><th>Cells have cell walls</th></tr>
<tr><td>fungi</td><td>some</td><td>(all)</td><td>none</td><td>(all);</td></tr>
<tr><td>bacteria</td><td>none</td><td>none</td><td>(some)</td><td>(all);</td></tr>
<tr><td>protoctists</td><td>(none)</td><td>all</td><td>(some)</td><td>some;</td></tr>
</table>
</td><td></td><td>3</td></tr>
<tr><td>(c) (i)</td><td>smaller;
protein coat / no cell wall / eq;
no cell membrane;
no cytoplasm / no organelles / no plasmids / no ribosome / eq;
no flagellum;</td><td>ignore reference to shape and reproduction
ignore nucleus / Golgi / mitochondria / eq
allow converse
ignore HIV</td><td>1</td></tr>
<tr><td>(ii)</td><td>tobacco mosaic / AIDS / influenza / any correct flu / cold / measles / eq;</td><td></td><td>1</td></tr>
<tr><td></td><td></td><td>Total</td><td>9</td></tr>
</table>

Q5.

<table>
<tr><th>Question number</th><th>Answer</th><th>Marks</th></tr>
<tr><td>(a)</td><td>
<table>
<tr><th>Characteristic</th><th>Description</th></tr>
<tr><td>nutrition</td><td>feeding / eating / nutrients / energy / eq;</td></tr>
<tr><td>respiration;</td><td>releasing energy in cells</td></tr>
<tr><td>reproduction;</td><td>producing offspring</td></tr>
<tr><td>growth and development</td><td>increase in size / more cells / cell division / eq;</td></tr>
</table>
</td><td>4</td></tr>
<tr><td>(b) (i)</td><td>cell wall / cellulose;
vacuole;
chloroplast / chlorophyll;
starch;</td><td>Max 2</td></tr>
<tr><td>(ii)</td><td>cell wall / (no) protein coat;
cell membrane;
cytoplasm / cell organelles; Ignore nucleus
plasmids / only DNA;
flagellum;
larger;
slime capsule;</td><td>Max2</td></tr>
</table>

Total 8 Marks