8Da

1 Which of these is a 'life process' carried out by all organisms?

A photosynthesis

B breathing

C fermentation

D respiration

2 Two kingdoms that contain many unicellular microorganisms are:

A prokaryotes and protoctists.

B animals and plants.

C yeast and fungi.

D viruses and bacteria.

3 Multicellular organisms need transport systems to carry materials to their cells because:

A diffusion is not fast enough to do this.

B diffraction is not fast enough to do this.

C dissolving is not fast enough to do this.

D dispersion is not fast enough to do this.

4 One feature of all prokaryotes is that they:

A have chloroplasts.

B do not have nuclei.

C do not respire.

D do not have cytoplasm.

8Db

1 Which of these is a food often made using yeast?

A chips **B** cheese

C bread **D** yoghurt

2 Which of these shows the correct word equation for anaerobic respiration in yeast?

A oxygen + glucose → carbon dioxide + water

B carbon dioxide + water → oxygen + glucose

C glucose → carbon dioxide + ethanol

D glucose + carbon dioxide → oxygen + water

3 Yeast reproduce by:

A binary fission **B** binary fusion

C fermentation **D** budding

4 The graph shows the growth of a population of yeast.

At point **P** the graph becomes level. One reason for this might be that:

A the yeast cells can only grow to a certain size.

B the food for the yeast has started to run out.

C it has got dark and there is not enough light for the yeast to grow.

D the carbon dioxide for the yeast has started to run out.

8Dc

1 Three resources needed by all bacteria for growth are:

A warmth, food and moisture.

B light, carbon dioxide and glucose.

C oxygen, nitrogen and mould.

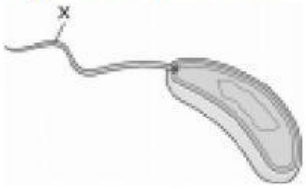
D darkness, moisture and nitrogen.

2 A product of fermentation of milk by bacteria is:

A ethanol. **B** oxygen.

C glucose. **D** lactic acid.

3 The drawing shows a bacterium.

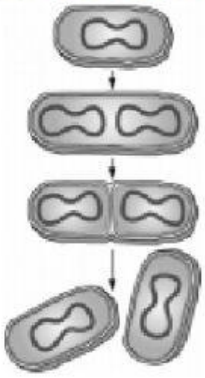


What is the part labelled **X** called?

A tail **B** chromosome

C cilium **D** flagellum

4 What process is shown in the diagram?



A globulisation.

B globalisation

C binary fission.

D glandibular separatisation.

8Dd

1 Three resources needed by algae for growth are:

A carbon dioxide, darkness, food.

B water, warmth, light.

C nitrogen, salt, water.

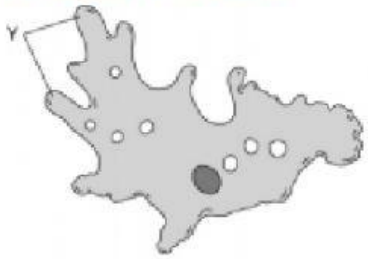
D oxygen, glucose, darkness.

2 If the amount of light increases, then organisms that photosynthesise will produce more:

A oxygen. B methane.

C carbon dioxide. D hydrogen.

3 The drawing shows an *Amoeba*.



What does it use the parts labelled **Y** for?

A photosynthesis

B moving

C controlling the cell

D storage

4 Why is light important for photosynthesis?

A It transfers energy from the Sun.

B It lets the organisms see.

C It warms up the ground.

D It contains chlorophyll.

8De

1 A decomposer is:

A an organism that spends a lot of its time asleep.

B an organism that is used to remove poisons from contaminated soils.

C an organism that breaks down dead organisms and animal wastes.

D an organism that has ten legs.

2 Examples of organic compounds include:

A sodium chloride, magnesium oxide and ammonium nitrate.

B fish, meat and eggs.

C water, oxygen and carbon dioxide.

D glucose, proteins and fats.

3 Decomposers are important because they:

A allow recycling.

B do not produce very much carbon dioxide.

C can move very fast and escape from predators.

D produce oxygen.

4 Which pair of processes both release the same products?

A fermentation and photosynthesis

B photosynthesis and aerobic respiration

C photosynthesis and combustion

D aerobic respiration and combustion

A pH probe was placed in some milk. The graph shows what happened.

Explain why the pH changed in this way.

Glucose is an organic compound. Name one other organic compound. Tick *one* box.

- ☐ A carbon dioxide
- ☐ B water
- ☐ C salt
- ☐ D protein

Some foods are dried to stop them going rotten. Explain how drying food stops moulds growing.

Explain how an increase in the numbers of yeast cells in an ecosystem will affect the supply of carbon for photosynthetic protoctists.

Maddy and Lilia are making bread. They make two different types of dough. They put a small amount of each dough mixture into two separate measuring cylinders and put the measuring cylinders in a warm place. The table shows their results:

	Dough A (100 g flour, 5 g sugar, 3.5 g yeast, 120 cm^3 water)	**Dough B (100 g flour, 10 g sugar, 3.5 g yeast, 120 cm^3 water)**
Starting volume (cm^3)	30	20
Finishing volume (cm^3)	55	50

a Why does the dough rise? Tick *one* box.

- ☐ A The sugar produces oxygen gas.
- ☐ B The flour produces carbon dioxide gas.
- ☐ C The yeast produces oxygen gas.
- ☐ D The yeast produces carbon dioxide gas.

b At the end of the experiment there were many more yeast cells than there were at the start. Describe how one yeast cell can become many yeast cells. Draw a diagram as part of your answer.

_____

_____

_____

a Many bacteria are decomposers. What does a decomposer do? Tick *one* box.

- ☐ A breaks down dead organisms
- ☐ B infects living organisms
- ☐ C photosynthesises
- ☐ D kills living organisms

b Explain why decomposers are very important in an ecosystem.

_____

_____

c Yeast is also a decomposer.

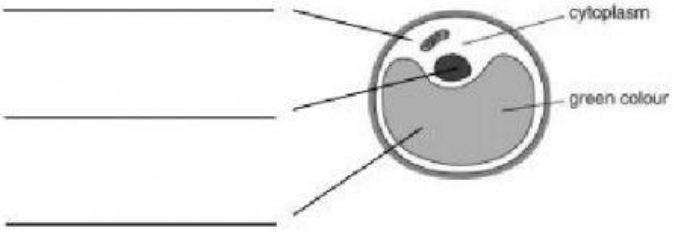
Bacteria and yeast do **not** belong to the same kingdom of organisms. State *one* difference between bacteria and yeast.

_____

_____

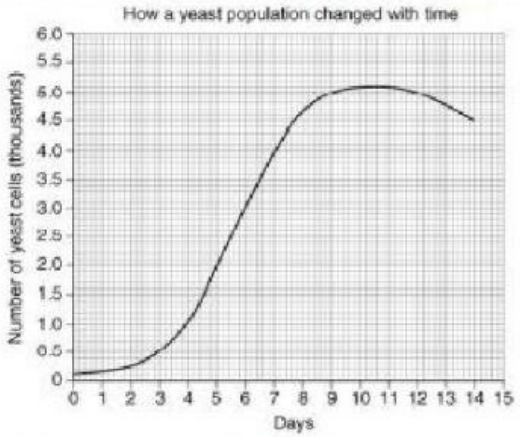
The drawing shows a photosynthetic unicellular organism called *Chlorella*.

Add lines with labels **P**, **Q** and **R** to the diagram to show different parts of the cell. Then fill in the table on the next page to give the names of the parts and their functions.



Letter	Name of part	Function of part
P		
Q		
R		

The graph shows how a population of yeast cells changed over two weeks.



a When was the population growing fastest? Tick *one* box.

- ☐ A days 0 – 4
- ☐ B days 4 – 7
- ☐ C days 7 – 10
- ☐ D days 10 – 15

b Explain what is happening to the yeast population from day 10 to day 11.

_____

_____

c Explain what is happening to the yeast population after day 11.

_____