Cells Homework 1

1. Which structural feature is found in a plant cell and not in an animal cell?

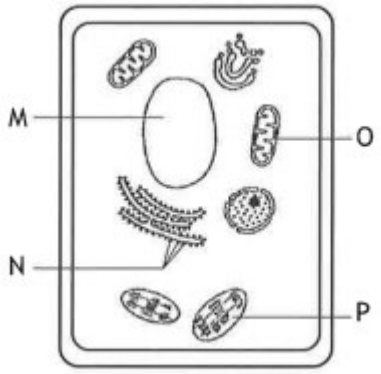
A Nucleus

B Cell wall

C Cell membrane

D Cytoplasm

2. The diagram below represents a plant cell.



Which parts of the cell would also be found in an animal cell?

A M and N

B N and O

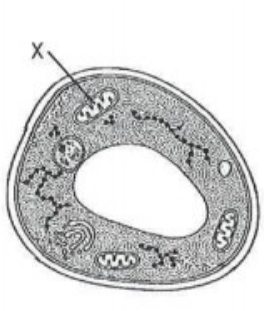
C M and P

D M, N, O and P

3. Which line in the table correctly identifies the functions of the cell wall and mitochondria.

	Function of the cell wall	*Function of the mitochondria*
A	prevents cell bursting	aerobic respiration
B	controls entry of substances	aerobic respiration
C	prevents cell bursting	photosynthesis
D	controls entry of substances	photosynthesis

4. The diagram below shows structures in a fungal cell.



Structure X

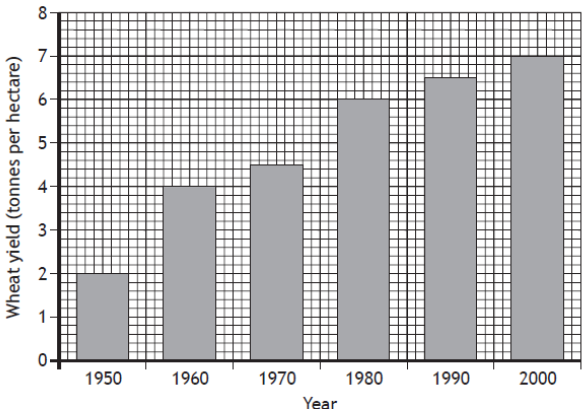
A controls all the cell's activities

B is the site of protein synthesis

C is the site of aerobic respiration

D is the site of photosynthesis

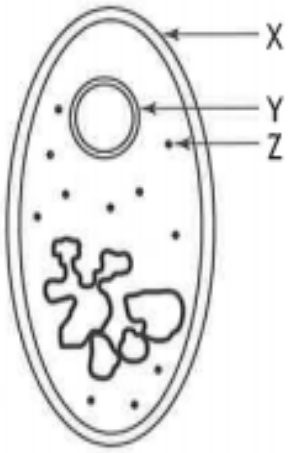
5. The following graph shows the changes in wheat yield over a fifty year period.



The percentage increase in wheat yield from 1950 to 2000 is:

A 5%
B 40%
C 250%
D 350%

1. (a) The diagram below represents a bacterial cell.



(i) Name the parts of the cell labelled X and Y. 2

X _____

Y _____

(ii) Give the function of structure Z. 1

_____

_____

(b) Give **one** difference and **one** similarity between the structure of a fungal and a bacterial cell.

Difference 1

_____

Similarity 1

_____

C) The cell wall in plants cells is made of a different substance than from yeast and bacterial cells.

State the name of the substance of which the cell wall is composed in plant cells.

_____ 1

2. A group of students carried out an investigation into the variety of cell types.

The types of cell they examined are shown in the box below.

Animal	Plant	Bacterial	Fungal

(a) (i) Identify the type(s) of cell which have a cell wall. **1**

_____

(ii) Identify the type(s) of cell which have a plasmid. **1**

_____

(iii) Some organelles are found in all cells.

Choose one of the following organelles and tick (✓) the appropriate box.

Describe the function of the chosen organelle. **1**

Ribosome ☐ Mitochondria ☐

Function _____

_____

(iv) Describe one difference between plant and fungal cells.

_____ **1**

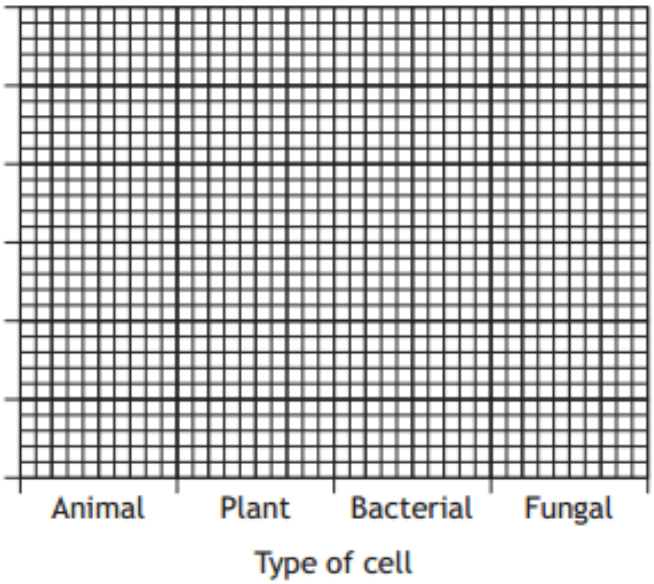
_____

2. (b) The students then measured a number of cells and calculated the average cell sizes. The results are shown in the table below.

Type of cell	*Average size of cell* (μm)
Animal	24
Plant	48
Bacterial	3
Fungal	7

On the graph paper below, complete the vertical axis and draw a bar chart to show the average size of the cells shown in the table. **2**

(Additional graph paper, if required, can be found on *Page twenty-six*)



(c) Calculate the average cell size of the four types of cell shown in the table above. 1

Space for calculation

_____ cells

(d) Calculate the percentage increase in the average size of cells from animal to plant cells.

_____ % 1

Total Marks = 19