

**AQA, OCR, Edexcel**

# GCSE Science

## GCSE Biology

Animal and Plant Cell Answers

Name:

**M M E**

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Total Marks: /22

Q1: Plant cells are specialised to use photosynthesis. What cellular component do plants use for this function?

Tick one box.

Vacuole

Ribosomes

Chloroplasts

(1 mark)

Q2: Figure 1 shows a diagram of a cell.

a)

i) What type of cell is shown in figure 1?

Answer- Plant Cell

(1 mark)

ii) Label the two structures labelled A and B in figure 1.

Answer- A= Vacuole

B= Mitochondria

(2marks)

iii) Figure 1 shows the cell wall and cell membrane. Discuss the functions of these cell components.

Answer: Cell wall- Provides Structure

Cell Membrane – Allows substances in and out of the cell

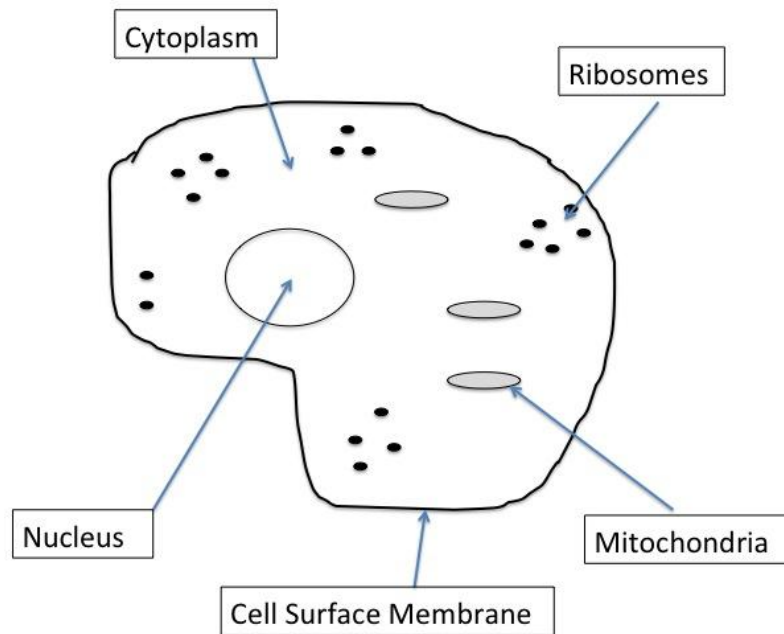
(2 marks)

iv) What is the cell wall in plants and algae made of?

Answer- Cellulose

(1 mark)

Q3: Draw and label an animal cell and its major structures.



Answer- 2 marks awarded for accurate drawing

1 mark awarded for each correctly labelled cell structure (max 4 marks)

NB: Accept either cell membrane or cell surface membrane.

(6 marks)

Q4: By what process do substances move across the cell membrane?

Answer - Diffusion

(1 mark)

Q5: Animal and plant cells both contain a nucleus. What is the role of the nucleus?

Answer- Contains the genetic material of the cell

(1 mark)

Q6: i) Give the definition of turgid.

Answer – Must contain the word 'swollen'

Other accepted terms – bloated

Can also accept explanation – e.g. high fluid content.

(1 mark)

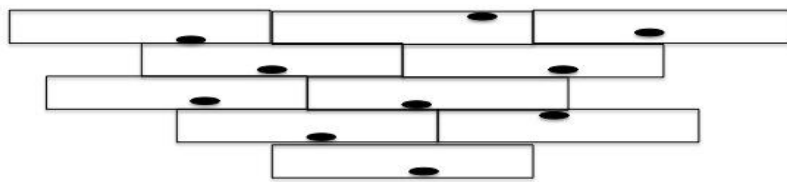
ii) What plant cell structure can be described as turgid?

Answer - Vacuole

(1 mark)

Q7: Scientists want to examine onion cells under the microscope. The scientists prepare the onion cells by taking one sheet of cells from the epidermis of the onion and place the tissue on a glass slide. Iodine is used to dye the onion cells and a cover slip is placed on top of the sample. A light microscope is used to observe the cells.

i) Draw what the scientists would expect to see under the microscope.



(2 marks)

ii) What does the iodine stain in order to see the cells?

Answer - Starch

(1 mark)

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- iii) Why can the scientists not see all of the cell components? Explain what the scientists could use to see the cells in more detail.

Answer- 1 mark – Low magnification

1 mark – Award mark for one of the following:

- Higher Magnification
- Electron Microscope

(2 marks)