

Cell structure recall questions

1. Draw an animal cell and label 5 different parts.
2. Write down a function for each cell part.
3. Write down three other parts and functions for plant cells.
4. What are three ways bacterial cells differ to eukaryotic cells?
5. Draw diagrams and/or write sentences to describe how structure makes cells specialised for (e.g. sperm cells, root hair cells)
6. What is one important difference between an electron microscope and a light microscope?
7. Calculate the real size of a cell if the image is 12m and the magnification x 200. Give the answer in micro meters.

Cell structure recall answers

1. Draw an animal cell and label 5 different parts.
2. Nucleus – controls cell activity, Cell membrane – controls what enters and leaves the cell, Mitochondria – aerobic respiration, Ribosomes – protein synthesis, Cytoplasm – chemical reactions take place.
3. Chloroplasts – photosynthesis, Permanent vacuole – store of cell sap, Cell wall – structure of the cell.
4. Smaller, no mitochondria, no nucleus but plasmids.
5. E.g. Sperm cell – tail for swimming to the egg, mitochondria for energy for swimming to the egg, enzyme in the head to break into the wall of the egg.
6. Higher magnification and higher resolution.
7. Magnification = image size / real size
 $200 = 12\text{mm} / \text{real size}$
 $\text{Real size} = 12\text{mm} / 200$
 $\text{Real size} = 0.06\text{mm}$
 $\text{Real size} = 60 \text{ micrometers}$