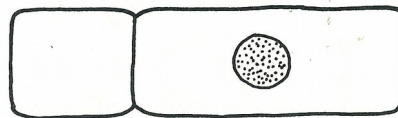


## Cells and tissues - answers

1 The section would appear like this



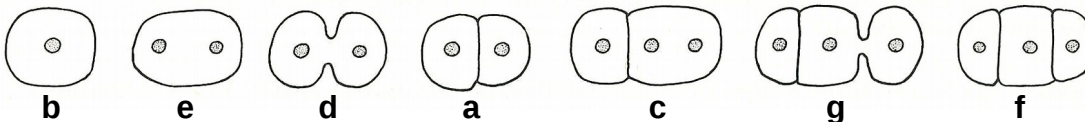
2 The magnification at which plant cells could be seen would be about  $\times 100$ .

3 Of the choices offered, (b) is the best description of a cell membrane's function: it controls the substances entering and leaving the cell.

4 (a) Plant and animal cells have cytoplasm, cell membrane, mitochondria, nucleus and chromosomes.

(b) Only plant cells have a cell wall, central vacuole and cell sap.

5 The most likely sequence is as shown below.



6 If a cell develops in such a way that it does one particular job very efficiently, it is said to be *specialised*. Such a cell is also said to be *adapted* to its function. A nerve cell is *specialised* for conducting impulses. It can do this efficiently because of its *shape* and the chemical reactions in its *cytoplasm*.

7 Cell structure: *nucleus, mitochondrion, cytoplasm*.

Tissue: *bone, nerve, muscle, epithelium*.

Organ: *brain, stomach, lung*.

System: *skeleton, heart and blood vessels, alimentary canal, lungs and windpipe*.

*Note: You could reasonably argue that the digestive system includes salivary glands, pancreas and liver, and therefore the alimentary canal is an organ, not a system.*