



Cell differentiation and Specialisation

1 Fill in the missing words

Animals and plants produced by sexual reproduction begin life as a, which is known as a fertilised egg or zygote. This cell must to produce a multicellular organism. It must also, so that its cells develop features that enable them to fulfil specific roles, at which point we can say that the cells are

[4 marks]

2 Match the below plant cells to their adaptations

Xylem

Cells have finger-like that increase the surface area.

Root hair cells

Cells have lots of chloroplasts filled with chlorophyll

Leaf cell

Cells are hollow in the centre, and joined end to end with no gaps

Phloem

Cells have very few subcellular structures, and holes in the end cell walls

[4 marks]

3 What is the function of a sperm cell and how is it adapted to its function?

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[3 marks]

4 Muscle cells are specialised for contraction. Give two adaptations that help them achieve this

- 1)
- 2)

[2 marks]

[Total - 13 marks]