

Foundation Separate version — Higher Tier (★) questions removed.

**Q1. State ONE difference between a eukaryotic and a prokaryotic cell.**

[1 mark]

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**Q2. A student observes a cell with a large permanent vacuole, a cell wall and mitochondria, but no chloroplasts. State the cell type and give THREE reasons for your answer.**

[3 marks]

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**Q3. Describe the function of THREE organelles found in both animal and plant cells.**

[3 marks]

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**Q4. Describe THREE structural features of a bacterial cell that differ from a plant cell.**

[3 marks]

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Total: 10 marks

**Q1 (1 mark)**

State ONE difference between a eukaryotic and a prokaryotic cell.

- Eukaryotic: membrane-bound nucleus; prokaryotic: no nucleus / circular DNA in cytoplasm [1] — accept: no membrane-bound organelles in prokaryotes

**Q2 (3 marks)**

A student observes a cell with a large permanent vacuole, a cell wall and mitochondria, bu...

- Plant cell [1]
- Has a cell wall (made of cellulose) [1]
- Has a permanent vacuole [1]
- Absence of chloroplasts indicates a non-photosynthetic plant cell (e.g. root cell) [1] — any 3 features with identification

**Q3 (3 marks)**

Describe the function of THREE organelles found in both animal and plant cells.

- Nucleus: contains DNA/chromosomes, controls cell activities [1]
- Mitochondria: site of aerobic respiration, produces ATP/energy [1]
- Ribosomes: site of protein synthesis [1]

**Q4 (3 marks)**

Describe THREE structural features of a bacterial cell that differ from a plant cell.

- Bacterial cell has no membrane-bound nucleus [1]
- Bacterial cell has circular DNA / may have plasmids [1]
- Bacterial cell has no chloroplasts or mitochondria (no membrane-bound organelles) [1]