

Question 1

| Question | Answers | Extra information | Mark |
|----------|--|---|------|
| 01.1 | Xcell membraneYcell wallYchloroplastZcytoplasm | 1 mark for each correct line. If more than one line is drawn from one box, do not allow a mark for that box. | 3 |
| 01.2 | protein synthesis respiration energy | Answers in this order only. | 3 |
| Total | | | 6 |



Question 2

| Question | Answers | Extra information | Mark |
|----------|--|-----------------------------|------|
| 02.1 | A DNA loop | Answers in this order only. | 2 |
| | B flagellum | | |
| 02.2 | allows the cell to move/swim | | 1 |
| 02.3 | Similarity | | 1 |
| | Any one from: | | |
| | • both have a cell membrane | | |
| | • both have a cell wall | | 1 |
| | both have cytoplasm | | |
| | • both contain ribosomes | | |
| | Difference | | |
| | Any one from: | | |
| | plant cells contain a nucleus/ prokaryotic cells have DNA floating free in the cytoplasm | | |
| | plant cells contain chloroplasts | | |
| | plant cells contain mitochondria | | |
| | prokaryotic cells have a flagellum | | |
| | prokaryotic cells contain plasmids | | |
| | prokaryotic cells are smaller than plant cells | | |
| Total | | | 6 |

Question 3

| Question | Answers | Extra information | Mark |
|----------|---|-------------------------|-------|
| 03.1 | contains genetic information | Accept chromosomes/DNA. | 2 |
| | controls the cell | | |
| 03.2 | Level 3: At least three differences between animal cells and plant cells are described and an explanation of why each these differences are important. For six marks, some additional details must be given. | | 5 - 6 |
| | Level 2: There are statements describing the differences between animal cells and plant cells. An attempt is made to explain why these differences are important | | 3 - 4 |
| | Level 1: There are simple statements describing some differences between animal cells and plant cells. Allow two marks for two correct statements. | | 1 - 2 |
| | No relevant content. | | 0 |
| | Indicative content: plant cells contain chloroplasts to allow them to make food/glucose by photosynthesis/using energy from sunlight animal cells do not need chloroplasts because animals obtain glucose/food/nutrients by feeding plant cells have a cell wall to strengthen and provide support for the cell animal cells do not need a cell wall because animals have a skeleton to support the cells plant cells have a (permanent) vacuole maintains the shape of the cell/keeps the cell rigid animal cells may have many smaller vacuoles/no vacuole Additional details: chloroplasts contain chlorophyll photosynthesis: carbon dioxide + water → glucose + oxygen cell wall is made of cellulose | | |
| Total | | | 8 |

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