

| Question number | Answer | Notes | Marks |
|-----------------|---|--|----------|
| 1 (a) (i) | cell <u>membrane</u> ; nucleus (must be lobed); cytoplasm; | ignore shape of cell must be labelled if cell wall no credit for membrane | 3 |
| (ii) | nucleus / bigger / irregular / not (bi)concave / eq / no haemoglobin; | allow converse | 1 |
| (b) | 1 ingest / engulf / surround / phagocytosis / eq; 2 enzymes; 3 digest / breakdown / eq; 4 lymphocytes; 5 antibodies / antitoxins; 6 specific / eq; 7 antigen: 8 memory / memory cell / eq; | | Max 5 |
| | | Total | 9 |

| Question number | Answer | Marks | | | | | | | | | | |
|------------------------|---|----------------|-------------|-----------|--|---------------------|---------------------------|----------------------|---------------------|------------------------|--|---|
| 3 (a) | <table border="1" data-bbox="439 311 1189 674"> <thead> <tr> <th data-bbox="439 311 815 349">Characteristic</th> <th data-bbox="815 311 1189 349">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="439 349 815 458">nutrition</td> <td data-bbox="815 349 1189 458">feeding / eating / nutrients / energy / eq;</td> </tr> <tr> <td data-bbox="439 458 815 530">respiration;</td> <td data-bbox="815 458 1189 530">releasing energy in cells</td> </tr> <tr> <td data-bbox="439 530 815 568">reproduction;</td> <td data-bbox="815 530 1189 568">producing offspring</td> </tr> <tr> <td data-bbox="439 568 815 674">growth and development</td> <td data-bbox="815 568 1189 674">increase in size / more cells / cell division / eq;</td> </tr> </tbody> </table> | Characteristic | Description | nutrition | feeding / eating / nutrients / energy / eq; | respiration; | releasing energy in cells | reproduction; | producing offspring | growth and development | increase in size / more cells / cell division / eq; | 4 |
| Characteristic | Description | | | | | | | | | | | |
| nutrition | feeding / eating / nutrients / energy / eq; | | | | | | | | | | | |
| respiration; | releasing energy in cells | | | | | | | | | | | |
| reproduction; | producing offspring | | | | | | | | | | | |
| growth and development | increase in size / more cells / cell division / eq; | | | | | | | | | | | |
| (b) (i) | cell wall / cellulose; vacuole; chloroplast / chlorophyll; starch; | Max 2 | | | | | | | | | | |
| (ii) | cell wall / (no) protein coat; cell membrane; cytoplasm / cell organelles; Ignore nucleus plasmids / <u>only</u> DNA; flagellum; larger; slime capsule; | Max2 | | | | | | | | | | |

Total 8 Marks

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|-----------------|---|---|----------|
| 4 (a) (i) | correctly labelled; | ignore other labels if label line goes to wall and membrane = 0 | 1 |
| (ii) | cell wall; chloroplast; vacuole; | ignore chlorophyll | 3 |
| (b) (i) | LHS / water level lower than RHS / sucrose level; | labelling not required | 1 |
| (ii) | <u>osmosis</u> ; | ignore diffusion | 1 |
| | | Total | 6 |