

### Chapter 1 – Cells

Question	Answers	Extra information	Mark
1(a)	A – nucleus B – cell membrane C – cytoplasm D – mitochondria		1 1 1 1
(b)	Any one from: <ul style="list-style-type: none"> <li>• cell wall</li> <li>• vacuole</li> <li>• chloroplast</li> </ul>		1
2(a)	leaf cell – carry out photosynthesis red blood cell – carry oxygen root hair cell – absorb water and nutrients nerve cell – carry electrical impulses	2 marks for two correctly matched 1 mark for one correctly matched	3
(b)	Any one from: <ul style="list-style-type: none"> <li>• tail (to swim)</li> <li>• streamlined head</li> <li>• lots of mitochondria (to transfer energy for movement)</li> </ul>		1
3	cell membrane higher lower oxygen blood		1 1 1 1 1
4(a)	eyepiece/eyepiece lens		1
(b)	E and F		1
(c)	(on the) stage	Accept part C or part D	1

Question	Answers	Extra information	Mark
5(a)	transport oxygen around the body		1
(b)	Any two from: <ul style="list-style-type: none"> <li>• contain haemoglobin</li> <li>• disc-like shape/bi-concave</li> <li>• no nucleus</li> </ul>		2
6(a)	A – cell wall B – nucleus		1 1
(b)	contains genetic material/controls the cell	Do not allow brain of the cell	1
(c)	keeps the cell firm/contains cell sap		1
7	Any four from: <ul style="list-style-type: none"> <li>• place the sticky tape on a slide</li> <li>• add a stain/named stain</li> <li>• add a cover slip</li> <li>• place on the stage</li> <li>• select the magnification</li> <li>• focus the image using the focus knob</li> </ul>		4
8(a)	organism made up of one cell		1
(b)	to control what substances can move into/out of a cell		1
(c)	Any two from: <ul style="list-style-type: none"> <li>• nucleus divides</li> <li>• cytoplasm divides</li> <li>• two identical cells produced</li> </ul>		2
9(a)	only leaf cells contain chloroplasts/no chloroplasts in root hair cells chloroplasts carry out photosynthesis light is needed for photosynthesis/no light underground		1 1 1

Question	Answers	Extra information	Mark
(b)	x400	Accept 10 × 40 for 1 mark	2
10(a)	arrow pointing into the cell		1
(b)	molecules move from a place of higher concentration to a place of lower concentration		1
(c)	Any three from: <ul style="list-style-type: none"><li>• water diffuses into the cell vacuole</li><li>• this pushes outwards on the cell wall</li><li>• creating pressure</li><li>• making the cell rigid (and the plant stands upright)</li></ul>		3