

Mark scheme 1.1 cells and movement across cell membranes

- /1 (a) (i) A line drawn **outside** cell membrane; 2
 Nucleus, vacuole & chloroplasts (not dots) (all needed) correctly drawn;
 Must be able to distinguish the three different organelles
- (ii) {Controls/regulates/selects} {the movement of substances /what} 1
 into and out of cell;
NOT protect cell/maintain shape
- (b) (i) I Into the cell ✓; 3
 II Into the cell ✓;
 III Cell B ✓;
- (ii) Diffusion; 1

Question 6/1 Total

[7]

Question		Marking details	AO1
1	(a)	For each cell the correct organelles should be drawn in the correct location in the cell Root cell: nucleus (1) mitochondria (1) If chloroplast drawn and labelled (- 1). Palisade cell: Nucleus (1) Mitochondria (1) Chloroplasts (1) Animal cell: Nucleus (1) Mitochondria (1) If chloroplast drawn (-1)	7
	(b)	A Cell wall (1) B Cell membrane (1)	2
		Question 1 total	9

Question		Marking details	Marks Available	
4	(a)	High and low; (1) both for one mark Semi-permeable; (1)	2	
	(b)	(i)	3/ the strong solution of blackcurrant squash;	1
		(ii)	All readings correct (20 (column 2) + 24 (column 3));	1
		(iii)	2 bars of correct height in correct position;	1
		(iv)	2 and no change in <u>mass</u> /the potato chip was still 20g after 30 minutes; NOT weight	1
		(v)	Water concentration was higher outside the chip; Water {passes in/is absorbed}/chip gains water; Marks can be linked in either direction	2
Question 4 Total			[8]	

Question Number		Sub-section		Mark	Answer	Accept	Neutral answer	Do not accept
7	2	(a)	i	2	both substrate molecules having entered the enzyme; an attempt to make them connect;			
			ii	1	Lock and Key;		Enzyme substrate complex	
			iii	2	(Boiling) alters the shape of the {enzyme/active site}/ denatures enzyme; so the molecules do <u>not fit</u> into enzyme/ active site;			