

Question Number	Answer	Additional Guidance	Mark
3(a)	An explanation which includes reference to two of the following: <ul style="list-style-type: none"> <li data-bbox="383 320 1330 391">• description of water as a {polar / dipole / dipolar} molecule (1) <li data-bbox="383 427 1330 497">• water surrounds (polar) molecules allowing them to dissolve (1) <li data-bbox="383 534 1330 569">• hydrogen bonds form (1) 	ALLOW correct description of uneven charges	(2)

Question Number	Answer	Additional Guidance	Mark
3(b)	A description that makes reference to the following: <ul style="list-style-type: none"> <li data-bbox="383 786 1285 821">• carrier proteins (located in membrane) (1) <li data-bbox="383 858 1285 893">• (glucose enters by) facilitated diffusion (1) 	ALLOW channel proteins	(2)

Question Number	Answer	Additional Guidance	Mark
3 (c)	<p>An explanation which makes reference to three of the following:</p> <ul style="list-style-type: none"> • the percentage change in cell mass decreases as glucose decreases (1) • glucose is soluble / comparison between solubility (1) • higher ratio of glucose molecules has an osmotic effect (on the cell) / glycogen molecules does not have an osmotic effect (on the cell) (1) • water enters by osmosis (and increases cell mass) (1) 	<p>ALLOW converse ALLOW converse for glycogen</p> <p>ALLOW converse for glycogen</p> <p>ALLOW water molecules are not attracted to glycogen molecules ALLOW correct references to {water / osmotic / solute} potential</p>	(3)

Question Number	Answer	Additional Guidance	Mark
3 (d)(i)	A description which includes reference to the following: <ul style="list-style-type: none"> • joining together in condensation reactions (1) • forming {1,4 and 1,6} glycosidic bonds (1) 		(2)

Question Number	Answer	Additional Guidance	Mark
3 (d)(ii)	A description which includes reference to the following: <ul style="list-style-type: none"> • branched molecule for more rapid hydrolysis (1) • compact so more can be stored (1) 	ALLOW broken down ALLOW 'doesn't take up much space'	(2)