

Question Number	Answer	Additional guidance	Mark
2(a)	<ul style="list-style-type: none"> (adding a stain) allows structures to be seen / {differentiate / increase contrast} between structures 	e.g. chromosomes, DNA, lignin, organelles etc ACCEPT show detail more clearly ACCEPT converse argument for specimens which are not stained ignore to make specimens more visible	(1)

Question Number	Answer	Additional guidance	Mark
2(b)	An explanation that includes four of the following points: <ul style="list-style-type: none"> cellulose molecules can be organised into microfibrils. (1) (due to layers of) {cellulose / microfibrils} arranged in {different directions / a mesh} (1) {hydrogen bonds in cellulose molecules / hydrogen bonds in microfibrils / layers (of microfibrils) / lignin / secondary thickening / pectate} add {strength / support / stability} (1) {{(cellulose) microfibrils / mesh} held together by {pectin / pectate} (1) lignin makes {outside of xylem vessels / cell wall} impermeable (to water) (1) the structure of lignin described (1) 	ACCEPT lignin arrangement contributes to {rigidity / flexibility} (of vessel) ACCEPT cellulose microfibrils can't slide over each other ACCEPT lignin makes {cell walls / xylem} waterproof e.g. rings, spirals, ladders	(4)