

8. Transport in plants

8.1 Xylem and phloem

Paper 3 and 4

Marking Scheme

Q1.

(c)	vascular ; minerals / mineral ions ; roots ; sucrose ;	4	
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Q2.

(d)	<i>any three from:</i> dead / empty, cells ; no cytoplasm ; no, end / cross, walls OR (long) continuous tube ; thick / strong, walls ; ref. to lignin ;	3	
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Q3.

(d)	xylem ;	1	
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Q4.

(c)(i)	xylem ;	1	
(c)(ii)	xylem correctly labelled W on all three diagrams ;;;	3	

Q5.

(a)	xylem labelled ; phloem labelled ; root hair labelled ;	3	
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Q6.

(b)	<i>any three from:</i> thick walls ; containing lignin ; (lignin for) support (of vessel / tube) / AW ; no cell contents ; cells joined end to end / forming long continuous tube / no cross-walls ; to transport water ; AVP ;	3	e.g. narrow diameter to prevent water column 'breaking' / pits for side-ways movement of water / pits to by-pass a blockage
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Q7.

(a)(i)	label line and X pointing to any part of the 'star' in the centre of the root section ;	1	
(a)(ii)	composed of (group of) cells with similar structures ; working together to perform shared functions ;	2	