

# **8. Transport in plants**

## **8.1 Xylem and phloem**

### **Paper 3 and 4**

#### **Marking Scheme**

**Q1.**

(c)	vascular ; minerals / mineral ions ; roots ; sucrose ;	<b>4</b>	
-----	---	----------	--

**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 ;	<b>3</b>	
-----	--	----------	--

**Q3.**

(d)	xylem ;	<b>1</b>	
-----	---------	----------	--

**Q4.**

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

**Q5.**

(a)	xylem labelled ; phloem labelled ; root hair labelled ;	<b>3</b>	
-----	---	----------	--

**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 ;	<b>3</b>	e.g. narrow diameter to prevent water column 'breaking' / pits for side-ways movement of water / pits to by-pass a blockage
-----	--	----------	---

**Q7.**

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