

Question Number	Answer	Mark
3 (a) (i)	xylem (tissue/vessels) / eq ;	(1)

Question Number	Answer	Mark
3 *(a)(ii) QWC	<p>(QWC - Spelling of technical terms (<i>shown in italics</i>) must be correct and the answer must be organised in a logical sequence)</p> <p>Allow any pair for each of the following</p> <p>Water transport:</p> <ol style="list-style-type: none"> 1. hollow tubes / no living contents / end walls broken down / eq ; 2. idea of allow movement of water e.g. columns of water / vertical movement 3. ref to waterproof material / eq ; 4. idea that keeps water in the vessel e.g. less water lost 5. (pores / eq) ; 6. to allow sideways movement of water /eq ; <p>Support:</p> <ol style="list-style-type: none"> 7. ref. to {lignin / extra cellulose} ; 8. for strength ; 9. ref to {rings / spirals / eq} ; 10. for strength / flexibility ; 	<p>maximum (4)</p>

Question Number	Answer	Mark
3 (b)	<ol style="list-style-type: none"> 1. ref to correct stimulus e.g. chemical ; 2. some genes {switched off / switched on / eq} ; 3. mRNA from {switched on / eq} genes ; 4. mRNA translated / eq ; 5. idea of {protein synthesised / different proteins produced} ; 6. which (permanently) modify cell (to become specialised) /description of a modification / eq ; 	<p style="text-align: right;">maximum (3)</p>

Question Number	Answer	Mark
3 (c)	<ol style="list-style-type: none"> 1. ref to {sample / explants} from both (tissues) ; 2. ref to aseptic conditions / named example ; 3. grow cells into a callus / eq ; 4. ref to growth regulators / eq ; 5. ref to {cells / tissue} can differentiate / cells can become {whole plants / eq} ; 6. ref to details of procedure e.g. agar / leave for a suitable length of time / suitable controlled variable ; 	<p style="text-align: right;">maximum (4)</p>