

Transpiration MS

QUESTION 1

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	on diagram: arrow drawn from cell X, through air space and out through stoma above stoma		1
a)ii)	transpiration		1
b)i)	13-15	ignore units	1
b)ii)	any two from: <input type="checkbox"/> warmest / hottest / brightest time of day <input type="checkbox"/> water evaporates fastest <input type="checkbox"/> stomata open / more open	accept warmer / hotter or sun higher in sky	2
Total marks			5

QUESTION 2

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	transpiration / evaporation / diffusion	ignore osmosis	1
b)i)	D		1
b)ii)	any two from: <input type="checkbox"/> more / faster diffusion or evaporation or transpiration <input type="checkbox"/> molecules move faster <input type="checkbox"/> maintains concentration gradient or keeps water concentration low in the air or brings in more dry air or removes damp air / water		2
Total marks			4

QUESTION 5

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	B (B has) low(est) number of stomata or no stomata on upper surface or only 800 (on lower surface) less transpiration / evaporation / water loss owtte or water (vapour) is lost via stomata	only allow zero water loss if linked to no stomata on upper surface / linked to leaf B upper surface ignore references to leaf surface area	1 1 1
b)	reduce loss / amount of water (vapour) or reduced transpiration (from upper surface) warmer above leaf or wilted leaf folds over lower surface or lower leaf in shade or less light / heat / sun on lower side	accept converse do not allow no water is lost accept converse ignore reference to dust	1 1
Total marks			5

QUESTION 6

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	guard (cell)	ignore stoma / stomata	1
b)	Species A : <input type="checkbox"/> stomata open in dark / at night or close in light / in day <input type="checkbox"/> stomata closed during warm(est) period or open when cool(er) <input type="checkbox"/> heat (energy) / warmth	allow converse points for species B must give explicit link between heat	1 1 1

	increases evaporation / transpiration <input type="checkbox"/> reduces water loss / evaporation / transpiration	and transpiration ignore photosynthesis	1
Total marks			5