

# Competition and Adaptation 2 MS

## QUESTION 1

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	increased water uptake  (after) rain	ignore nutrients / food allow quicker water uptake allow collects water over larger area accept ideas in terms of more successful competitor	1  1
a)ii)	water storage or stability or safety from predators	ignore absorption of water from soil	1
b)	reduces water loss / evaporation wax protects plant or reflects heat or keeps plant cool or unpalatable folding reduces surface area or folding reduces warming	accept reduces transpiration allow stops water loss ignore reflects light accept enclosed stomata or less exposure of stomata or increased humidity or less water concentration gradient allow prevents burning ignore less likely to be damaged	1 1  1
Total marks			6

## QUESTION 2

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	brown (colour)		1
b)	(long) ears		1
c)	(long) horns		1
d)	(white) ring		1
Total marks			4

## QUESTION 3

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	(reduced) competition for any one from:  light water nutrients / ions / salts / minerals space colonise new areas	ignore fighting  ignore Sun  ignore food  allow less overcrowding	1 1
b)	hooks attach to animals / human	allow spines ignore wind dispersal	1 1

	clothing / animals carry fruits long distances		
Total marks			4

#### QUESTION 4

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	C		1
b)	B		1
c)	D		1
d)	E		1
e)	F		1
Total marks			5

#### QUESTION 5

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)		one mark for each line do not award mark for an adaptation if lines are drawn from it to more than one advantage	3
b)	escape (predators)	accept faster than swimming allow chase prey allow it stops them from drowning	1
c)	food territory	deduct one mark for each tick in excess of two	1 1
Total marks			6

#### QUESTION 6

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	extremophile(s)		1
b)i)	common (periwinkle) and flat	either order, both required	1
b)ii)	common and flat) both live in the same habitat / area / named area	allow habitats overlap the most	1
b)iii)	any two from:	allow cannot tolerate temperature	2

	<ul style="list-style-type: none"> <li>• would have wrong food</li> <li>• would otherwise be exposed to (specific) predators</li> <li>• cannot tolerate extended exposure to air or reduced submersion in seawater</li> <li>• cannot tolerate high salt concentration (in rock pools)</li> <li>• cannot compete with small periwinkle</li> </ul>	/ dehydration  allow low salt concentration (in rock pools)	
Total marks			5

### QUESTION 7

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	any two from: <ul style="list-style-type: none"> <li>• light</li> <li>• water</li> <li>• space</li> <li>• nutrients / ions / minerals / named</li> </ul>	ignore oxygen / food / sun / carbon dioxide  accept two named minerals / ions for 2 marks	2
a)ii)	less competition for water or more water / nutrients / minerals available	ignore space / light / food	1
b)	camouflage / same shape as leaf / looks like a leaf	allow 'blends in' ignore colour	1
Total marks			4