

The Organisms in the Environment

Mark Scheme 3

Level	IGCSE(9-1)
Subject	Biology
Exam Board	Edexcel IGCSE
Module	Double Award (Paper 1B)
Topic	Ecology and the Environment
Sub-Topic	The Organisms in the Environment
Booklet	Mark Scheme 3

Time Allowed: 35 minutes

Score: /29

Percentage: /100

Grade Boundaries:

9	8	7	6	5	4	3	2	1
>90%	80%	70%	60%	50%	40%	30%	20%	10%

Question number	Answer	Marks
1 (a)	less surface; fewer / no <u>stomata</u> ; (less) transpiration / evaporation / diffusion;	Max 2
(b)	obtain water; more area / eq; water at surface / before water evaporates / before water seeps into soil / eq; allow rain / dew	Max 2
(c)	less chance of being eaten/protection from animals /eq; allow if predator maintain still air / eq;	Max 1

Total 5 Marks

Question number	Answer	Marks
2	C vary pH / acid + alkali / eq; O same species / mass / number / concentration / amount of yeast / eq; R repeat each pH / eq; M1 mass / number / bubbles / carbon dioxide / M2 alcohol / eq; time period stated; S1 and S2 same temp / volume of water / same nutrients / conc. of nutrients / oxygen / eq;; Ignore light	Max 6

Total 6 Marks

Question number	Answer	Notes	Marks
3 (a) (i)	1. (food web) order correct; 2. all arrows correct;	plant, hare, fox, cats and eagles need to be in correct order allow order only if in pyramid	2
(ii)	herbivore / primary consumer;		1
(b) (i)	young heather;		1
(ii)	1. more food / eq; 2. more nutritious food / eq; 3. easier to digest / softer / less spikes / eq; 4. fewer other animals / competition from other herbivores; 5. camouflage / fewer predators / protection from predators / shelter from predators / hide in long grass;	2. ig re better quality / taste 4. ig re competition alone / intraspecific	3
(c) (i)	32;	allow one for $224 \div 700$	
(ii)	bilberry;		1

(d)	1. placed at random; 2. same sized quadrat	ignore repeat	1
-----	---	---------------	---

Total 11 marks

Question number	Answer	Notes	Marks
4 (a) (i)	deer;		1
(ii)	python;		1
(b) (i)	1. hear/listen to prey/predators / eq; 2. eat loss;	hear sound = 0	1
(ii)	camouflage / hide from prey/predators / eq;	ignore to keep warm	1
(iii)	see prey/predators/further / appear bigger / reach branches / climb trees / eq;	see alone = 0 ignore ideas about faster movement	1
(c)	1. idea of more carbon dioxide + less oxygen; 2. (less) photosynthesis;	ignore carbon dioxide is not changed into oxygen	2

(Total for Question = 7 marks)