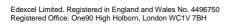


## Mark Scheme (Results) November 2010

IGCSE

IGCSE Biology (4325) Paper 1F





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## IGCSE BIOLOGY 4325/1F - November 2010

Question Number	Answer	Mark
1(a)	В;	(1)

Question Number	Answer	Mark
1(b)	D;	(1)

Question Number	Answer	Mark
1(c)	A;	(1)

Question Number	Answer	Mark
1(d)	D;	(1)

Question Number	Answer	Mark
1(e)	C;	(1)

Question Number	Answer	Mark
1(f)	В;	(1)

Question Number	Answer	Mark
1(g)	В;	(1)

Question Number	Answer	Mark
1(h)	D;	(1)

Question Number	Answer	Mark
1(i)	D;	(1)

Question Number	Answer	Mark
1(j)	Α;	(1)

Question Number	Answer		Mark
2(a)			
	Structure	Letter	
	Lower epidermis	A	
	Air space	F;	
	Palisade cells	В;	
	Spongy cells	С;	
	Guard cell	D;	
	Stomata	Ε;	
			(5)

Question Number	Answer	Mark
2(b)	carbon dioxide + water;; glucose + oxygen;;	
		(4)

Question Number	Answer	Mark
2(c)(i)	increases / eq;	(1)

Question Number	Answer	Mark
2(c)(ii)	decreases / eq;	(1)

Question Number	Answer	Mark
3(a)	lines correctly drawn;;;	(3)

Question Number	Answer	Mark
3(b)(i)	carbon monoxide;	(1)

Question Number	Answer	Mark
3(b)(ii)	tar;	(1)

Question Number	Answer	Mark
3(b)(iii)	nicotine;	(1)

Question Number	Answer	Mark
4(a)(i)	oak tree;	(1)

Question Number	Answer	Mark
4(a)(ii)	shrew;	(1)

Question	Answer	Mark
Number		
4(a)(iii)	(sun)light ; chloroplasts / chlorophyll;	(2)

Mark
(3)

Question Number	Answer	Mark
4(b)(ii)	Two from: energy loss / eq; respiration / eq; shrews are small / do not give much energy / eq;	(2)

Question Number	Answer	Mark
5(a)(i)	explants;	(1)

Question Number	Answer	Mark
5(a)(ii)	micropropagation;	(1)

Question Number	Answer	Mark
5(a)(iii)	in vitro;	(1)

Question Number	Answer	Mark
5(a)(iv)	cloning;	(1)

Question Number	Answer	Mark
5(a)(v)	sterile;	(1)

Question Number	Answer	Mark
5(b)	insulin / eq;	
	converts/controls/lowers blood glucose / sugar / eq;	(2)

Question Number	Answer	Mark
6(a)(i)	phloem;	(1)

Question Number	Answer	Mark
6(a)(ii)	leaves make sugar / roots do not; needed for respiration / growth / storage / photosynthesis / eq;	(1)

Question Number	Answer	Mark
6(a)(iii)	consume sugars / reduce yield / harm plants / eq;	(1)

Question Number	Answer			Mark
6(b)	Statement	advantage	disadvantage	
	Harmless to other organisms	ſ		
	Acts slowly Some pests survive		$\int$	
	Pests unlikely to develop resistance	ſ		
	No need to use more than once	√;		
	2 correct = 1 4 correct = 2 5 correct = 3			
				(1)

Question Number	Answer		Mark
7			
	Name of structure	Order o size	
	brain	3	
	nucleus	1	
	nervous system	4	
	nerve cell	2	
	4 = 3, 2 = 2 and 1 = 1;;;		
			(3)

Question Number	Answer	Mark
8	bacteria; decomposition / decomposers; oxygen use; respiration; death of organisms / suffocate; mineral ions / named mineral ion / nutrients; Ignore fertiliser growth of algae /growth of plants / eq; eutrophication;	(5)

Question Number	Answer	Mark
9(a)(i)	iris labelled; pupil labelled; pupil larger in dim light;	(3)

Question Number	Answer	Mark
9(a)(ii)	muscle; I name of muscle contracts / shortens / eq;	(2)

Question Number	Answer	Mark
9(a)(iii)	more light / eq; allow sight / to see / get image / eq;	(2)

Question Number	Answer	Mark
9(b)	ciliary muscle; contracts / shortens / eq;	
	suspensory ligaments; slacken / relax / eq;	
	lens; fattens / eq;	
		(3)

Question Number	Answer	Mark
10(a)	haemoglobin; no nucleus; large surface area; biconcave /concave / doughnut / eq; thin (membrane);	(2)

Question Number	Answer	Mark
10(b)(i)	alternative form of a gene / eq;	(1)

Question Number	Answer	Mark
10(b)(ii)	Nn and Nn; N and n and N and n; NN, Nn, Nn, nn;	(3)

Question Number	Answer	Mark
10(b)(iii)	normal and sickled; R carrier	(1)

Question Number	Answer	Mark
11(a)	2; 4; 46; 23;	
		(4)

Question	Answer	Mark
Number		
11(b)	repair / healing / eq; cloning; <u>asexual</u> reproduction;	
		(2)

Question Number	Answer	Mark
11(c)	gametes; haploid;	(2)

Question Number	Answer	Mark
12(a)	increases; levels off / drops by a beat / decreases (at 60) / eq;	(2)

Question Number	Answer	Mark
12(b)	respiration / energy; muscles; oxygen; glucose; adrenaline; (removal of) lactic acid / carbon dioxide;	(4)

Question Number	Answer	Mark
13	hyphae; (cell) walls; nucleus / mitochondria / ribosomes / eq; yeast; anaerobic; glucose; carbon dioxide;	(17

Question Number	Answer	Mark
14(a)	fast growing; lots of eggs;	(2)

Question Number	Answer	Mark
14(b)	grows faster than Chinese; Allow less eggs than Chinese	(1)

Question Number	Answer	Mark
14(c)	selective breeding / artificial selection;	(1)

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