



Rewarding Learning

**General Certificate of Secondary Education
2011–2012**

Science: Single Award (Modular)

Human Activity and Health
Module 2

Foundation Tier

[GSC21]

TUESDAY 8 NOVEMBER 2011

2.30 pm–3.15 pm

**MARK
SCHEME**

			AVAILABLE MARKS		
1	(a) (i)	carbon monoxide; bronchitis	[2]	7	
	(ii)	is addictive/affects/speeds up heart rate	[1]		
	(b)	Cocaine _____ gives users a 'high'; cannabis _____ makes users feel relaxed	[2]		
	(c)	stick to recommended limits; drink low alcohol drinks	[2]		
2	(a)	polio	[1]	5	
	(b) (i)	antibodies	[1]		
		(ii)	works quickly		[1]
	(c)	bacteria	[1]		
(d)	A	[1]			
3	(a)	B – A – C (all correct = 2; 1–2 correct = 1)	[2]	8	
	(b) (i)	3000 = 2 marks; 1 mark for at least one graph point correct	[2]		
		(ii)	extinction		[1]
		(iii)	pollution		[1]
(iv)	Any two from: large numbers; over long period of time; sampled every five years	[2]			
4	(a)	to sterilise soup/apparatus/kill microbes	[1]	6	
	(b)	no contamination/as microbes could not gain entry/microbes trapped; in bend/swan neck/cannot go up neck;	[2]		
	(c)	Any two from: left in same temperature; same volume/type of soup; left for same time	[2]		
	(d)	Pasteur	[1]		
5	(a)	fossilisation/feeding	[1]	5	
	(b)	more combustion; less photosynthesis/deforestation	[2]		
	(c)	global warming; climates/sea levels/weather	[2]		

		AVAILABLE MARKS
6	fewer seedlings; not as close together/more spread; some died/didn't grow; due to competition/for light/water/space/minerals/nutrients	[4] 4
7	(a) (i) through the blood system	[1]
	(ii) Any three from: mutations; in chromosome/genes/DNA; divide uncontrollably; due to UV light	[3]
	(iii) (more) continental holidays/(more) sun bed use	[1]
	(b) Down syndrome	[1]
	(c) (i) new different/foreign diseases/antigens; does not have antibodies/memory cells	[2]
	(ii) for antibody level (to build up)/reach immunity level	[1]
	(iii) choice/not needed if not travelling/travel is luxury/not everyone goes on holiday	[1] 10
	Total	45