

Biology 2

Question Number										
FT	HT	Sub-section			Mark	Answer	Accept	Neutral answer	Do not accept	
1		(a)	i		2	A Cell wall B Chloroplast C Nucleus <i>3 correct = 2 marks</i> <i>2 correct = 1 mark</i> <i>0/1 correct = 0 marks</i>	A: cellulose wall			
			ii		2	1 yeast 2 alga 3 bacteria/ alga <i>3 correct = 2 marks</i> <i>2 correct = 1 mark</i> <i>0/1 correct = 0 marks</i>			Letters instead of names	
		(b)	i		1	all organisms consist of one or more living cells;				
				ii		1	A virus is not a cell;	has genes and protein coat <u>only</u> / no cytoplasm/ no cell membrane/ <u>only reproduces inside cell</u>		No nucleus/ it requires a host
				iii		1	light microscopes and electron microscopes; (in order)	laser imaging as alternative for light microscope		
	Total Mark					7				

Question Number		Sub-section			Mark	Answer	Accept	Neutral answer	Do not accept
2		(a)	i		1	Double helix;			
			ii		2	T,G,C <i>3 correct = 2 marks</i> <i>2 correct = 1 mark</i> <i>0/1 correct = 0 marks</i>			
		(b)			1	Proteins and amino acids;			
		Total Mark			4				

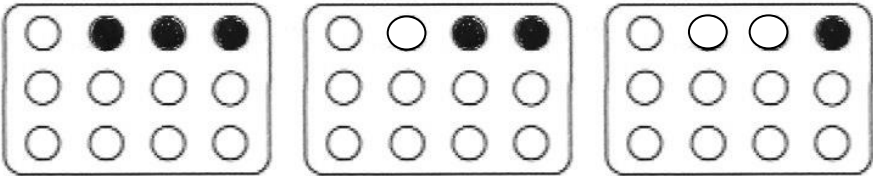
Question Number		Sub-section		Mark	Answer	Accept	Neutral answer	Do not accept
FT	HT							
3		(a)		4	Cells; Oxygen; Water; Enzymes;			
		(b)		2	carbon dioxide; (Lime water)turns {cloudy/ milky/ white};	CO ₂ cream		CO ²
		Total Mark		6				

Question Number		Sub-section		Mark	Answer	Accept	Neutral answer	Do not accept
4		(a)		1	Honey (bee) and bumble (bee);			
		(b)	i	1	{Loss of/less} nectar/ food (from wild flowers)/ {Loss of/less} nest sites/ {Loss of/less} habitat;			Fewer wild flowers/ wild flowers eaten by other animals Loss of space
			ii	2	480 000 and 180 000 OR 5 x 60 000; = 300 000; Correct answer = 2 marks			percentages
			iii	1	honey bee pollinates {food plants/ veg/ fruit}/ honey bee produces {food/ honey};			
		(c)		2	(loss of solitary bees) results in loss of {a number of/ <u>many/ 260</u> } species; (no pollination) – loss of species of wild flowers;			
Total Mark				7				

Question Number		Sub-section			Mark	Answer	Accept	Neutral answer	Do not accept
FT	HT								
5		(a)	i		2	paralyse cilia/ cilia unable move; mucus becomes {clogged/ dried}/ mucus builds up/ mucus thicker;	Mucus production increases	cilia {harmed/ don't work}/ mucus increases	cilia killed
			ii		1	tar;			
		(b)	i		1	suitable scale, correctly labelled; plotting must start at y axis all plots correct ($\frac{1}{2}$ small square tolerance); not extrapolated (all correct = 2 marks, 1 error = 1 mark, >1 error = 0 marks) line quality; drawn with ruler			
				2					
				1					
					2		Increase in number of cigarettes smoked increases <u>number of deaths</u> (from lung cancer); Small increase to <u>20</u> then a sharp increase;		
			iii		1	60;	Ecf from graph		
			iv		1	Some lung cancer deaths for 0 cigarettes/ some people who do not smoke die from lung cancer;			
		(c)			1	<u>Reference to {dangers/ harm} of {passive smoking/ second hand smoke /secondary smoking};</u>	Passive smoking makes people ill		second hand smoke affects people
		Total Mark			12				

Biology 2 - Common questions

Question Number		Sub-section		Mark	Answer	Accept	Neutral answer	Do not accept										
6	1	(a)		2	Water; Oxygen;	H ₂ O O ₂	Sunlight or Chlorophyll on arrow	H ₂ O O ₂										
		(b)	i	2	All correct = 2 marks 1 error = 1 mark > 1 error = 0 marks <table border="1"> <thead> <tr> <th>Apparatus</th> <th>Presence or absence of starch ✓ or ✗</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>✗</td> </tr> <tr> <td>B</td> <td>✓</td> </tr> <tr> <td>C</td> <td>✗</td> </tr> <tr> <td>D</td> <td>✗</td> </tr> </tbody> </table>	Apparatus	Presence or absence of starch ✓ or ✗	A	✗	B	✓	C	✗	D	✗			
Apparatus	Presence or absence of starch ✓ or ✗																	
A	✗																	
B	✓																	
C	✗																	
D	✗																	
		ii	I	1	B and C;													
			II	1	A and B;													
Total Mark				6														

Question Number		Sub-section		Mark	Answer	Accept	Neutral answer	Do not accept
FT	HT							
7	2	(a)	i	2	both substrate molecules having entered the enzyme; an attempt to make them connect;			
			ii	1	Lock and Key;		Enzyme substrate complex	
			iii	2	(Boiling) alters the shape of the {enzyme/active site}/ denatures enzyme; so the molecules do not <u>fit</u> into enzyme/ active site;			
		(b)		3	1 mark for each correct row;;;  NB only allow marks if some cavities shaded			
Total Mark				8				

Question Number		Sub-section		Mark	Answer	Accept	Neutral answer	Do not accept
8	3	(a)		1	Bronchiole;	bronchioles		
		(b)	i	1	15;			
			ii	2	3 – 0.6 = 2.4 litres/ l;; [NB unit required for 2 marks] Correct readings but incorrect answer = 1 mark 2.4 but no units = 1 mark No mark for correct unit only	L for litres		
		Total Mark		4				

Question Number		Mark	Answer
FT	HT		
9	4	6 QWC	<p><i>Indicative content:</i></p> <ul style="list-style-type: none"> ▪ use of disinfectant to wash both sets of peas ▪ (fill) a Thermos flask with these living peas ▪ ref to dead peas acting as control ▪ same {mass/ volume/ number} of peas should be used in both flasks ▪ place a thermometer into the peas ▪ place/ put cotton wool into the neck of the flask ▪ record temperature at {regular intervals/ every hour/ every day/ stated times} ▪ compare temperatures in both flasks <p>5-6 marks The candidate constructs an articulate, integrated account correctly linking relevant points, such as those in the indicative content, which shows sequential reasoning. The answer fully addresses the question with no irrelevant inclusions or significant omissions. The candidate uses appropriate scientific terminology and accurate spelling, punctuation and grammar.</p> <p>3-4 marks The candidate constructs an account correctly linking some relevant points, such as those in the indicative content, showing some reasoning. The answer addresses the question with some omissions. The candidate uses mainly appropriate scientific terminology and some accurate spelling, punctuation and grammar.</p> <p>1-2 marks The candidate makes some relevant points, such as those in the indicative content, showing limited reasoning. The answer addresses the question with significant omissions. The candidate uses limited scientific terminology and inaccuracies in spelling, punctuation and grammar.</p> <p>0 marks The candidate does not make any attempt or give a relevant answer worthy of credit.</p>
Total Mark		6	