

Question Number		Sub-section			Mark	Answer	Accept	Neutral answer	Do not accept
FT	HT								
7	1	(a)	i		1	Nn;	heterozygous		
			ii		2	He does not have cystic fibrosis therefore must have a {N/dominant allele} / He has to have a {N /dominant allele} to give to {the child without cystic fibrosis/ child 3}; Has to have a {n/recessive allele/ allele for cystic fibrosis } to give to {child with cystic fibrosis/ child 4} {child 4/ child with cystic fibrosis} has to have a {n/recessive allele} from him;			
		(b)	i		1	Nn;	heterozygous		
			ii		2	She does not have cystic fibrosis and therefore must have a { N allele/dominant allele} / person 3 gets { N allele/dominant allele} from person 2; Her mother has {cystic fibrosis/ nn } and therefore must give one {n allele/recessive allele} / person 3 gets {n allele/recessive allele} from person 1;			
		(c)			1	25%;			
		Total Mark			7				

Question Number		Sub-section		Mark	Answer	Accept	Neutral answer	Do not accept
FT	HT							
8	2	(a)		2	A hair B sweat gland			Hair follicle Sweat duct
		(b)	i	2	any two from <ul style="list-style-type: none"> sweating/ produces sweat; vasodilation/ blood vessels widen; hairs lying flat/ hairs lie {flat/down}/ hairs lowered; 		Erector muscle relaxes	sweat Blood vessels {open/ get bigger/ larger/thicken/ enlarge}/ expand. hairs are flat
			ii	2	<u>Less/not as much</u> blood flowing (through the blood vessels); therefore <u>less/not as much</u> heat is {lost/ radiated} 2 nd mark linked to 1 st mark			Any reference to blood vessels moving {up to/ down from} skin surface. No heat is lost
		Total Mark		6				

Question Number		Sub-section		Mark	Answer	Accept	Neutral answer	Do not accept
FT	HT							
9	3	(a)		2	any two from: <ul style="list-style-type: none"> • liver {damage/ failure/disease}/ cirrhosis of the liver; • circulatory disease; • heart {damage/failure/disease}; • brain damage; • {throat/tongue/oesophagus/liver/breast/bowel} cancer; • kidney {disease/damage/failure}; 	kills brain cells		Liver problems Heart attack
		(b)	i	1	alcohol consumption {increases/slows} reaction time/ alcohol consumption slows {reactions/ reaction speed};			Less reaction time/ reaction time decreases
			ii	1	person 2;			
			iii	1	take longer to {react/brake/swerve} to avoid an accident/ longer to react to {danger/changes in road};		take longer to stop (needs to be qualified)	
		Total Mark		5				

Question Number		Mark	Answer
FT	HT		
10	4	6 QWC	<p><i>Indicative content:</i></p> <p><i>Credit should only be given where health issue is linked to the excess in the diet</i></p> <ul style="list-style-type: none"> • ENERGY: too much energy (taken in at lunch – excess energy stored as fat) leading to obesity • SUGAR: too much sugar (taken in at lunch) - this could possibly lead to diabetes (type 2)/ obesity/tooth decay • FAT: too much fat (taken in at lunch) - (possibly) leading to obesity/ heart disease/circulatory disease • SODIUM: too much salt (taken in at lunch) - could lead to high blood pressure • EXERCISE: ref to lack of exercise affecting circulation/heart <p>For marks in 5-6 range:</p> <p>Account needs to recognise, at least once</p> <p>EITHER that the GDA is being exceeded</p> <p>OR that only one meal is being looked at and therefore when all the daily meals are considered then the overshoot of the GDAs are very great indeed.</p> <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	

Question Number		Sub-section			Mark	Answer	Accept	Neutral answer	Do not accept
FT	HT								
	5	(a)	i		2	<u>different</u> {size/ length/ depth/ width}; <u>different</u> shape;			They are all pointed
			ii		1	They can eat <u>different</u> types of food/prey;		More food	
		(b)			3	any three from: <ul style="list-style-type: none"> • restriction on {number of tourists/ months allowed to land/ time allowed on island}; • restrict access to wildlife sites; • restrict building houses/ restrict building {hotels/ accommodation for tourists}; • educate tourists about endangered species; • {development/ road building} is carried out which causes minimal harm to wildlife/limit number of vehicles; • reduction of {litter/ pollution} from increased number of visitors and residents; 			Stop tourism
		Total Mark			6				

Question Number		Sub-section		Mark	Answer	Accept	Neutral answer	Do not accept
FT	HT							
	6	(a)		1	1985-1986;			
		(b)	I & II	1	1980 and 1990;			
		(c)		3	Line begins at 1980 above 0 and rises; peaks between 1985-7; Then drops but not to 0;			
		Total Mark		5				

Question Number							
FT	HT	Sub-section	Mark	Answer	Accept	Neutral answer	Do not accept
	7	(a)	1	<i>Muddy sand;</i>			
		(b)	1	birds;			
		(c) i	1	(The level/concentration of lead) decreases/ becomes less;			
		ii	2	(18/20) x 100; 90; Correct answer = 2 marks			
		iii	2	Measure the {concentration/mass} of lead; In each (growth) ring/ in every fifth growth ring;	Measure how much lead		amount
		Total Mark	7				

Question Number		Sub-section		Mark	Answer	Accept	Neutral answer	Do not accept
FT	HT							
	8	(a)		1	Less objection/ more agreement / more positive /more accepted /more popular;			Crop increased
		(b)		2	<u>gene for herbicide resistance</u> from {bacteria / plant / organism /species}; {Inserted into/ added into} {chromosome/ DNA} (of host plant / soya plant);	weed		
		(c)		3	Any three from <ul style="list-style-type: none"> • Crop yield increases with use of GM; • GM crop not 100% resistant; • GM plants not resistant to sap sucking insects/ sap sucking insects are not affected; • GM effective against leaf eating insects/ GM plants are resistant to leaf eating insects; • Less <u>total</u> insecticide used with GM crops/ less insecticide used to control leaf eating insects with GM crops; • A correct statement relating to data in table; 			
		Total Mark		6				

Question Number		Sub-section		Mark	Answer	Accept	Neutral answer	Do not accept
FT	HT							
	9	(a)	i	1	Discontinuous;			
			ii	1	No black <u>allele</u> in white turkeys/ white allele is recessive/ white turkey is homozygous recessive;	Homozygous expressed as symbols		gene
		(b)	i	1	A and C;			
			ii	2	D and E; All (of the clones with the inherited disease) would <u>pass it on</u> ;			
			iii	1	3;			
		Total Mark		6				

Question Number		Mark	Answer
FT	HT		
	10	6 QWC	<p>Indicative content</p> <p>Bacteria and Fungi are decomposers Decomposers decay dead organisms/waste Conversion of protein to ammonia Conversion of urea to ammonia Ammonia converted to nitrate Nitrate taken up by plant (roots) Nitrate used to make protein Factors that affect the activity should include oxygen, temperature, pH and heavy metals (some factors must be present to access marks in the range 5-6)</p> <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	