

**UNIT B1**  
**FOUNDATION TIER**

<b>Question</b>	<b>Marking details</b>	<b>Marks Available</b>
1. (a)	Earthworm – invertebrate Fern – non-flowering plant Fox – vertebrate Dandelion – flowering plant Algae – microorganism 4 or 5 = 4 marks;;;; 3 = 3 marks 2 = 2 marks 1 = 1 mark	4
(b)	Presence of {backbone/ spine} in vertebrates (or converse); Must be clear reference to vertebrates/ invertebrates	1
(c)	Bacteria / virus / fungi/ yeast; NOT named species/ plant plankton/ mould	1
(d)	Scientific name is always the same / common names different/ scientific name is the {same all over the world/ universal}/ scientific names are the same in <u>all</u> languages;	1
<b>Question total</b>		<b>[7]</b>

Question	Marking details	Marks Available
2. (a) (i)	Answer <u>120</u> ;; Suitable part calculation (eg 620 – 500) allow 1 mark	2
(ii)	Less food has to be <u>bought</u> / lower labour <u>costs</u> / can keep <u>more</u> chickens in the <u>same</u> space; NOT lower heating costs/ security costs/ cheaper – unqualified/ less food – unqualified	1
(b)	Have less food/ {crushing/ cramped/ squashed/ squeezed together/ crammed} (against cage wall)/ less room so less exercise; Must be clear reference to caged/ uncaged NOT restricted movement/ less space/ cooped up/ squished up/ standing on top of each other/ fighting	1
(c)	Poor feather growth/ less feathers; NOT no feathers	1
(d)	<u>More</u> room to <u>move</u> / stretch legs or wings <u>more</u> / <u>more</u> movement/ <u>more</u> exercise/ movement is <u>less</u> restricted. NOT more ethical/ cruel/ less broken bones	
<b>Question total</b>		<b>[6]</b>

Question	Marking details	Marks Available
3. (a) (i)	I hawk or stoat;	1
	II Any two from: Mice / beetles / moths / rabbits / caterpillars / snails;	1
	III <u>green</u> plants;	1
(ii)	Badger: eats {beetles/ mice/ rabbits} <u>and plants</u> ; No mark if any wrong animal named	1
(iii)	Sun (light); NOT light/ sunshine	1
(iv)	Arrows/ $\longrightarrow$ ;	1
(b) (i)	Decrease;	1
(ii)	More { <u>variety</u> of herbivores/ herbivore species} to <u>feed on</u> ; NOT more food/ more herbivores	1
<b>Question total</b>		<b>[8]</b>

Question	Marking details	Marks Available
4.	(a) (i) 26, 48;	1
	(ii) Plots 4 plots all correct (-1 per error) (+/- ½ small square);;	2
	Line quality;	1
	(b) (i) 30 min (from graph) (units must be present);	1
	(ii) Rise <u>and</u> then fall;	1
	(c) (i) Insulin;	1
	(ii) Diabetes/ diabetic;	1
<b>Question total</b>		<b>[8]</b>
5.	(a) Pairs;	1
	DNA;	1
	Genes;	1
	Inherited;	1
	(b) (i) X X <b>and</b> X Y;	1
	(ii) 23;	1
	(iii) Gametes/ sex cells;	1
<b>Question total</b>		<b>[7]</b>

## FOUNDATION / HIGHER TIER

Question	Marking details	Marks Available
6/1 (a)	(i) I DD II dd; Allow e.c.f from (a)(i)	1
	(ii) Gametes correct;	1
	Cross correct;	1

F1	Gametes	D	D
	d	Dd	Dd
	d	Dd	Dd

(b)	(i)	Allow e.c.f from (a)(ii)	1
		Gametes correct;	1
		Cross correct (mark independently of gametes);	

	Gametes	D	d
	D	DD	Dd
	d	Dd	dd

(ii)	Answer from candidate's Punnett square	
	<b>1</b> homozygous dominant : <b>2</b> heterozygous : <b>1</b> recessive;	1
	NOT 25:50:25/ 2:4:2/ ¼: ½: ¼	

**Question total [6]**

Question	Marking details	Marks Available
7/2 (a)	Variation; NOT {environmental/ genetic} variation/ mutation	1
(b)	Any <b>two</b> from:  (Trees in region) A have <u>less</u> water/ <u>further</u> away from {water/ river} ORA;  (Trees in region) A have <u>less</u> (sun)light /ORA;  Accept south facing slope has <u>more</u> sunlight  (Trees in region) A are growing on <u>thinner</u> soils/ ORA;  (Trees in region) A are growing higher up the hillside therefore at a <u>lower</u> temp/ ORA;  NOT REFERENCES TO DIFFERENCES IN O <sub>2</sub> OR CO <sub>2</sub> CONCENTRATIONS  <u>Candidates must make it clear which survey points they are referring to in their answer</u>	2
(c)	They are <u>genetically</u> different / <u>genetic</u> differences / <u>genes</u> are different / DNA is different/ genetic variation/ variation in inherited genes;  NOT: Chromosomes are different/ They come from seeds from different parents/ mutations/ genetics	1
<b>Question total</b>		<b>[4]</b>

Question	Marking details	Marks Available
8/3 (a)	<u>Erector</u> muscle;	1
(b)	<p>Indicative content:</p> <p>Sweat gland</p> <p>Removes {sweat / water and salts} from blood/ produces sweat</p> <p>Sweat travels up sweat duct</p> <p>Through sweat pore onto surface of skin</p> <p>{ Water in sweat evaporates / accept sweat evaporates Removing heat</p> <p>The order of these two statements can be reversed as shown below:</p> <p>{ Heat is removed from the body to Evaporate the water in sweat / accept to evaporate the sweat</p>	

**5 – 6 marks**

6

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.

**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.

**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.

**0 marks**

The candidate does not make any attempt or give a relevant answer worthy of credit

**Question total [7]**



Question	Marking details	Marks Available
9/4 (a)	<p>8400 ÷ 992 x 100 = 846.8g (accept 846.77g);;</p> <p>Award 2 marks for correct answer – unit required</p> <p>Award 1 mark for correct answer if no unit indicated.</p> <p>If answer is incorrect award 1 mark for 8400 ÷ 992 x 100</p> <p>NOT 847</p>	2
(b) (i)	<p>White sliced because it has the <u>{lowest/ lower/ less}</u> {fat / saturated fat} content (salt is neutral)</p> <p>NOT low fat</p>	1
(ii)	<p>White sliced because it has the <u>{lowest/ lower/ less}</u> salt content</p> <p>NOT low salt</p>	1
(c) (i)	<p>Any 2 from:</p> <p>Initial temperature (of water);</p> <p>Final temperature (of water);</p> <p>{Rise/ Change} in temperature of water = 2 marks</p> <p>NOT temperature alone</p> <p>Mass (accept weight) of {bread/ food (being burned)}</p> <p>NOT amount</p>	2
(ii)	<p>Much of the heat from the burning {food sample / bread} is {not transferred to the water / lost to the surroundings}/ incomplete burning / apparatus is not insulated.</p>	1
<b>Question total</b>		<b>[7]</b>
<b>PAPER TOTAL</b>		<b>[60]</b>