



Rewarding Learning

**General Certificate of Secondary Education
2012–2013**

Science: Single Award

Unit 1 (Biology)

Foundation Tier

[GSS11]

MONDAY 27 FEBRUARY 2012

9.30 am–10.30 am

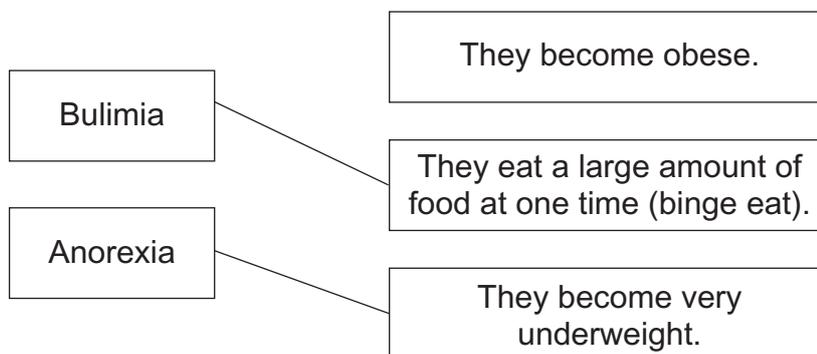
**MARK
SCHEME**

- 1 (a) (i) arrows pointing right between grass and rabbit and fox [1]
 (ii) who is eaten by whom/direction of energy flow [1]
 (iii) grass [1]
 (iv) the sun [1]
 (b) less predation; more reproduction [2]

AVAILABLE MARKS

6

2 (a) (i)



[2]

(ii) any correct e.g. industry demands/social expectation/need to be thin [link with occupation needed or implied] [1]

(iii) jockeys/celebrities/sumo wrestlers *any correct* [1]

(b) (i) Y axis scaled 1 mark
 4 bars 2 marks
 2/3 1 mark [3]

(ii) cod; least fat/lowest fat/low fat/only 1 g fat [2]

9

3 (a)

method of contraception	permanent	prevents STDs	changes hormone levels
condom		yes	
contraceptive pill			yes

[2]

(b) (i) oviduct, sperm, fertilisation [3]

(ii) regard it as abortion, unnatural, religious teachings, promiscuity, culture *Any* [2]

7

		AVAILABLE MARKS
4	<p>(a) 1. – killer whale, 2. – common dolphin, 3. – bottlenose dolphin, 4. – minke whale [2-3 correct = 2 marks; 1 correct = 1 mark] [3]</p> <p>(b) (i) groups: features [2]</p> <p>(ii) large numbers of species/easier to identify/work out relationships [1]</p>	6
5	<p>(a) skin/mucous membranes (mucus) [2]</p> <p>(b) E A C D [2] Any two in correct order (disregard position) 1 mark</p> <p>(c) only kill bacteria/rubella is a viral disease [1]</p>	5
6	<p>(a) Any three from: they respond/grow to light, for more photosynthesis, controlled by hormones, phototropism [3]</p> <p>(b) carbon dioxide + water \longrightarrow sugar/starch/glucose + oxygen [3] [1 mark each side – 1 mark for arrow]</p> <p>(c) respiration: energy <i>or</i> reproduction: produce young <i>or</i> excretion: to get rid of waste [2]</p>	8

7 (a) Indicative content

- Use BB/other to set alight to each food
- Same mass food/volume water/distance lit food from tube/same distance from bunsen/time to get lit food under tube [any two required]
- Place under boiling tube of water
- Record temperature difference
- Repeat experiment

Band	Response	Mark
A	Candidates must use appropriate specialist terms throughout to describe all four or five points above, including two or more controlled variables (listed in second point) in a logical sequence. They use good spelling, punctuation and grammar and the form and style are of a high standard.	[5–6]
B	Candidates use some appropriate specialist terms to describe three of the points above in a logical sequence. They use satisfactory spelling, punctuation and grammar and the form and style are of a satisfactory standard.	[3–4]
C	Candidates describe the experimental procedure using one or two of the above points. However, these are not presented in a logical sequence. They use limited spelling, punctuation and grammar and they have made little use of specialist terms. The form and style are of a limited standard.	[1–2]
D	Response not worthy of credit.	[0]

[6]

(b) (i) C;

C – better than A as has fewer swallowing problems/fewer side effects;

C – better than B as has fewer swallowing problems/fewer side effects; [3]

(ii) effectiveness/how strong it is/amount of iron it contains [1]

AVAILABLE
MARKS

10

8 (a) (i) July – October 1986 (July/October 1986); biggest fall/lowest cases/less cases/numbers dropped	[2]	AVAILABLE MARKS
(ii) never no patients/rise in numbers	[1]	
(b) (i) lack of space/lack of funds/lack of facilities	[1]	9
(ii) hand/good hygiene, gloving, mouth/nose/eye protection, gowning, (thorough) cleaning/wiping spillages (not hygiene on own) any 1 mark cannot spread as easily/cross contamination 1 mark	[2]	
(c) before antibiotic variation in resistance/different levels of resistance; only those with strongest resistance survived [or converse]; all offspring inherited strong resistance/resistant survivors reproduce	[3]	
Total	60	