



# **General Certificate of Secondary Education**

## **Science B 4462 / Biology 4411**

**BLY1F      Unit Biology 1**

# **Report on the Examination**

*2008 Examination – January Series*

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## Science B / Biology

### Foundation Tier BLY1F

#### General

There were eight questions on the paper. The first six questions appeared only on the Foundation Tier and were targeted at grades E, F and G. The final two questions (termed Standard Demand) were common to Foundation and Higher Tiers. These were targeted at grades C and D.

Candidates should be advised to write in black ink or black ball point pen only as the scanning process involved in on-line marking does not pick up pale colours well. Furthermore candidates should be advised to ensure that if their answers extend beyond the printed lines or space then they should keep these extensions away from the edges of the page as they may be removed during scanning.

Some examiners expressed concern about the apparent increase in illegible handwriting this year. Although it is still a very small percentage, candidates should be aware that if the examiner cannot read the script they will not be awarded any marks for that part.

Fundamental knowledge and understanding of How Science Works in the world at large were tested throughout this paper. This means that candidates should be reminded that it is essential to read all of the question carefully, analyse the information provided and think about their response before writing their answer.

#### Question 1 (*Low Demand*)

Most candidates made reference to trees or forests, but weaker candidates merely repeated the question in part (a)(i). In part (a)(ii) fewer candidates gave acceptable responses in terms of saving natural resources. A majority merely referred to re-use of the metals.

In all three parts of (b), almost 50% of the candidates merely copied the labels from the appropriate part of the drawing. In part (b)(i) there were many vague answers in terms of 'using natural resources' which did not gain credit. Weaker candidates often answered in terms of flood prevention in (b)(ii). Weaker candidates frequently answered in terms of land-fill sites in part (b)(iii).

#### Question 2 (*Low Demand*)

In part (a) a majority of candidates answered in terms of 'legs' rather than referring specifically to the hind limbs.

In part (b) it was surprising that, given the information that the frog was bright blue in colour, only 50% of the candidates offered a satisfactory explanation in terms of warning colouration.

In part (c)(i), less than 50% of the candidates could offer an explanation in terms of habitat loss or disease. Most candidates answered in terms of lack of food or increase in predator numbers. Part (c)(ii) saw reasons for preserving biodiversity still elude most candidates. A significant number stated that frogs are useful in keeping flies down!

#### Question 3 (*Low Demand*)

Parts (a)(i) and (a)(ii) were well answered, but many candidates confused the liver and kidneys in part (a)(iii).

In part (b)(i) most candidates coped well with the inverse relationship. Part (b)(ii) saw a significant number of candidates ignoring the data, giving answers which related to training programmes or taking breaks.

**Question 4 (Low Demand)**

In part (a) a majority of candidates scored two of the three marks. The most common error was to associate High blood cholesterol with too much salt in the diet.

In part (b) almost all the candidates managed to score one of the two available marks. Many gave similar statements for the two reasons e.g. 'to keep us fit' and 'to keep us healthy'.

**Question 5 (Low Demand)**

In part (a) almost half of the pupils scored at least one of the two marks. There remains, however, great confusion between 'gene' and 'chromosome'.

In part (b)(i) the majority of students recognised at least one advantage of GM crops. Many candidates, however, thought it would be advantageous to get rid of bees. In part (b)(ii) the majority of students were able to pick out two valid reasons.

**Question 6 (Low Demand)**

Part (a) was well answered except for the following:

- (i) The alternative 'is not affected by drugs' attracted many candidates
- (ii) Many candidates confused 'infective' with 'inactive'
- (iii) Many candidates still confuse 'antibodies' with 'antibiotics'.

In part (b)(i) the majority of candidates read the graph correctly. In part (b)(ii) a common answer was '15 years' indicating that candidates had measured from 1948, rather than 1955 when the vaccine was introduced. In part (b)(iii) only a minority of students made reasonable suggestions, most being content with 'the disease might come back'.

**Question 7 (Standard Demand)**

In part (a)(i) the word 'recreational' proved to be a problem to many students. The most common incorrect answers were 'used regularly' and 'illegal'. In part (a)(ii) only a minority of candidates gained both marks. Many gained one mark for stating that the drugs contained addictive substances, but very few mentioned the effects on body chemistry.

In part (b)(i) a majority of candidates ignored the link between cannabis and cocaine, referring instead to other substances in the table. In part (b)(ii) almost 50% of the candidates were able to pick out Class B drugs, but relatively few were able to point out that use of these was correlated with the uptake of two Class A drugs.

**Question 8 (Standard Demand)**

In part (a) the question involves reading the given information, then sorting out variables. Relatively few candidates gained both marks, the most common incorrect answers being 'the concentration of copper' and 'the number of invertebrate species'.

In spite of the instructions, less than 50% of the students drew lines or curves on the graph, thereby forfeiting at least one of the two marks in part (b).

In part (c)(i) the majority of candidates failed to understand the graph and merely stated that 'species C had the fewest survivors'. In part (c)(ii) it was apparent from their answers that few candidates had done any fieldwork involving counting invertebrates. Few appreciated the word 'convenient' in the questions and went on to give answers in terms of the cost of chemicals. Many thought that chemicals would be poured into the water, thus polluting it.

**Mark Ranges and Award of Grades**

Grade boundaries and cumulative percentage grades are available on the [Results Statistics](#) page of the AQA Website.