Principal Assessor Report 2002

Assessment Panel:	**Biology**

Qualification area

Subject(s) and Level(s) included in this report	**Higher Human Biology**

Statistical information: update

Number of entries in 2001	
Pre appeal	2818
Post appeal	2844

Number of entries in 2002	
Pre appeal	3047
Post appeal	

General comments re entry numbers

Entries have increased each year, bar one, since 1993.

Grade boundaries at C, B and A for each subject area included in the report

Maximum mark = 130
Grade boundaries expressed as percentage of mark in brackets

Year	Upper A	A	B	C
2002	108 (83·1%)	98 (75·4%)	81 (62·3%)	65 (50%)

General commentary on grade boundaries

Notional percentage cut-offs for each grade

Question papers and their associated marking schemes are designed to be of the required standard and to meet the assessment specification for the subject/level concerned.
For National courses the examination paper(s) are set in order that a score of approximately 50% of the total marks for all components merits a grade C (based on the grade descriptions for that grade), and similarly a score of 70 % for a grade A. The lowest mark for a grade B is set by the computer software as half way between the C and A grade boundaries.

Comments on grade boundaries for each subject area

The grade boundaries are much the same as in previous years, but this has resulted in more candidates gaining "A" and "B" grades. This is the result of an observed improvement in performance of candidates of higher ability.

Comments on candidate performance

General comments

In general there has been an improvement in candidate performance over the last ten years and this is reflected in a greater number of candidates obtaining "A" and "B" passes.
We have also been able to measure improvements statistically, by comparison of facility values of common multiple-choice questions.

The reasons for the improvement are likely to be:

- improved quality of teaching as teachers become more familiar with the course
- increasing numbers of past papers to exemplify the course and the examination
- improved feedback from examinations with answers provided by the SQA and commercial publishers
- availability of a number of good-quality textbooks specifically written for the course
- candidates having to sit Unit tests on a regular basis throughout the course.

Areas of external assessment in which candidates performed well

Markers commented that the essays were handled well, particularly the essay on DNA. Although a fair proportion of the candidates went on to describe transcription and translation of DNA.
Section A of the examination had a facility value of 64%.

Areas of external assessment in which candidates had difficulty

A few commented on the unusual 3-D drawing of the ER and nucleus in Qu 1, but it did not seem to present the candidates with any real problems. The setting team felt that it was important to emphasise that cell organelles are three-dimensional structures.

The size of graph paper chosen for the graph in Qu 11 presented some candidates with problems. On reflection, a different size should have been provided.

Candidates still have problems with arithmetical calculations.

Qu 8(b) (i) Many candidates stated that insulin converts glucose to glycogen. This is incorrect, although they were given credit for this on this occasion. Insulin promotes or stimulates the conversion of glucose to glycogen.

Areas of common misunderstanding

A very large proportion of candidates answered 4(a) (ii) with the letter D rather than the letter A.

Recommendations

Feedback to centres

Teachers' estimates of numbers of candidates passing at "C" or "B" are very accurate, but there is a tendency to over-estimate the number of candidates predicted to pass at "A".

Candidates should read questions carefully and respond as requested. In particular they should respond appropriately to "describe", "explain" and "compare".

Candidates should avoid using a series of bullet points in answers to Section C, particularly to question 2.