



External Assessment Report 2011

Subject	Biology
Level	Standard Grade

The statistics used in this report are pre-appeal.

This report provides information on the performance of candidates which it is hoped will be useful to teachers/lecturers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding. It would be helpful to read this report in conjunction with the published question papers and marking instructions for the Examination.

Comments on candidate performance

General comments

Comments from Markers indicate that candidate performance was good overall.

Problem Solving at Credit level proved to be more demanding this year, resulting in Knowledge and Understanding marks being very similar to Problem Solving marks.

At General level, once again, Problem Solving marks were much higher than Knowledge and Understanding marks. This was the result of some very demanding KU questions together with several less demanding PS questions. These factors are reflected in the grade boundaries.

Areas in which candidates performed well

The great majority of candidates were able to answer the following:

Credit Knowledge and Understanding

Question 3 (a)(i): Identifying an insect pollinated flower.

Credit Problem Solving

Question 5 (a)(i): Selecting information from a bar chart.

Question 6 (a)(d): Selecting information from a passage of text.

Question 9 (b): Calculating an average.

General Knowledge and Understanding

Question 1 (a)(i): Stating that the arrows in a food web represent the transfer of energy.

Question 1 (a)(ii): Identifying the producers of a food web.

Question 1 (c)(i): Identifying an abiotic factor.

Question 1 (c)(ii): Identifying competition as an interaction between two organisms which use the same resources.

Question 3 (b): Naming a structure found in plant cells but not in animal cells.

Question 9 (b): Naming an example of discontinuous variation.

Question 13 (b): Stating that biological detergents contain enzymes produced by bacteria.

General Problem Solving

Question 1 (a)(iii): Selecting information from a food web diagram.

Question 2 (a): Completing a branching key.

Question 2 (b): Selecting information from a table.

Question 5 (a): Calculating an average.

Question 6 (d)(i): Completing a line graph.

Question 9 (a)(i)(ii)(iii): Selecting information from a histogram.

Question 10 (a)(b)(d)(e)(f): Selecting information from a passage of text.

Question 11 (a)(i): Completing a table with information from a passage of text.

Question 13 (a)(i): Completing a bar chart.

Question 13 (c)(i): Completing a pie chart.

Areas which candidates found demanding

The great majority of candidates were unable to answer the following:

Credit Knowledge and Understanding

Question 17 (c)(i): Knowing that bacterial or fungal spores are the reason for the use of high temperature steam treatment.

Credit Problem Solving

Question 1 (b)(ii): Describing how to reduce the effect of atypical results.

Question 3 (b): Drawing a conclusion from information in a table.

Question 5 (a)(ii): Calculating an absolute value from percentage figures.

Question 5 (a)(iii): Identifying the fact that percentage figures cannot be used for a direct comparison of absolute values.

Question 10 (c): Giving a reason for a change in blood flow during exercise.

Question 12 (a): Describing the relationship between practice and performance of a darts player.

Question 13 (b): Calculating a percentage increase.

Question 16 (a)(iii): Suggesting a method of improving a continuous flow process.

Question 17 (a): Calculating an average increase.

General Knowledge and Understanding

Question 4 (a): Identifying molars as the teeth used by carnivores to slice meat.

Question 6 (a): Defining the term 'catalyst'.

Question 6 (c): Naming a synthesis enzyme.

General Problem Solving

There were no areas which proved difficult for the majority of candidates.

Advice to centres for preparation of future candidates

General

Candidates must be encouraged to revise their work. The Knowledge and Understanding questions of the examinations cannot be tackled by most candidates without revision. It is important that their knowledge is based on the Learning Outcomes of the Arrangements. This is demonstrated by Questions 17 (c)(ii) of the Credit paper and 6 (a) and (c) of the General paper.

Candidates must be given the opportunity to practise Problem Solving questions similar to those of the examinations. They should be able to recognise styles of questions and be able to adapt particular formats of answers to new situations.

Candidates do well overall when calculating ratios but they have problems when calculating percentages, particularly if the question involves a percentage increase or decrease and when an answer is greater than 100%.

The use of a ruler when joining the points of a line graph and drawing the tops of the bars of a bar chart should be encouraged as well as the need for both a minimum and maximum value on a scale.

Statistical information: update on Courses

Number of resulted entries in 2010	20,570
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Number of resulted entries in 2011	20,315
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Statistical information: performance of candidates

Distribution of overall awards

Grade 1	23.5%
Grade 2	26.9%
Grade 3	25.4%
Grade 4	9.4%
Grade 5	10.6%
Grade 6	3.7%
Grade 7	0.1%
No award	0.6%

Grade boundaries for each assessable element in the subject included in the report

Assessable Element	Credit Max Mark	Grade Boundaries		General Max Mark	Grade Boundaries		Foundation Max Mark	Grade Boundaries	
		1	2		3	4		5	6
KU	40	27	21	50	28	21	50	19	n/a
PS	40	24	15	50	36	29	50	26	n/a