



## External Assessment Report 2011

Subject	<b>Geology</b>
Level	<b>Intermediate 2</b>

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

The majority of candidates seemed well prepared. There were some very good marks and about 30% of the candidates obtained an A grade. The lowest mark was 32/110, and around 54% passed. The mean fieldwork mark was 10.2/15, and the mean for the written paper was 52.3/95.

## Areas in which candidates performed well

Questions 2 (d)(i) and (ii): fieldwork techniques and safety precautions.

Question 3 (a): drawing a graph.

Questions 6 (a) and (b): obtaining information from a table and interpreting this information.

Question 7 (e): identifying trace fossils.

Question 8 (c): describing a general relationship concerning size of crystals.

Question 9 (a): interpreting line graphs and information in a table.

Questions 9 (b)(ii), (iii), and (iv): completing a magnetic stripe diagram and showing knowledge of plate movements.

Questions 11 (a), (b), and (c): most candidates knew the meaning of epicentre, the wave order reaching a seismometer, and the meaning of earthquake intensity.

Questions 12 (a), (b), and (c): labelling and answering questions on a destructive zone.

Question 13 (a): the consequences of worldwide ice-melt on Greenland.

## Areas which candidates found demanding

Question 1 (a): mineral identification.

Question 1 (b)(ii): explaining the frequency of rock-falls given in a bar chart.

Question 2 (a): completing a fold diagram.

Question 3 (f): explaining banding in some lavas.

Question 4 (e): working out movement direction on either side of a fault using outcrop widths.

Question 8 (a): some students did not use all the information given in the diagram.

Question 8 (e): many answers were too brief and lacked detail about the environment in which the sediments had been deposited.

Question 10 (d): calculating which sediment had the greatest porosity.

## **Advice to centres for preparation of future candidates**

### **General**

### **Fieldwork**

No verification activity took place this year. Standards remain high.

### **Written Paper**

While many candidates performed well, weaknesses commonly appeared in the following areas:

- ◆ mineral identification
- ◆ completing folds using three borehole diagrams
- ◆ movements on either side of a fault and naming types of fault
- ◆ accounting for red colouring in sandstone
- ◆ calculating the rate of sea floor spreading and the porosity of sediments

## Statistical information: update on Courses

Number of resulted entries in 2010	21
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Number of resulted entries in 2011	25
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## Statistical information: performance of candidates

### Distribution of Course awards including grade boundaries

Distribution of Course awards	%	Cum. %	Number of candidates	Lowest mark
Maximum Mark 110				
A	28.0%	28.0%	7	77
B	16.0%	44.0%	4	66
C	16.0%	60.0%	4	55
D	16.0%	76.0%	4	49
No award	24.0%	100.0%	6	-

## General commentary on grade boundaries

While SQA aims to set examinations and create marking instructions which will allow a competent candidate to score a minimum of 50% of the available marks (the notional C boundary) and a well prepared, very competent candidate to score at least 70% of the available marks (the notional A boundary), it is very challenging to get the standard on target every year, in every subject at every level.

Each year, therefore, SQA holds a grade boundary meeting for each subject at each level where it brings together all the information available (statistical and judgemental). The Principal Assessor and SQA Qualifications Manager meet with the relevant SQA Head of Service and Statistician to discuss the evidence and make decisions. The meetings are chaired by members of the management team at SQA.

The grade boundaries can be adjusted downwards if there is evidence that the exam is more challenging than usual, allowing the pass rate to be unaffected by this circumstance.

The grade boundaries can be adjusted upwards if there is evidence that the exam is less challenging than usual, allowing the pass rate to be unaffected by this circumstance.

Where standards are comparable to previous years, similar grade boundaries are maintained.

An exam paper at a particular level in a subject in one year tends to have a marginally different set of grade boundaries from exam papers in that subject at that level in other years. This is because the particular questions, and the mix of questions, are different. This is also the case for exams set in centres. If SQA has already altered a boundary in a particular year in say Higher Chemistry this does not mean that centres should necessarily alter boundaries in their prelim exam in Higher Chemistry. The two are not that closely related as they do not contain identical questions.

SQA's main aim is to be fair to candidates across all subjects and all levels and maintain comparable standards across the years, even as Arrangements evolve and change.