



2015 Geology

Intermediate 1

Finalised Marking Instructions

© Scottish Qualifications Authority 2015

The information in this publication may be reproduced to support SQA qualifications only on a non-commercial basis. If it is to be used for any other purposes written permission must be obtained from SQA's NQ Assessment team.

Where the publication includes materials from sources other than SQA (secondary copyright), this material should only be reproduced for the purposes of examination or assessment. If it needs to be reproduced for any other purpose it is the centre's responsibility to obtain the necessary copyright clearance. SQA's NQ Assessment team may be able to direct you to the secondary sources.

These Marking Instructions have been prepared by Examination Teams for use by SQA Appointed Markers when marking External Course Assessments. This publication must not be reproduced for commercial or trade purposes.

Part One: General Marking Principles for: Geology Intermediate 1

This information is provided to help you understand the general principles you must apply when marking candidate responses to questions in this Paper. These principles must be read in conjunction with the specific Marking Instructions for each question.

- (a)** Marks for each candidate response must always be assigned in line with these general marking principles and the specific Marking Instructions for the relevant question. If a specific candidate response does not seem to be covered by either the principles or detailed Marking Instructions, and you are uncertain how to assess it, you must seek guidance from your Team Leader/Principal Assessor.
- (b)** Marking should always be positive ie, marks should be awarded for what is correct and not deducted for errors or omissions.

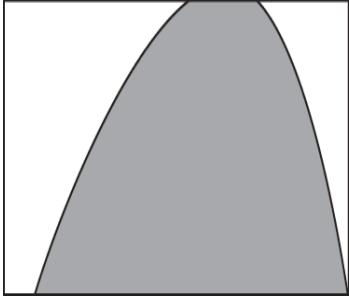
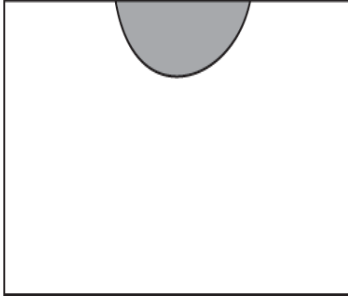
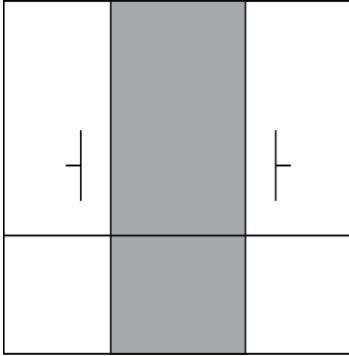
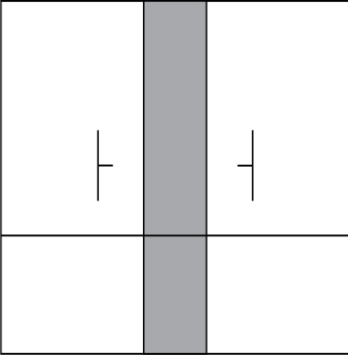
GENERAL MARKING ADVICE: Geology Intermediate 1

The marking schemes are written to assist in determining the “minimal acceptable answer” rather than listing every possible correct and incorrect answer. The following notes are offered to support Markers in making judgements on candidates’ evidence, and apply to marking both end of unit assessments and course assessments.

Part Two: Marking Instructions for each Question

Question		Expected Answer(s)	Max Mark	Additional Guidance
1.	(a)	Venus	1	
1.	(b)	3726 million km (1 mark for working out/1 mark for answer) Accept number with or without unit of measurement	2	
1.	(c)	B,D,F	2	
2.	(a)	P Igneous Q Sedimentary R Metamorphic	2	
2.	(b)	Slow cooling/time for crystal to grow/were molten	2	
2.	(c)	Formed on the surface of the earth/igneous rock/once molten/formed from magma/contains crystals (Accept any correct)	2	
2.	(d)	Largest→smallest/conglomerate, sandstone, mudstone	1	

Question		Expected Answer(s)	Max Mark	Additional Guidance
3.	(a)	<p>Correct sequencing (6 lines)</p> <div style="text-align: center;"> <p>A B</p> </div> <p>6 lines correct = 3 marks 4/5 lines correct = 2 marks 2/3 lines correct = 1 mark 1 line correct = 0 marks</p>	3	
3.	(b)	<p>Fine sandstone – ammonites Coarse sandstone – trilobites Limestone – bivalves or mussel</p>	3	

Question		Expected Answer(s)	Max Mark	Additional Guidance
4.	(a)	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>A</p>  </div> <div style="text-align: center;"> <p>B</p>  </div> </div> <p>For each drawing 1 mark for correct scale and 1 mark for correct shape (2 × 2)</p>	4	
4.	(b)	A – anticline B – syncline	2	
4.	(c)	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>A</p>  </div> <div style="text-align: center;"> <p>B</p>  </div> </div> <p>For each drawing 1 mark for symbol and 1 mark for correct mapping (2 × 2)</p>	4	
4.	(d)	Anticlines may form a cap rock with an impermeable layer/ anticline is a common form of oil trap	1	
5.	(a)	A = old sea cliffs B = raised beach	2	
5.	(b)	Changes in sea level/land raised/sea level drops/isostatic rebound/weight of ice pressing down on land/weight of ice removed/sea level rises due to melting ice	3	If no diagram then mark out of 2

Question		Expected Answer(s)	Max Mark	Additional Guidance												
6.	(a)	$500 \times 8 = 4000 \text{ kWh}$ 1 mark for working 1 mark for correct answer	2													
6.	(b)	$4000 \text{ kWh} \times 24 \text{ hrs} = 96000 \text{ kWh}$ Credit for working out even if (a) is incorrect	2	No double penalty if incorrect answer for (a) used												
6.	(c)	Approximately half Double/nothing/shut down	1 1													
6.	(d)	Correct drawing – marks awarded for correct labelling, correct proportions and accuracy	3	See sketch for accuracy												
7.	(a)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Amount of Carbon</th> <th style="text-align: left;">Type of Fuel</th> </tr> </thead> <tbody> <tr> <td>Least Carbon</td> <td>wood</td> </tr> <tr> <td></td> <td>peat</td> </tr> <tr> <td></td> <td>lignite</td> </tr> <tr> <td></td> <td>bituminous</td> </tr> <tr> <td>Most Carbon</td> <td>anthracite</td> </tr> </tbody> </table> 5 correct – 4 marks 3/4 correct = 3 marks 2 correct = 2 marks 1 correct = 1 mark	Amount of Carbon	Type of Fuel	Least Carbon	wood		peat		lignite		bituminous	Most Carbon	anthracite	4	
Amount of Carbon	Type of Fuel															
Least Carbon	wood															
	peat															
	lignite															
	bituminous															
Most Carbon	anthracite															
7.	(b)	Slumping/subsidence/unemployment cracked walls/pipes/holes in the ground (physical and social)	3													
7.	(c)	Opencast mining	1													
7.	(d)	Noise, air, dust, increased traffic, eyesore, loss of habitat	2													
7.	(e)	1 mark for appropriate solution ie spraying water, earth walls Accept any other appropriate answer	1													

Question		Expected Answer(s)	Max Mark	Additional Guidance
8.	(a)	C → A → B → D oldest youngest	4	
8.	(b)	Dyke	1	
8.	(c)	Limestone: Marble Mudstone: Slate/schist/gneiss	1 1	
9.	(a)	Correct labelling	1	
9.	(b)	Temperature drop/freezing/thawing/expanding/rock fragments fall to bottom of slope	3	
9.	(c)	(Material transported by glaciers/deposited where ice melts/rocks pile up at end of glacier across the valley) *Award 3 marks for appropriate points on diagram. If no diagram max 2 marks	3	Accept moraine piles up.

Question		Expected Answer(s)	Max Mark	Additional Guidance
10.	(a)	<p>Best location - no mark</p> <p><u>Advantages</u> from narrowest crossing/least cost no fault. Igneous rock for pinning edge of bridge/ Island for foundations and support Shortest distance to settlements</p> <p><u>Disadvantages</u> from fault (instability), longer crossing/ higher cost/sedimentary rock not so strong</p> <p>Award 2 marks for correct 2 advantages and 1 mark for correct disadvantage</p>	3	
10.	(b)	<p>Reason 1 shrinkage from clay or weak rocks Reason 2 unable to take weight (1 mark each)</p>	2	
10.	(c)	<p>Concrete supports/steel jacket/concrete casing/spraying concrete on steel structure/shock absorbers</p> <p>(Accept any other correct answer)</p>	1 1	
11.	(a)	<p>Bar graph – mark for scale/mark for accuracy</p>	2	See sketch for accuracy
11.	(b)	<p>Underground features: Cave, cavern, pot hole Wider joints Wider bedding plane Stalagmites/stalactites</p>	3	

(80)

[END OF MARKING INSTRUCTIONS]