

2013 Geology

Intermediate 1

Finalised Marking Instructions

© Scottish Qualifications Authority 2013

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 <u>always</u> 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		on	Expected Answer/s		Max Mark	Additional Guidance
1	а		Jupiter		1	
1	b		Mercury		1	
1	С		100 – 99·86 0·14%		2	
2	а		C B D A (sheet)		2	also refer to appendix.
2	b		4600 – 100 4500 million years 1 mark for working, 1 mark for final answer		2	accept answer without mya.
3	а		Place	Rock Type	3	
			A	Igneous	-	
			В	Sedimentary		
			C	Igneous		
			D	Metamorphic		
			E	Sedimentary		
			F	Metamorphic		
			2 or 3 correct = 1 r 4 or 5 correct = 2 r 6 correct = 3 mark	marks		
3	b		A D B C (See marking sheet)		2	also refer to appendix.
4	а		Basalt		1	
4	b		Igneous rock – fossils destroyed by heat. Fossils not formed in igneous rocks. Accept any correct answer.		1	Do not accept only 'igneous rock'.

Question		en Expected Answer/s	Max Mark	Additional Guidance
4	С	 Graptolite Belemnite Echinoid/sea urchin Brachiopod 	4	
4	d	Limestone – seas/tropical seas Conglomerate – rivers/flooding Sandstone – desert/dry/beach (Accept any other reasonable description)	3	
5	а	Conglomerate	1	
5	b	Anticline	1	
5	С	Dyke	1	
5	d	Dolerite/Gabbro	1	
5	е	They do not cut one another	1	answer must include explanation.
6	а	Frost Shattering/freeze thaw. Accept biological or chemical weathering.	1	
6	b	 Water seeps into cracks Water freezes and expands Cracks are widened Process repeats until rock breaks up Gravity pulls rocks downhill Relevant labelled diagram(s) (Or explanation appropriate to answer given in part (a).) 	4	also accept chemical weathering explanation.
6	С	Concrete or steel lining Rock bolts Make sure rocks are stable Support beams	2	

Qu	estio	n Expected Answer/s	Max Mark	Additional Guidance
7	а	24% (1 mark for working)	2	
7	b	1 mark for vertical axis correctly labelled 2 marks for accuracy	3	
7	С	Wind, wave, tidal, solar, geothermal, hydro (Accept any reasonable answer)	2	
7	d	Use more renewable energy sources Use less energy (Insulation etc) Public transport (Accept any reasonable answer)	2	
8	а	Sandstone	1	
8	b	A C B D (See marking sheet)	2	also accept A-C-Q-R and refer to appendix
8	С	Dykes cut across other rocks Sills come between other rocks Dykes cut across other structures Dykes are more vertical Sills at an angle	2	
8	d	Tear or sliding fault	1	
8	е	West (or left)	1	
9	а	Arrow left to right/west to east	1	
9	b	 Diagram showing: Sand blown up windward side Sand falls down sheltered side Sand blown around edges gives crescent shape 	2	
9	С	Move forward faster, could change shape, blow away entirely, finer material could blow away.	1	
9	d	Sand and wind Eroding rocks Cleaning buildings	2	

Question		on Expected	Expected Answer/s		Additional Guidance
10 a		200 x 4 x 50	•		
		= 40 000 tonnes (1 m	= 40 000 tonnes (1 mark for working)		
10	b	150 x 4 x 50		3	no double penalty if incorrect
	= 30 000 tonnes (2 marks for working)		narks for working)	_	figure used from part a)
		40.000 00.000 44	2 200 1		
		40 000 – 30 000 = 10	40 000 – 30 000 = 10 000 tonnes		
10	С	10 000 x £97		2	no double penalty if incorrect
		= £970 000 (1 mark f	= £970 000 (1 mark for working)		figure used from previous answers a/b.
10	d	Accept any reasonal	Accept any reasonable answer.		answers a/b.
	<u> </u>		(No mark for increase/decrease, answer must explain)		
		`			
44					
11	а	Ore mineral	Metal	4	
		Cassiterite	Tin		
		Galena	Lead		
		Sphalerite	Zinc		
		Chalcopyrite	Copper		
		Спаюбрунно	Соррог		
11	b	Hydrothermal deposi	ts	1	
				2	
11	С		Transport eg planes/parts of vehicles		
		Buildings eg windows	S		
		Packaging eg cans	anewor)		
		(Or arry other correct	(Or any other correct answer)		
12	а	Boulders – roll or slide along the bed		2	
		Sand – hounce along	the hed or carried		
			Sand – bounce along the bed or carried in suspension		
	_				
12	b	It will get smaller		2	
		It will get more round	led		
		it will get more round	it will get more rounded		
12	С	Pothole		1	
13	а	Subsidence	Subsidence		
		Pollution of ground w	Pollution of ground water		
		Toxic metals			
		Unsightly	Unsightly		
13	b	b Pollution of river by		2	
		fertilisers/pesticides/l			
		(Accept any other rea	asonable answer)		
			80		
				00	