[C208/SQP327]

Geography
Advanced Higher

NATIONAL QUALIFICATIONS

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Course Assessment Specification

Geography Advanced Higher

The purpose of this document is to provide:

- Details of the structure of the Question Paper in this Course
- Details of the structure of the Folio that contributes to this Course
- Guidance to centres on how to use information gathered from the Question Paper and the Folio in this Course to estimate candidate performance

PART 1

This part of the Course Assessment Specification details the structure of the Question Paper in this Course.

The Question Paper assesses the ability of candidates to use a variety of geographical methods and techniques.

The following is guidance on the three sections of the Question Paper.

- There will be three sections, (A) Map Interpretation, (B) Geographical Methods and Techniques (GMTs) and (C) Fieldwork Scenario. Sections A and B will have a choice of two questions and candidates must attempt one question from each section. Section C will have **one** compulsory question.
- Candidates are given the allocation of marks for different parts of any individual question.
- The duration of the examination will be 2 hours 30 minutes. Candidates should be advised to allocate about 75 minutes to the Map Interpretation question, about 45 minutes to the Geographical Methods and Techniques (GMT) question and 30 minutes to the Fieldwork Scenario question.

Map Interpretation questions

There are two broad types of questions in this section, a decision making type and a map interpretation type. In both cases the form, style and difficulty of the questions will not vary greatly from year to year. Geographical interpretation of information on the map is the key skill that is being examined, and thus it is very likely that at least half of the marks available in any map interpretation question will be allocated to these elements of the question. Formal map interpretation skills, such as use of scale (eg by drawing a plot to scale), depiction of relief, depiction of surface features, etc. will receive a higher mark loading. This will give emphasis on testing the ability of candidates to understand the representation of information on the Explorer 1/25,000 map series. To complement this, marks will be available for candidates who give evidence from the map extract ***correctly***. This will include grid references and reference to features symbolised on the map. This reflects the importance attached to the skilled use of OS maps. Candidates should be reminded that their atlas is a very valuable resource for this question. It will be essential to locate the map extract in its broader regional setting, and information on thematic topics (eg geology, transport routes) may be very helpful in answering specific questions.

GMT questions

The questions are fundamentally geography questions. Some data manipulation or commentary on techniques may be required in any question set, but the majority of marks available will be allocated to interpretation of data. It is very likely that in any year, at least one question will be based on a statistical technique or techniques. Where formulae or tables are required these will be supplied. Arithmetic will be confined to the amount that examiners believe is necessary to show that candidates understand the technique that is used. If a minor arithmetic error is made, candidates will not be penalised severely. In the case of a gross error, examiners will try to give some credit for sensible elements in the candidates answer based on her/his calculated answer. If incredible answers are given (eg correlation coefficient with a value greater than 1 or less than -1) it may be difficult to give much or any credit to an answer. Candidates should be encouraged to check their work and ensure that the answer to any calculation looks sensible. Candidates should also be encouraged to answer the whole question. Even if they are unfamiliar with the specific data, all information needed to answer the question is in the data on the examination paper. The atlas may also be a very valuable source of information. Candidates will be able to answer the question well at this level using the geographical skills that they have developed in the Advanced Higher programme.

Fieldwork Scenario question

The question will be focussed on the application of fieldwork techniques and the analysis of results which might be obtained from fieldwork. The question will ask candidates to suggest a suitable working hypothesis for a fieldwork scenario. It will require candidates to explore issues within the given scenario which relate to the practical application of fieldwork gathering techniques, and the analysis of the data gathered. Marks will be awarded for each part of the question, ie the proposed hypothesis, gathering techniques, analysis of data.

PART 2

This part of the Course Assessment Specification details the structure of the Folio in this Course.

The Folio consists of two key pieces of work:

a. Geographical Study – a report on geographical research
b. Geographical Issues – an essay which critically evaluates an issue from a geographical perspective

These two pieces of folio work allow candidates to demonstrate, through fieldwork and other research techniques, their ability to use and integrate the skills learned in the *Geographical Methods and Techniques* Unit at Advanced Higher together with the range of skills gained through the study of Geography at other levels. This folio of coursework assesses the skills acquired by candidates as they develop a more detailed understanding of the issues affecting aspects of the contemporary world. In view of this, the weighting attached to this component is greater than that for the Question Paper. To broaden candidates' knowledge and understanding, and to improve their skills, it is expected that candidates choose a significantly different Issue to their Study.

The total mark for the Folio is 140, with 80 marks for the Geographical Study and 60 marks for the Geographical Issues essay.

PART 3

This part of the Course Assessment Specification provides guidance to centres on how to use assessment information gathered from all the components in this Course to estimate candidate performance.

The Course assessment is based on two components – a Question Paper and a Folio.

Component	Mark Range
Question Paper	0 – 60
Folio	0 – 140
Total Marks	0 – 200

In National Qualifications cut-off scores should be set at approximately 70% for Grade A and 50% for Grade C with Grade B falling midway.

Where a prelim which mirrors the external examination, plus the Study and Issue in the Folio, are used for grading purposes, the table below gives an indication of the cut-off scores that may apply.

Grade	Band	Mark Range
A	1	170 - 200
A	2	140 - 169
B	3	130 - 139
B	4	120 - 129
C	5	110 - 119
C	6	100 - 109
D	7	90 - 99
NA	8	80 - 89
NA	9	0 - 79

The cut-off scores may be lowered slightly if the Question Paper turns out to be more demanding or raised if the Question Paper is less demanding than intended.

In estimating performance for a candidate who scored 126/200 in the centre's own assessment, the following considerations would apply:

- The centre's view is that their assessment is less demanding than SQA Question Paper.
- Using the table a more realistic estimate may be **band 5.**

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Advanced Higher Geography

2 hours 30 minutes

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Specimen Questions (Section C)
for use in and after 2009

1. Candidates are expected to attempt **three** questions, **one** from Section A and **one** from Section B, and the question in Section C.

2. Both questions in Section A are worth 30 marks each and both questions in Section B 20 marks each. The question in Section C is worth 10 marks.

3. In all questions, marks will be given for sketch-maps and diagrams which are integral parts of an answer.

4. Candidates are encouraged to use the Supplementary Items and tracing paper provided for annotation or as bases for diagrams. If used, the resources should be placed inside the front cover of the candidate's answer book.

5. Candidates are reminded that they have an atlas which can be a valuable resource in answering questions in all parts of the paper.

Marks

SECTION C

This question **must** be answered.

Example 1

A student wishes to compare land-use pattern zones of a town using the Burgess model.

(*a*) State **two** appropriate hypotheses for the study. **2**

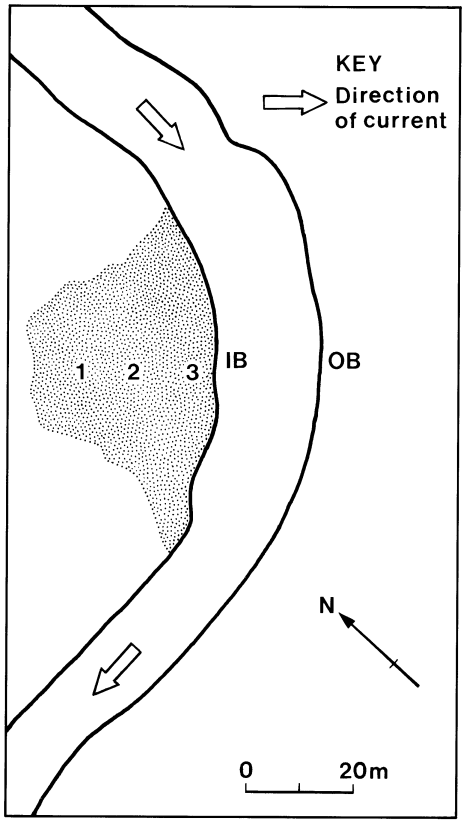
(*b*) What information would the student have to gather to investigate each hypothesis and discuss the methods used to gather this information? **4**

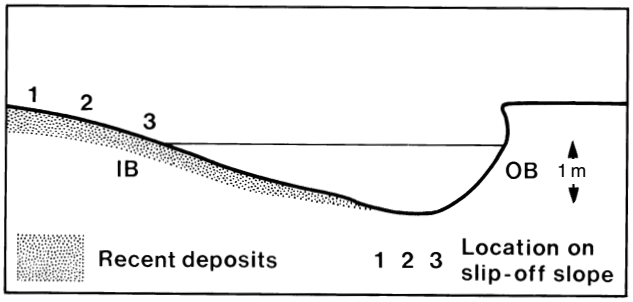
(*c*) Discuss suitable techniques that could be used to process and analyse the information that has been gathered. **4**

(10)

Example 2

A group of students was asked to undertake a fieldwork exercise that involved the collecting of data that would help analyse the development of meanders on a river as it progresssed down valley. The information collected is shown in the three figures below.





Stage of Development	Meander No	Width (m)	Depth (cm)		Vel (m/s)		Bedload Content	X-axis (cm) of slip-off slope Material		
			Inner bank	Outer bank	Inner bank	Outer bank		Location on slip-off slope		
								1	2	3
Middle	1	5·9	11	14	0·4	0·15	Very coarse gravels	18	17	29
Lower Middle	2	5·1	14	13	0·28	0·34	Coarse gravels	14	21	26
Lower Middle	3	6·8	13	19	0·18	0·29	Medium gravels	11	14	21
Lower	4	6·5	17	43	0·21	0·61	Fine gravels	17	18	21
Lower	5	7·2	16	67	0·49	0·67	Fine gravels and fine sands	6	9	11
Lower	6	10·8	20	81	0·41	0·71	Medium and fine sands	1	1·5	1·2

The diagrams and table above show some of the data collected by the students to identify factors influencing meander development.

(*a*) State a working hypothesis for the study. **1**

(*b*) Describe methods of data collection students would use to measure **two** of the following aspects of meanders and describe any difficulties they may encounter.

(i) Velocity

(ii) Depth

(iii) Slip-off slope material **6**

(*c*) For any **one** of the above, identify a suitable statistical technique that could be used to analyse the data collected. **3**

(10)

[*END OF SPECIMEN QUESTION PAPER*]

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Advanced Higher Geography

2 hours 30 minutes

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Specimen Marking Instructions (Section C)
for use in and after 2009

Example 1

(*a*) Any appropriate statements, eg the density of buildings decreases from the CBD to the suburbs, offices are found mainly in the CBD. (2)

(*b*) Answers must show an understanding of land use relationships within and between different zones and must relate to the hypothesis. Simple statements of listing techniques are unsuitable, eg for the hypothesis above, land use mapping and height of buildings would help to show decrease in density as well as changes in use. On the other hand, answers that state relationships as a hypothesis, such as building height, density decrease with distance from the CBD, show understanding of relationships. (4)

(*c*) Processing and analysis techniques may be graphical and/or statistical, and should be appropriate to demonstrate the relevance of the hypotheses, eg land use map to show types of uses, Spearman's rank to show relationship between distance from CBD and height of buildings, chi square to show pedestrian counts and particular land use zones. (4)

Example 2

(*a*) Accept any reasonable hypothesis, eg water depth generally increases down stream **or** greater at outer bend of meander. 1 mark

The following notes are provided as further guidance to the instructions given for (*a*).

Answers relating to a work hypothesis may vary from a generalised statement whereby all or most characteristic values are considered, to a hypothesis statement narrower in focus, but should include mention of expected trends and reference to aspects of at least **two** physical characteristics.

- Do hydrological features leading to meander development become more pronounced down stream?

or

- Do width, depth and velocity increase as meanders develop down stream?

or

- Are meanders more pronounced down stream?

or

- Does bed load content and size around meanders alter down stream?

(*b*) **Velocity**: Any acceptable method—float, timed by distance, averaged and recorded.

Depth: Measurements taken at sample points across stream and at specific locations down stream. Mention should be made of multiple readings taken then averaged and recorded.

Slip-off Slope: Plot out stones at three different locations up the river beach and measure their x and y axis.

Bedload: Collect samples of sediment at a number of points and sieve these using different mesh sizes, or use quadrat in a number of locations to sample bedload and quantify numbers of pebbles of different sizes. 6 marks

The following notes are provided as further guidance to the instructions given for (*b*).

Velocity

Depending on the river width, this may be conducted around point 1, from each bank. Place a float (orange, yoghurt carton with some sand) at start of meander and record time taken to reach end point or a specified distance. Measurements and times may be repeated at least 10 times for validity then averaged. (calculation m ÷ secs = m/s) Alternatively, a flow meter placed one third (depth) into the water with the propeller facing upstream. Allow reading to settle and record. As above for all other methodologies.

Example 2(*b*) (continued)

Depth

Given the information on the table, 10 depth readings could be taken at selected points along the IB and OB, using a regular sampling plan at around 1 m from either bank. Metre stick placed with the narrow edge facing stream flow thus allowing for more accurate readings.

Some students may suggest 5 readings across the channel (strictly correct) but only the IB and OB readings noted in the table.

Slip-off Slope Material

Using Vernier Callipers, tape or even a ruler measure at least ten samples at each meander at three locations from river edge to further up the river beach. Measure the **X** (long axis) of the pebbles and record in fieldwork notebook. Average each axis at each location at every meander.

Bedload

Use a quadrat at different locations down stream to sample the quantity and variation in size of pebbles. Sediment could be collected and sized using geography sieves using nominal mesh size 2·00 mm to 0·05 mm. Use of Power's angularity chart may also be acceptable if referenced correctly.

Difficulties

Data Collection

- Keeping tape measure taut may have resulted in over estimating stream width.
- Overgrown banks made accuracy of width reading difficult.
- Possibility of a typical deep pool at IB may skew average readings.
- Float/orange sticking/interrupted by rocks, tree branches in stream.
- Loss of oranges/floats due to speed of river especially at OB.
- Difficulties in placing flow meter one third deep into shallow IB conditions.
- Propeller of flow meter sluggish around IB, therefore readings intermittent and possibly inaccurate.
- Difficulty in identifying X axis of rounder pebbles.
- Difficulty in conducting strictly random/stratified/linear sampling.

(*c*) Analytical techniques may include standard deviation and bell graphs to reveal observed differences in velocity. Velocity → depth; Spearman's/Pearson's to examine potentially causal relationships. Some students may go further, eg suggesting other techniques as a result of the above; scatter graphs, best fit and regression. This would merit a further mark. Slip-off slope data would be suited to Chi^2.

The following notes are provided as further guidance to the instructions given for (*c*).

Suitable Techniques

A number of techniques can be applied to a range of proposed analyses.

- In considering if the difference in velocity between the IB and OB was significant then, standard deviation to two standard errors may be used and bell graphs constructed to reveal the extent of "the observed" differential.
- Velocity and depth could be analysed to determine if variations in velocity influenced variations in depth. Spearman's, but more realistically, Pearson's would be employed to examine the extent of any proposed causal relationship. The figure and the two data sets could then be employed to draw a scatter graph, best fit line and regression.
- Consideration of slip-off slope material size at different locations would be ideally suited to employing Chi^2 to consider if the significance of the pattern observed occurred by chance.

[*END OF SPECIMEN MARKING INSTRUCTIONS*]