

Surname	Centre Number	Candidate Number
Other Names		2



GCE A level

1215/03

GEOLOGY – GL5

Thematic Unit 3

Geological Evolution of Britain

P.M. TUESDAY, 11 June 2013

ONE of TWO units to be completed in 2 hours

			Examiner only
Section A	1.	15	
Section B	2.	25	
	3.		
	4.		
Total		40	

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ADDITIONAL MATERIALS

In addition to this and one other examination paper, you may require a calculator.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **question 1** in Section A (15 marks) and **one** question from Section B (25 marks).

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

You are reminded of the necessity for good English and orderly presentation in your answers.

SECTION A

1. Three localities **A**, **B** and **C** were studied in Welsh early Palaeozoic rocks. **Figure 1a** is an interpretation of the palaeogeographical setting of the three localities. **Figure 1b** shows four fossils, **L**, **M**, **N** and **O**, found at the localities as indicated. The sections shown in **Figure 1c** are sedimentary sequences found at the localities.

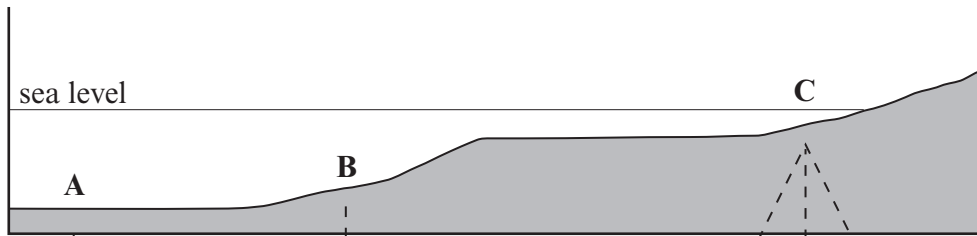


Figure 1a

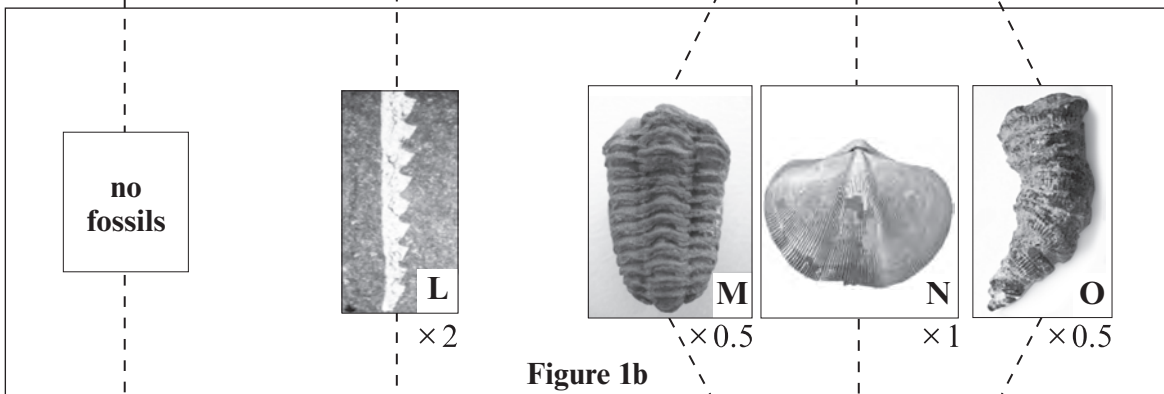


Figure 1b

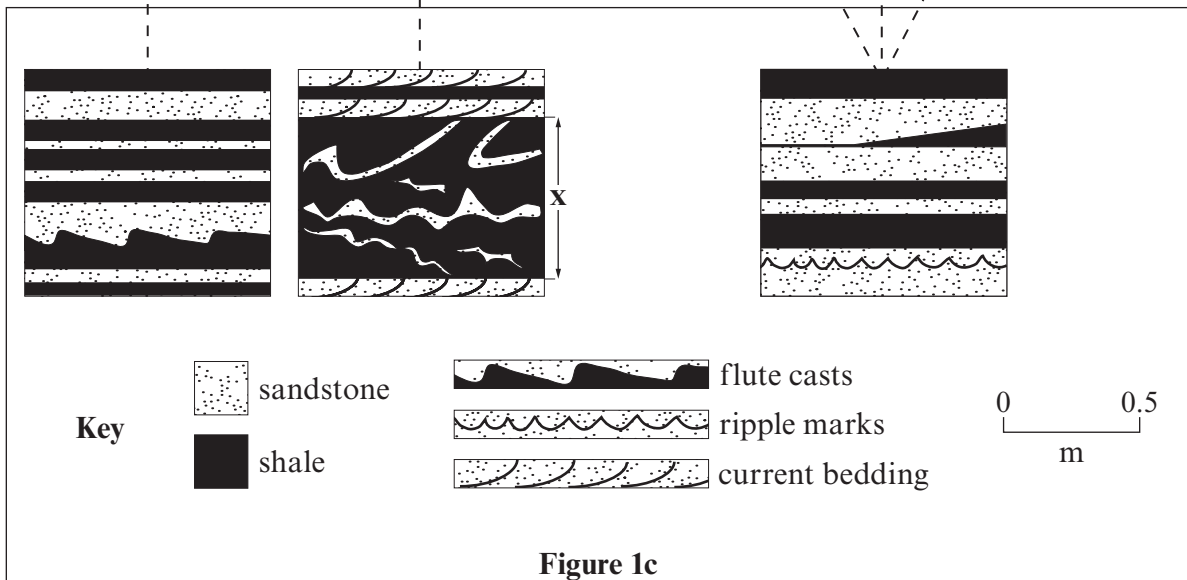


Figure 1c

(a) Using **Figure 1b** identify the fossils **L** and **M** to complete **Table 1**. [2]

Locality	Fossils
A	no fossils
B	L:
C	M: N: brachiopod O: coral

Table 1

(b) (i) Describe the structures in bed **X** of the section at **B**. [2]

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(ii) Give **one** piece of evidence which suggests that the structures were **not** formed by tectonic processes. [1]

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(c) Explain **one** piece of evidence to support each of the following claims for conditions at each of the three localities during the early Palaeozoic.

(i) At **C** there was shallow water. [2]

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(ii) At **A** there was deep water. [2]

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(iii) **B** was on a slope. [2]

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(d) Evaluate the statement that “the climate of Wales during the early Palaeozoic was much warmer than today, but the latitude has **not** changed”. [4]

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15

SECTION B

Answer one question only.

Write your answer in the remaining pages of this booklet.

2. Geological evidence suggests that Britain drifted northwards throughout the Carboniferous and Permo-Triassic.
Describe and evaluate the evidence provided by:
- (i) sedimentary rocks and fossils,
 - (ii) palaeomagnetism. [25]
3. (a) Describe the range of igneous bodies and their associated rock types found in the Tertiary Igneous Province.
(b) Evaluate the importance of this range to an understanding of the plate tectonic setting in which it was produced. [25]
4. Describe and evaluate the use of igneous and metamorphic rocks and structures in interpreting the plate tectonic setting in which the Caledonian Orogeny developed. [25]

Examiner
only

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