



National  
Qualifications  
2016

**X733/77/11**

**Geography**

FRIDAY, 6 MAY

9:00 AM – 11:30 AM

---

**Total marks — 50**

**Attempt ALL questions**

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

Candidates must use the Supplementary Items and tracing overlays provided for annotation or as bases for diagrams. These resources should be placed inside the front cover of the candidate's answer booklet.

Candidates are reminded that they have an atlas which can be a valuable resource in answering the questions.

Write your answers clearly in the answer booklet provided. In the answer booklet you must clearly identify the question number you are attempting.

Use **blue** or **black** ink. You may use pencil for the completion of Supplementary Item B — Tracing Overlay.

Before leaving the examination room you must give your answer booklet to the Invigilator; if you do not you may lose all the marks for this paper.



**Total marks — 50**  
**Attempt ALL questions**

**Question 1 — Map Interpretation**

To answer this question you need to use:

- Supplementary Item A — Ordnance Survey (OS) Map, Extract No 2215/EXP125 1:25000 (Explorer Series), Romney Marsh Rye and Winchelsea
- Supplementary Item B — Tracing Overlay
- Supplementary Item C — Sussex Wildlife Trust Nature Reserves
- The atlas provided.

You should make extensive and detailed use of the whole map extract and your atlas in your responses.

Rye is a popular tourist destination with over 100,000 visitors per annum. Eighty one percent of tourists travel by car. The highest proportion of home-based tourists travel from Kent. Rye has narrow roads and limited car parking. As a result Sussex County Council is proposing to build a Park and Ride facility. The size of the site is to be 100 m x 150 m and would provide parking space for 200 cars.

- |     |   |          |
|-----|---|----------|
| (a) | Discuss the <b>physical</b> factors that may have influenced the site of Rye.   | <b>6</b> |
| (b) | <div style="margin-left: 20px;">(i) On Supplementary Item B draw accurately to scale a suitable site for the Park and Ride.</div> | <b>3</b> |
|     | <div style="margin-left: 20px;">(ii) Explain the reasons for your choice of site.</div>   |          |
|     | <div style="margin-left: 40px;">You may wish to annotate your tracing overlay to support your answer.</div>                       | <b>5</b> |

Rye Harbour and Castle Water are two Nature Reserves found to the south of Rye. Rye Harbour Nature Reserve is a Site of Special Scientific Interest (SSSI) because of the many unusual plants and animals that are found here and the impact that the sea has had on changing the features of the coastline over the last 500 years.

- |     |   |          |
|-----|---|----------|
| (c) | Using the map extract and Supplementary Item C:   |          |
|     | <div style="margin-left: 20px;">(i) suggest possible reasons for the designation of Rye Harbour as a Nature Reserve;</div>                | <b>3</b> |
|     | <div style="margin-left: 20px;">(ii) discuss potential problems that could arise at Rye Harbour Nature Reserve due to its location.</div> | <b>3</b> |

**Question 2 — Gathering and Processing Techniques**

To answer this question you need to use:

- Supplementary Item A — Ordnance Survey (OS) Map, Extract No 2215/EXP125 1:25000 (Explorer Series), Romney Marsh Rye and Winchelsea
- Supplementary Item C — Sussex Wildlife Trust Nature Reserves.

Sussex Wildlife Trust is concerned that increasing numbers of visitors to the Rye Harbour Nature Reserve are not using the public footpaths. This could be having negative impacts on the environment of the Nature Reserve.

- |  |   |
|--|---|
| <p>(a) Outline the physical and human gathering techniques that could be used to assess the impact that visitors may be having on the environment of the Nature Reserve.</p>     | 4 |
| <p>(b) Sussex Wildlife Trust wishes to fund a study to investigate possible links between the vegetation and the micro-climate conditions across Rye Harbour Nature Reserve.</p> |   |
| <p>(i) Discuss an appropriate sampling method that could be used for this investigation.</p>   | 2 |
| <p>(ii) Explain factors, other than micro-climate, that may account for changes in vegetation across the Nature Reserve.</p>   | 4 |

[Turn over for next question]

### Question 3 — Geographical Data Handling

To answer this question you need to use:

- Supplementary Item D — Map 1: Population of Selected European Cities (2013), Table 1: Selected European Countries GDP, Net Migration and Annual Population Change, information on Spearman's Rank Correlation Coefficient
- The atlas provided.

#### Study Map 1

- (a) Proportional circles have been used to show the population of selected European cities in 2013.
- (i) Explain the factors that could account for the pattern of city population shown on the map. 4
- (ii) Evaluate the effectiveness of using proportional circles to show this information. 3
- (b) A student wants to investigate whether the GDP of a country influences its net migration.
- (i) State a null hypothesis for such an investigation. 1
- Using the GDP and the net migration data shown in Table 1, the student has applied a Spearman's Rank Correlation Coefficient to test the strength of the relationship. The result of the test can be found on Supplementary Item D.
- (ii) Evaluate this result in terms of the null hypothesis. 2
- (iii) Explain the suitability of using Spearman's Rank Correlation Coefficient for measuring the relationship. 4
- (c) Table 1 shows GDP, net migration and annual population change for selected European countries.
- Discuss possible reasons for the population changes shown in the Table. 6

[END OF QUESTION PAPER]