

X208/13/01

NATIONAL
QUALIFICATIONS
2012

TUESDAY, 8 MAY
9.00 AM – 11.30 AM

GEOGRAPHY
ADVANCED HIGHER

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.



SECTION A

Marks

Answer ONE question ONLY from this Section

Map Interpretation

Supplementary Item A, Ordnance Survey Map, Extract No 1941/OL43 1:25000 (Explorer Series), Hexham showing part of Hadrian's Wall Path, is the basis for answers to questions in this Section.

For whichever question you choose in this Section (ie 1. or 2.) you are expected to make extensive and detailed use of your atlas and the map extract.

You are strongly advised to read the whole of both question 1 and question 2 before you make your choice.

1. A local company, in conjunction with Northumberland County Council, intends to stage a three day summer Music Festival to help promote Northumberland's heritage and scenic attractions. They anticipate that this could become an annual event, to complement or rival existing Music Festivals. The Festival will be geared for all age groups and music genres. In the first year, there will be twelve stages and a market place for alternative therapies, crafts, food and other entertainment. An area for tents and caravans will be provided, along with car parking facilities.

The proposed total size of the site will be 1.2 km^2 , with a crowd capacity of 30,000 people. The site will be served with amenities to cope with the crowd capacity and will have to meet strict health and safety requirements.

- (a) Choose an appropriate site for the Music Festival and draw it to scale on the tracing overlay (*Supplementary Item B*). 4
- (b) (i) Discuss the physical and human advantages and disadvantages of your chosen site. 10
- (ii) Suggest the planning and environmental considerations that may have to be met before staging the Music Festival **and** how they might be overcome. 8
- (c) What impact may the Festival have on the local area and/or communities in both the short-term **and** long-term? You should make direct reference to the OS map. 8

(30)

	<i>Marks</i>
2. (a) The map extract (<i>Supplementary Item A</i>) shows different types of communications, from ancient to modern systems. Describe and explain, using direct map evidence, the pattern of these communication routes found in the map extract.	15
(b) Describe and explain the location and likely uses of the woodland throughout the area of the map extract.	15
	(30)

[Turn over for SECTION B on *Page four*

SECTION B

Marks

Answer ONE question ONLY from this Section

For whichever question you choose in this Section (ie 3. or 4.) you are encouraged to make use of your atlas.

You are strongly advised to read the whole of both question 3 and question 4 before you make your choice.

In their efforts to provide health services to all Malawians, the Ministry of Health and Population has set up a three-tiered system. At the local level are rural health centres and rural hospitals. For illnesses or injuries that cannot be treated at the rural health centres, patients are referred to district hospitals. There is one hospital in each district of Malawi. These hospitals have more advanced diagnostic equipment, including x-ray machines and blood laboratories. They also have a doctor, and they can provide surgical treatment if necessary. The staff at a district hospital usually have better training, more qualifications and more experience. However, some illnesses are not treatable even at district hospitals. These patients are referred to one of three central hospitals. The central hospitals have the most advanced diagnostic equipment and the best trained health care workers. This is where the highest level of care is provided.

3. (a) *Supplementary Item C* shows the distribution of **District** Hospitals in Malawi. A nearest neighbour table of distances has been produced (*Supplementary Item E*) and a detailed map of Malawi has been supplied (*Supplementary Item D*).

- (i) Use the nearest neighbour formula to complete the Nearest Neighbour Index (NNI) given below to complete the nearest neighbour (Rn). All calculations should be correct to two decimal places.

$$\text{NNI or } R_n = 2D \sqrt{\left(\frac{n}{a}\right)} \text{ where } R_n = \text{nearest neighbour index}$$

D = mean distance between the nearest neighbours in km

n = the number of settlements

a = area in km²

4

- (ii) Comment on the significance of the result obtained in this example, referring to the significant values diagram (*Supplementary Item E*), and discuss the advantages and disadvantages of the nearest neighbour statistic in this example.

6

- (b) Discuss the significance of the result for the provision of primary health care in Malawi or any other developing country that you have studied.

10

(20)

4. The UK fresh cut flower and indoor plant market is worth, at retail, £2.2 billion.

The UK does grow flowers but with competition for land, low temperatures and light levels in winter, a lot must still be imported, as shown in the pie chart.

Many UK supermarket chains import Fairtrade flowers directly from Kenya; other Kenyan flowers are first imported through the Netherlands and then re-exported to UK.

- (a) Referring to *Supplementary Item F*, describe and explain the pattern of imports of flowers to the UK.

4

4. (continued)

The Netherlands is a major grower of cut flowers and is the world's biggest flower trader. Its exports of flowers represent a 56% share of the world market with 80% going to European Union (EU) countries. Of the ten biggest markets for cut flowers six are in the EU; UK, Germany, France, Italy, the Netherlands and Spain (in order of importance).

Aalsmeer Flower Auction is a short distance from Amsterdam airport, Schipol. 22 million flowers and plants are auctioned every day. For example, flowers auctioned in the morning can be on sale in New York later in the day and in Tokyo the next day.

Although the Netherlands produce cut flowers in season, most of the production is in greenhouses.

Kenya uses both solar panels and geothermal power to heat greenhouses. Many of the flower farms are along the shores of Lake Naivasha, north west of Nairobi.

Greenhouse Gas Emissions in kg of CO² equivalent for cut flowers exported from Kenya compared with those grown from the Netherlands

Stage in supply chain	Kenya	Netherlands
Production	300	36,900
Packaging	110	160
Transport to airport	18	0
Transport to Netherlands	5600	0
Transport to flower auction	6	50
Total	6034	37,110

- (b) Describe and explain the differences in the amounts of emissions of Greenhouse Gases (GHG) between the production of flowers in Kenya and the Netherlands. 6
- (c) Referring to *Supplementary Item F*, explain the possible **environmental issues** that may arise in Kenya as a result of flower production. 6
- (d) Comment on the usefulness of the pie chart and the flow diagram as a means of data presentation in this question. 4

(20)

[Turn over for SECTION C on Page six]

SECTION C

Marks

This question must be answered

5. A group of students are asked to test the hypothesis: “beach profile steepens and narrows to the south, along the beach” shown in *Supplementary Item G*. The object of this one day exercise is to obtain information on the change of the overall beach profile, by gathering information from transects measured across the beach.

(a) Draw on *Supplementary Item G*, an appropriate number of transects to test the hypothesis. 2

(b) Explain how information on beach profile may be collected and processed. 4

(c) Comment on problems that may be encountered in collection of suitable field data for this survey. 4

(10)

[END OF QUESTION PAPER]

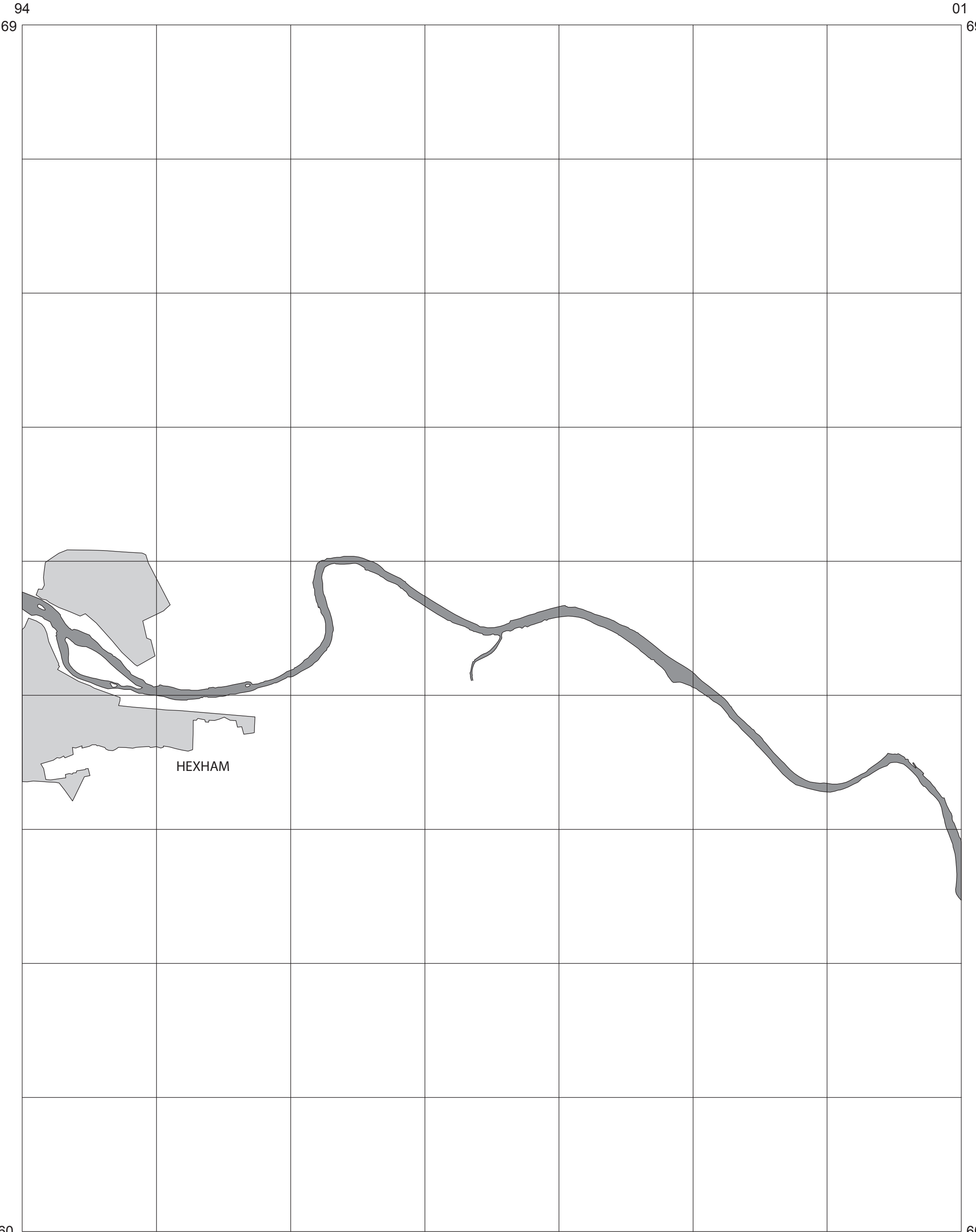
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Full name of centre

Name of candidate

Date of birth



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GEOGRAPHY
ADVANCED HIGHER
SECTION B
Supplementary Item C
for Q3

Fill in these boxes.

Full name of centre

Town

Forename(s)

Surname

Date of birth

Day

Month

Year

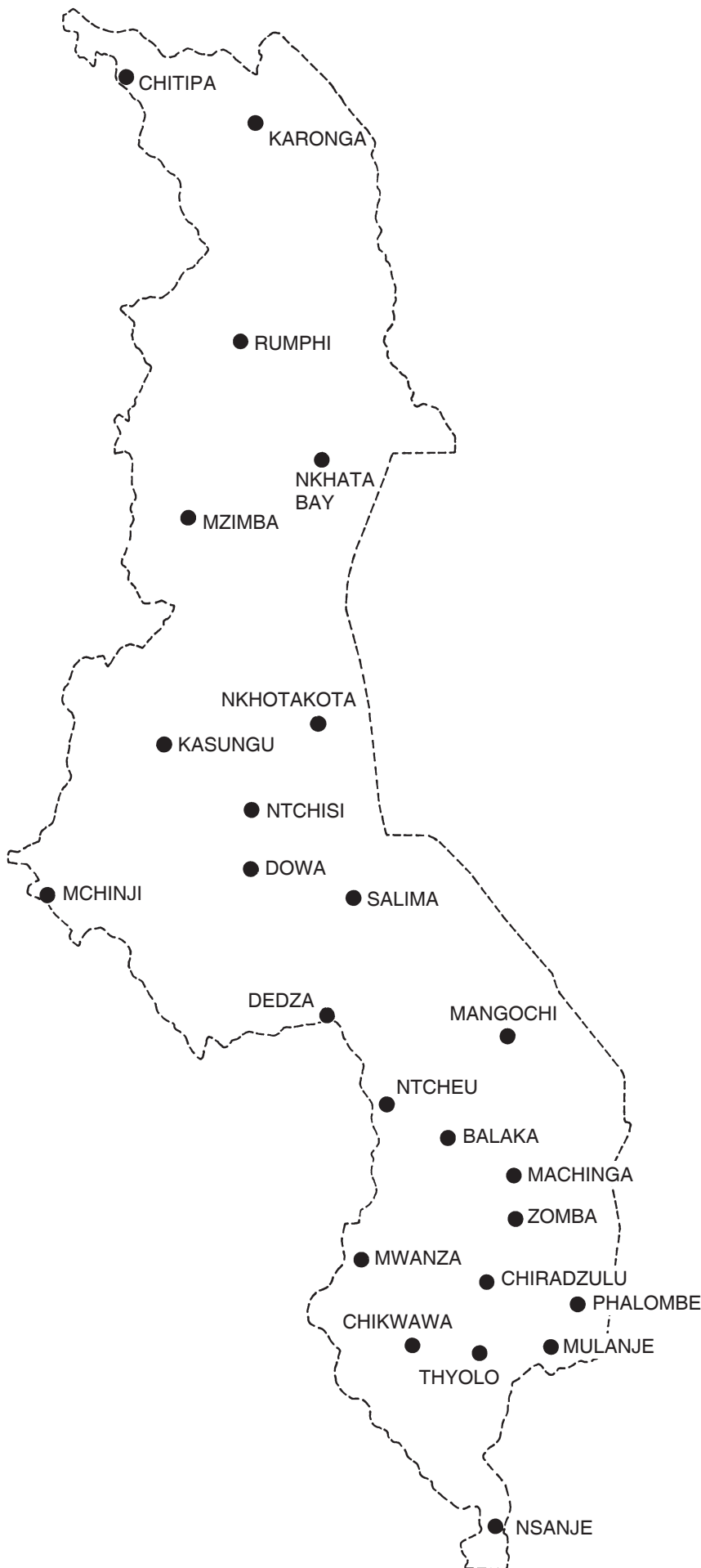
Scottish candidate number

Number of seat

If annotated by the candidate, to be placed inside
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Distribution of District Hospitals in Malawi



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GEOGRAPHY
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SECTION B
Supplementary Item D
for Q3

Fill in these boxes.

Full name of centre

Town

Forename(s)

Surname

Date of birth

Day

Month

Year

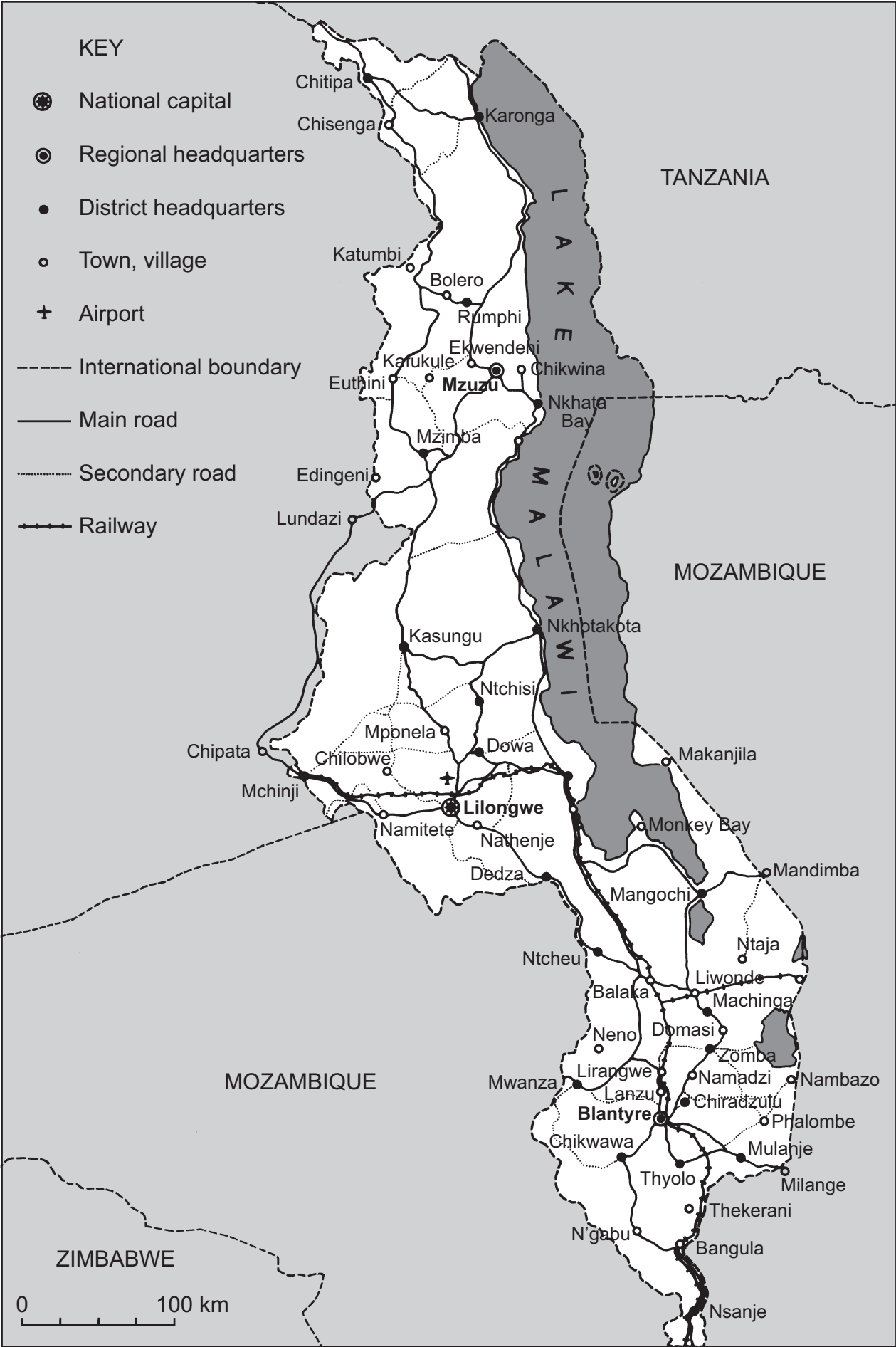
Scottish candidate number

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Detailed Map of Malawi



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GEOGRAPHY
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SECTION B
Supplementary Item E
for Q3

Fill in these boxes.

Full name of centre

Town

Forename(s)

Surname

Date of birth

Day

Month

Year

Scottish candidate number

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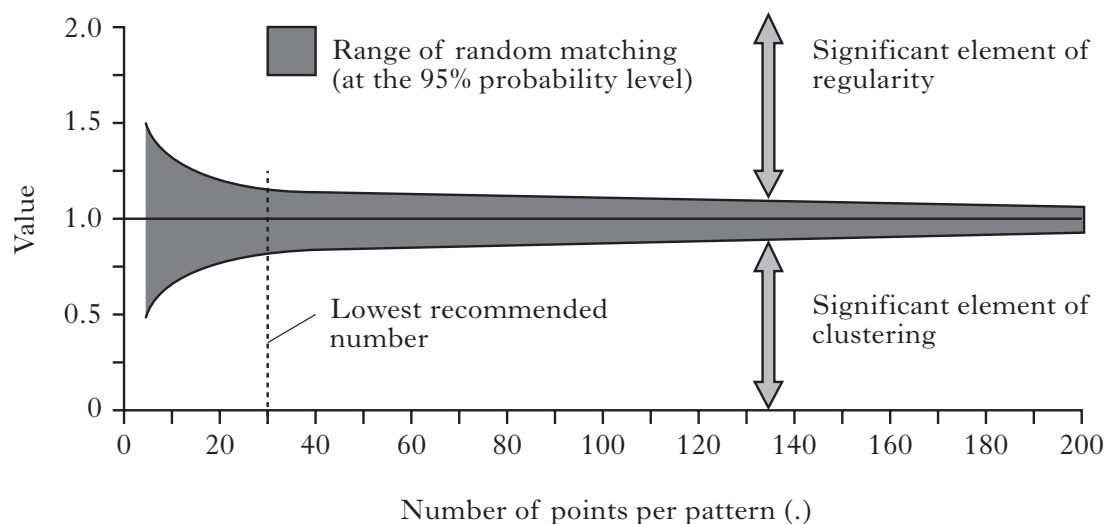
SUPPLEMENTARY ITEM E FOR QUESTION 3

Location of Nearest Neighbour of District Hospitals in Malawi

Location of District Hospital	Location of Nearest Neighbour	Distance in km
Chitipa	Karonga	67
Karonga	Chitipa	67
Mzimba	Nkhata Bay	70
Nkhata Bay	Mzimba	70
Rumphi	Nkhata Bay	71
Dedza	Ntcheu	54
Dowa	Ntchisi	32
Kasungu	Ntchisi	58
Mchinji	Dowa	106
Nkhotakota	Ntchisi	58
Ntcheu	Balaka	38
Ntchisi	Dowa	54
Salima	Dowa	55
Balaka	Ntcheu	38
Chikwawa	Thyolo	37
Chiradzulu	Zomba	40
Machinga	Zomba	58
Mangochi	Balaka	61
Mulanje	Phalombe	26
Mwanza	Chikwawa	51
Nsanje	Thyolo	90
Phalombe	Mulanje	26
Thyolo	Chikwawa	37
Zomba	Machinga	58
	Total	

Area of Malawi: 118,484 sq km

Significant Values Diagram



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GEOGRAPHY
ADVANCED HIGHER
SECTION B
Supplementary Item F
for Q4

Fill in these boxes.

Full name of centre

Town

Forename(s)

Surname

Date of birth

Day

Month

Year

Scottish candidate number

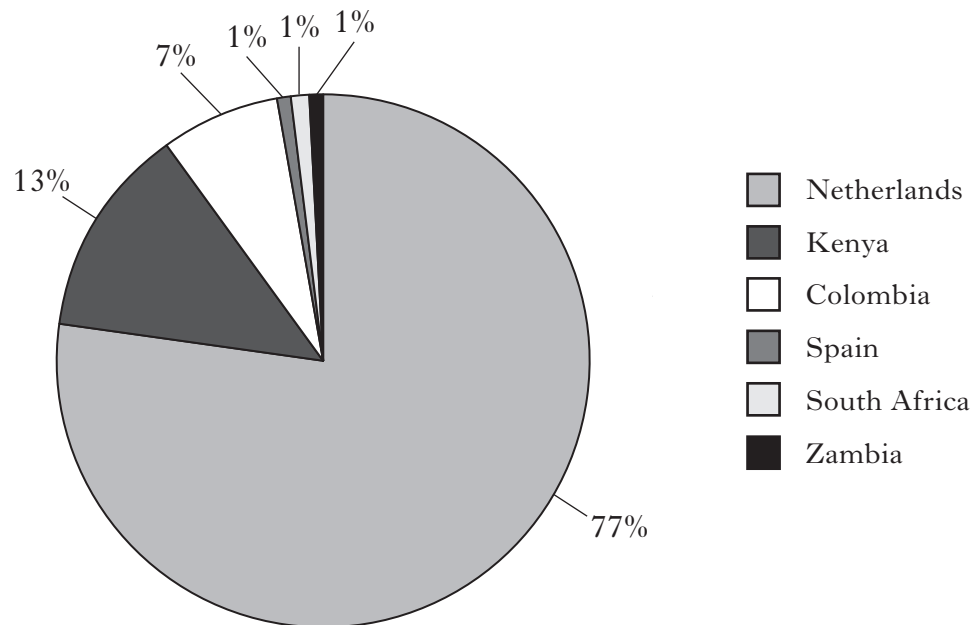
Number of seat

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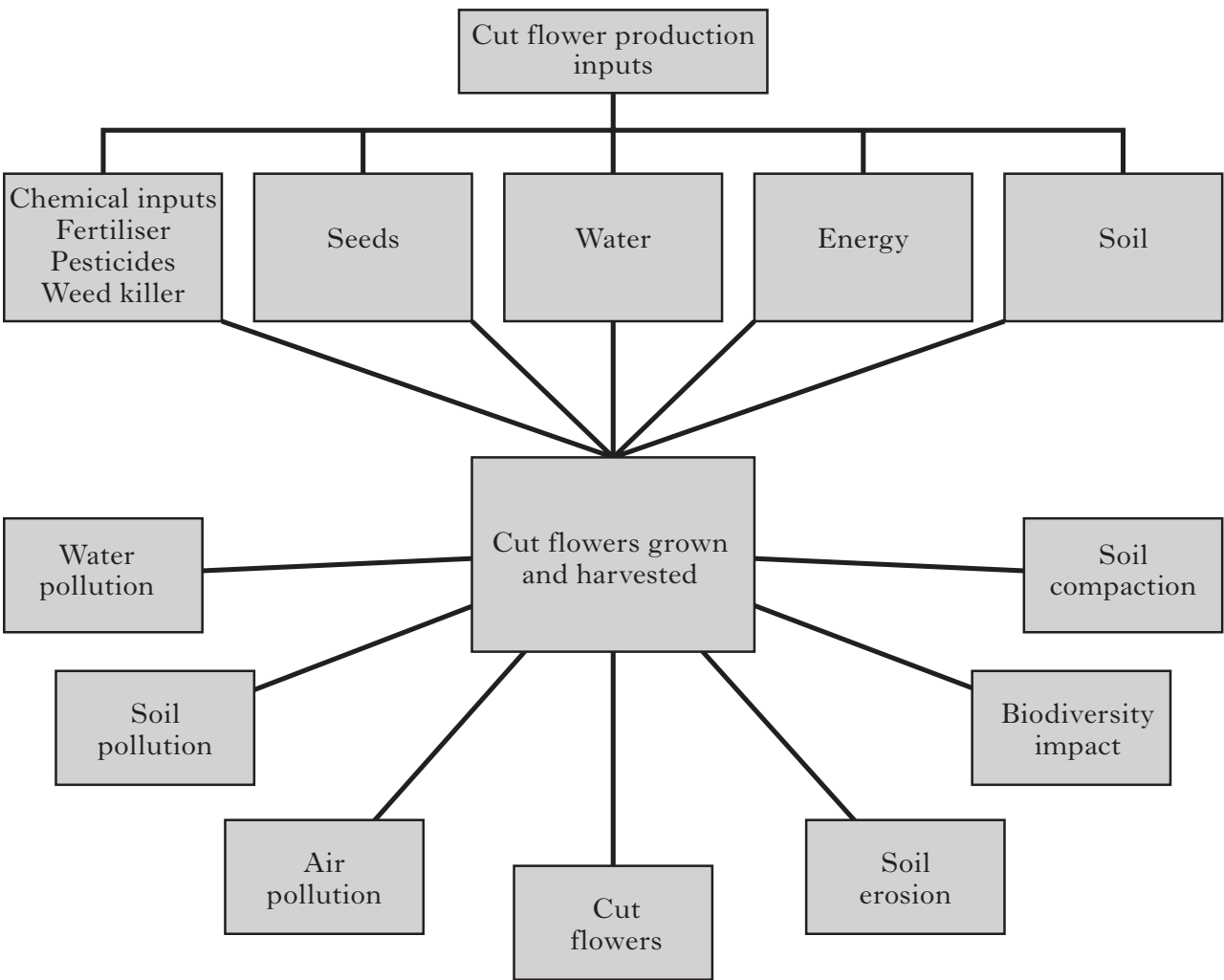
SUPPLEMENTARY ITEM F FOR QUESTION 4

Main Sources of Flowers imported to UK



Total value of UK flower imports £544,858,750

Processes involved in flower growing in Kenya and the Netherlands



Full name of centre

Name of candidate

Date of birth

