Six questions should be attempted, namely:

all four questions in Section A (Questions 1, 2, 3 and 4);
one question from Section B (Question 5 or Question 6);
one question from Section C (Question 7 or Question 8).

Write the numbers of the six questions you have attempted in the marks grid on the back cover of your answer booklet.

The value attached to each question is shown in the margin.

Credit will be given for appropriate maps and diagrams, and for reference to named examples.

Questions should be answered in sentences.

Note  The reference maps and diagrams in this paper have been printed in black only: no other colours have been used.
SECTION A: Answer ALL four questions from this section.

Question 1: Hydrosphere

(a) Study OS Map Extract number 2054/152: Northampton (separate item), and Map Q1.

Using map evidence, describe the physical characteristics of the Brampton Nene River and its valley from 695684 to 747604.

Map Q1: Location of Brampton Nene River
Question 1 – continued

(b) Study Diagram Q1.

Describe and explain the changing river levels on the River Nene at Northampton from 29th to 30th April 2012.

Diagram Q1: Flood Hydrograph for the River Nene in Northampton

---

[Diagram showing flood hydrograph with key: River level (cm) and Precipitation (mm)]

Key
- River level (cm)
- Precipitation (mm)
Question 2: Biosphere

(a) Explain in detail what is meant by the term climax vegetation.

(b) Study Diagram Q2.

Describe and give reasons for the changes in plant types likely to be present across the transect as you move from location 1 at the coast, inland to location 6. You should refer to named plant species in your answer.
Question 3: Rural Geography

(a) Describe and explain the main characteristics of the agricultural system for intensive peasant farming.

(b) For any named area of commercial arable farming:

   (i) describe the changes in farming practices that have taken place in recent years; and

   (ii) discuss the impact of these changes on people, the landscape and the environment.
Question 4: Urban Geography

(a) For a **named** city which you have studied in the Developed World, **explain** the ways in which its site and situation contributed to its growth.

(b) Study Map Q4.

For Glasgow, or any **named** developed world city you have studied, **describe** and **explain** schemes which have been introduced to reduce problems of traffic management in the Central Business District.

**Map Q4:** Inner-ring road plan to reduce traffic congestion in Glasgow’s Central Business District
SECTION B: Answer ONE question from this section, ie either Question 5 or Question 6.

Question 5: Lithosphere

Study Diagram Q5.

Select one erosional landform and one depositional landform from Diagram Q5. With the aid of annotated diagrams, explain the formation of each feature.

Diagram Q5: A Glaciated Landscape
Question 6: Atmosphere

(a) Study Diagram Q6A and Map Q6A.

Describe the origin and characteristics of the Tropical Maritime and Tropical Continental air masses.

Diagram Q6A: The Inter-Tropical Convergence Zone (ITCZ)

Map Q6A: Location of section X–Y
Question 6 – continued

(b) Study Maps Q6A and Q6B and Diagram Q6B.

Referring to the position of the ITCZ, **describe** and **explain** the changing rainfall pattern as you move inland from Abidjan to Nioro.

**Map Q6B: West Africa**

[Map showing Isohyps showing mean annual rainfall (mm)]

**Diagram Q6B: West Africa — selected rainfall graphs**

[Graphs showing precipitation patterns for Abidjan, Ouagadougou, and Nioro]
SECTION C: Answer ONE question from this section, ie either Question 7 or Question 8.

Question 7: Industrial Geography

(a) Study OS Map Extract number 2054/152: Northampton (separate item), and Map Q7.

Using map evidence, describe and explain the human factors that have encouraged modern industry to locate in area A.

Map Q7: Location of Swan Valley industrial area, Northampton
Question 7 – continued

(b) Study Table Q7.

Table Q7: % UK employment by broad sector

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>2020 (projection)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary sector and utilities</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>17</td>
<td>7</td>
</tr>
<tr>
<td>Construction</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Trade, accommodation and transport</td>
<td>27</td>
<td>26</td>
</tr>
<tr>
<td>Other services</td>
<td>44</td>
<td>57</td>
</tr>
</tbody>
</table>

“Changes in employment figures for the UK are similar to those of many old industrial areas of Western Europe.”

Referring to a named industrial concentration in the European Union, explain why these changes are occurring.

[Turn over for Question 8 on Page twelve]
Question 8: Population

Map Q8 shows the main origins of USA immigrants.

(a) **Describe** and **suggest reasons** for the patterns shown on Map Q8.

(b) With reference to an international migration you have studied **describe** the impact on **both** the donor **and** receiving country.

Map Q8: Origin of immigrants into the USA (number in thousands)
ORDNANCE SURVEY MAP
For Questions 1 and 7

Note: The colours used in the printing of this map extract are indicated in the four little boxes at the top of the map extract. Each box should contain a colour; if any does not, the map is incomplete and should be returned to the Invigilator.
Answer any two questions.

Write the numbers of the two questions you have attempted in the marks grid on the back cover of your answer booklet.

The value attached to each question is shown in the margin.

Credit will be given for appropriate maps and diagrams, and for reference to named examples.

Questions should be answered in sentences.

Note  The reference maps and diagrams in this paper have been printed in black only: no other colours have been used.
Question 1: Rural Land Resources

(a) With the aid of annotated diagrams, **describe** and **explain** the formation of the physical features associated with coastal landscapes. You should refer to both erosional **and** depositional features in your answer. **20 Marks**

(b) Study Map Q1 and Table Q1.

**Explain** why National Parks attract widely differing numbers of visitors. **10 Marks**

(c) For any **named** upland or coastal area you have studied:

(i) **describe** and **explain** the environmental conflicts that may be caused by large numbers of people visiting the area for tourism and recreation; **10 Marks**

(ii) **describe** the measures taken to resolve these environmental conflicts and **comment on** their effectiveness. **10 Marks**

**Map Q1: UK National Parks**

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**Legend**

- National Parks
- Large centres of population
- Selected Motorways
- Selected Main Roads

---

[X208/12/02] Page two
### Question 1 – continued

**Table Q1: National Park Statistics**

<table>
<thead>
<tr>
<th>Name of National Park</th>
<th>Designation Year</th>
<th>Area (sq km)</th>
<th>Visitor days per year (million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brecon Beacons</td>
<td>1957</td>
<td>1344</td>
<td>5.0</td>
</tr>
<tr>
<td>Cairngorms</td>
<td>2003</td>
<td>4528</td>
<td>3.1</td>
</tr>
<tr>
<td>Dartmoor</td>
<td>1951</td>
<td>953</td>
<td>3.1</td>
</tr>
<tr>
<td>Exmoor</td>
<td>1954</td>
<td>694</td>
<td>2.0</td>
</tr>
<tr>
<td>Lake District</td>
<td>1951</td>
<td>2292</td>
<td>23.1</td>
</tr>
<tr>
<td>Loch Lomond and the Trossachs</td>
<td>2002</td>
<td>1865</td>
<td>7.0</td>
</tr>
<tr>
<td>New Forest</td>
<td>2005</td>
<td>570</td>
<td>13.5</td>
</tr>
<tr>
<td>Norfolk Broads</td>
<td>1989</td>
<td>305</td>
<td>11.3</td>
</tr>
<tr>
<td>Northumberland</td>
<td>1956</td>
<td>1048</td>
<td>1.7</td>
</tr>
<tr>
<td>North York Moors</td>
<td>1952</td>
<td>1434</td>
<td>10.7</td>
</tr>
<tr>
<td>Peak District</td>
<td>1951</td>
<td>1437</td>
<td>10.4</td>
</tr>
<tr>
<td>Pembrokeshire Coast</td>
<td>1952</td>
<td>621</td>
<td>13.0</td>
</tr>
<tr>
<td>Snowdonia</td>
<td>1951</td>
<td>2176</td>
<td>10.4</td>
</tr>
<tr>
<td>South Downs</td>
<td>2010</td>
<td>1624</td>
<td>39.0</td>
</tr>
<tr>
<td>Yorkshire Dales</td>
<td>1954</td>
<td>1769</td>
<td>12.6</td>
</tr>
</tbody>
</table>

[Turn over]
Question 2: Rural Land Degradation

(a) Study Map Q2

**Describe** the climatic conditions found in Chad and **explain** why such physical conditions may lead to the degradation of rural land. 10

(b) For **either** Africa north of the equator, or the Amazon Basin:

(i) **explain** how human activities, including inappropriate farming techniques, have led to rural land degradation; and 15

(ii) **describe** the consequences of rural land degradation on the people **and** their environment. 9

(c) Referring to **named** areas of **North America** which you have studied:

(i) **describe** and **explain** some of the measures which have been taken to conserve soil and limit rural land degradation; and 16

(ii) **comment** on the effectiveness of these strategies. (50)
Question 2 – continued

Map Q2: Climatic Regions of Chad

Climatic / Vegetation Region

Location of Chad

1000 km

Key:
- Precipitation (mm)
- Temperature (°C)
Question 3: River Basin Management

(a) Study Map Q3 and Diagrams Q3A and Q3B. **Describe** and **explain** why there is a need for water management within the Indus river basin. **Marks 12**

(b) For the Tarbela Dam, or any dam and reservoir scheme you have studied, **describe** and **explain** the physical and human factors that should be considered when selecting the site for a dam and its associated reservoir. **Marks 14**

(c) **Describe** and **account for** the social, economic and environmental benefits and adverse consequences of a named major water control project in Africa or Asia or North America. **Marks 24**

Map Q3: The Indus Valley, Pakistan, and areas affected by 2010 floods
Question 3 – continued

Diagram Q3A: Population growth in Pakistan

Diagram Q3B: Pakistan Climate Graphs

Key:
- Temperature (°C)
- Precipitation (mm)

Islamabad

Hyderabad

Key:
- Precipitation (mm)
- Temperature (°C)
Question 4: Urban Change and its Management

(a) Study Map Q4A.

Describe and account for the distribution of major towns and cities in either Brazil or any other Developing Country which you have studied.  

(b) Study Map Q4B.

There are over 600 shanty towns (favelas) within Rio de Janeiro. With reference to Rio de Janeiro, or any named city that you have studied in a Developing Country, discuss the social, economic and environmental problems of favelas.

(c) Study Map Q4B.

Rio de Janeiro will host the 2014 World Cup and 2016 Olympic Games. The favelas nearest to the Olympic and World Cup venues have been targeted for improvement. Referring to Rio de Janeiro, or any named city that you have studied in a Developing Country, describe the methods used to tackle problems in shanty towns and comment on their effectiveness.

(d) In March 2012, the British Government published the National Planning Policy Framework document, which emphasises the importance of redevelopment within cities. Countryside campaigners believe this is a victory against urban sprawl.

With reference to any named city in a Developed Country that you have studied:

(i) explain why urban sprawl has occurred; and

(ii) describe the problems caused by urban sprawl; and comment on possible solutions.
Map Q4A: Map of Brazil

Map Q4B: Location of favelas, World Cup and Olympic venues in Rio de Janeiro
Question 5: European Regional Inequalities

(a) Study Map Q5 and Table Q5.

To what extent does the data provide evidence of regional inequalities within Portugal?

Map Q5: Regions of Portugal

Table Q5: Regional statistics—Portugal

<table>
<thead>
<tr>
<th>Norte</th>
<th>Centro</th>
<th>Lisboa</th>
<th>Alentejo</th>
<th>Algarve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Expectancy (years)</td>
<td>79·6</td>
<td>79·6</td>
<td>79·2</td>
<td>78·4</td>
</tr>
<tr>
<td>Unemployment Rate (%)</td>
<td>12·7</td>
<td>7·7</td>
<td>11·3</td>
<td>11·4</td>
</tr>
<tr>
<td>% Employed in service sector</td>
<td>52·3</td>
<td>50·8</td>
<td>80·0</td>
<td>65·5</td>
</tr>
<tr>
<td>% Computer access</td>
<td>58·4</td>
<td>53·8</td>
<td>67·7</td>
<td>47·1</td>
</tr>
<tr>
<td>Educational attainment rate in tertiary education (%)</td>
<td>27·8</td>
<td>33·9</td>
<td>44·9</td>
<td>21·3</td>
</tr>
</tbody>
</table>
Question 5 – continued

(b) For Portugal or any other country in the European Union (EU), describe and explain the physical and human factors that have contributed to regional differences. 18

(c) For a named country in the EU, select one less developed region and:

(i) discuss ways in which the national government and the EU have taken steps to overcome the problems of inequality; and

(ii) comment on the effectiveness of these strategies. 20

(50)
Question 6: Development and Health

(a) Study Map Q6 and Table Q6.

India’s states and union territories can be grouped into six regions.

Using the development indicators in Table Q6 below, describe how the information given suggests that the six regions of India are at different levels of development.

Map Q6: Six regions of India

<table>
<thead>
<tr>
<th>Region</th>
<th>% Illiteracy Rate</th>
<th>Infant Mortality Rate (per 1000 live births)</th>
<th>Crude Birth Rate (per 1000 of population)</th>
<th>% of households without electricity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Himalayan North</td>
<td>23</td>
<td>43</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>The Plains</td>
<td>25</td>
<td>47</td>
<td>23</td>
<td>28</td>
</tr>
<tr>
<td>Western India</td>
<td>20</td>
<td>35</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>Southern India</td>
<td>17</td>
<td>29</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>Eastern India</td>
<td>26</td>
<td>46</td>
<td>22</td>
<td>38</td>
</tr>
<tr>
<td>North-eastern India</td>
<td>21</td>
<td>37</td>
<td>19</td>
<td>33</td>
</tr>
</tbody>
</table>

Table Q6: Selected indicators of development for India’s regions
Question 6 – continued

(b) **Explain** why using only one development indicator, such as Gross Domestic Product (GDP) per capita, may fail to reflect accurately the true quality of life within a country.

(c) **Explain** why countries in the Developing world are at different stages of development. You should refer to named countries that you have studied in your answer.

(d) Water-related diseases, such as malaria, cholera and bilharzia/schistosomiasis, are a serious problem in many Developing Countries.

For one of the above diseases:

(i) **describe** the measures that have been taken to combat the disease, and **comment on** how effective these measures have been;

(ii) **explain** the benefits for the Developing Countries in successfully controlling the disease.

[END OF QUESTION PAPER]