GCSE GEOGRAPHY

Paper 2 Challenges in the human environment

Tuesday 5 June 2018 Afternoon Time allowed: 1 hour 30 minutes

Materials
For this paper you must have:
• a pencil
• a rubber
• a ruler.
You may use a calculator.

Instructions
• Use black ink or black ball-point pen.
• Fill in the boxes at the top of this page.

Answer all questions in Section A and Section B.
Answer Question 3 and one other question in Section C.

• You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages. Do all rough work in this book. Cross through any work you do not want to be marked.

Information
• The marks for questions are shown in brackets.
• The total number of marks available for this paper is 88.
• Spelling, punctuation, grammar and specialist terminology will be assessed in Question 01.9.
• HIC is a higher income country.
• LIC is a lower income country.
• NEE is a newly emerging economy.
Section A Urban issues and challenges

Answer all questions in this section.

Question 1 Urban issues and challenges

Which term is best defined by the phrase, ‘the increasing percentage of the population living in towns and cities’?

Shade one circle only.

A Urban sprawl

B Urbanisation

C Migration

D Urban regeneration

[1 mark]
Study Figure 1, a graph showing the percentage of the population living in urban areas in different parts of the world 1950–2050 (projected).

Figure 1

Key
- Higher income countries (HICs)
- Newly emerging economies (NEEs)
- Lower income countries (LICs)

Complete the following paragraph to describe the changes shown in Figure 1.

Choose the three correct answers from this list:

HICs doubled NEEs
slow down trebled speed up

The smallest increase in percentage of urban population 1950–2050 is expected to be in _____________________.

From 2020 the rate of increase is expected to _________________ in NEEs.

Between 2000 and 2050, lower income countries are projected to have almost ____________________ in the percentage living in urban areas.

[3 marks]

Question 1 continues on the next page
Study Figure 2, a pie chart showing the reasons for rural–urban migration in a region of Pakistan, a country in Asia.

Figure 2

![Pie chart showing reasons for rural–urban migration in Pakistan.]

Key
- Green: Pull factors of migration
- Red: Push factors of migration

- War against terrorism
- Employment opportunities
- Educational facilities
- Gain new skills and experience
- Hostility in village
- Religious differences
- Family conflict
- Inadequate health facilities

Describe the pattern of reasons for migration shown in Figure 2. [2 marks]

0 1 3

Study Figure 3, some social media comments about traffic in Bangalore, a city in India.

Figure 3

![Social media comments on traffic in Bangalore.]

- #RoadsPoorQuality 62%
- #insufficientPublicTransport 28%
- #RoadsNeverRepaired 10%

Twitter: What is the main reason for traffic getting worse in Bangalore? Opinions please...

10 miles to go... SatNav says... 1h 30 mins 😞
That's #BangaloreCongestion

Turned down lift home yesterday – I was in a hurry!
#BangaloreCongestion
01.4 Using Figure 3 suggest one problem faced by people in Bangalore as a result of traffic congestion. [2 marks]

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01.5 Use Figure 3 and a case study of a city in a LIC or NEE to suggest why managing traffic congestion and air pollution may be challenging. [6 marks]

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Extra space
Study Figure 4, a graph showing GCSE scores along a transect through a UK city.

**Figure 4**

![Graph showing GCSE scores along a transect through a UK city.]

Key:
- Total GCSE score – the higher the score the better the student’s overall exam performance

01.6 Calculate the range in GCSE scores shown in Figure 4.

[1 mark]

____________________________________________________________________________________

01.7 Using Figure 4 and your own understanding, suggest reason(s) for inequalities in education in urban areas in the UK.

[4 marks]

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Outline one way that national migration has led to change in the character of a named UK city.

[2 marks]

To what extent has urban change created environmental challenges in a UK city you have studied?

[9 marks]

Name of city: ________________________________

[+ 3 SPaG marks]
Section B The changing economic world

Answer all questions in this section.

Question 2 The changing economic world

Study Figure 5, a table showing the Gross National Income (GNI) data for selected countries in 2016.

Figure 5

<table>
<thead>
<tr>
<th>Country name</th>
<th>GNI US$ per person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>11 960</td>
</tr>
<tr>
<td>Belgium</td>
<td>41 860</td>
</tr>
<tr>
<td>China</td>
<td>8 260</td>
</tr>
<tr>
<td>Finland</td>
<td>44 730</td>
</tr>
<tr>
<td>Haiti</td>
<td>780</td>
</tr>
<tr>
<td>India</td>
<td>1 680</td>
</tr>
<tr>
<td>Kenya</td>
<td>1 380</td>
</tr>
<tr>
<td>Mali</td>
<td>750</td>
</tr>
<tr>
<td>Poland</td>
<td>12 680</td>
</tr>
<tr>
<td>Spain</td>
<td>27 520</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>42 390</td>
</tr>
</tbody>
</table>

02.1 Calculate the median value for the GNI data in Figure 5.

[2 marks]

Space for working

Median =

02.2 Suggest one reason why the GNI per person varies between the countries shown in Figure 5.

[1 mark]

Question 2 continues on the next page
Give one disadvantage of using an economic measure of development such as GNI. [1 mark]

Study Figure 6, a diagram to explain the impact of tourism on a country.

Figure 6

Using Figure 6 and your own understanding, suggest how the growth of tourism in a LIC or NEE might help to reduce the development gap. [4 marks]
Extra space

Question 2 continues on the next page
Study Figure 7 which describes the effects of an intermediate technology project in an area of Malawi, a country in Africa.

**Figure 7**

**Bicycle Ambulances**

There are two small Health Centres in the area serving 45 000 people. 1 in 6 women die in childbirth.

People have to travel vast distances to be seen by a nurse or doctor. Travel to the clinics is usually by ox and cart but this is an expensive and slow mode of transport.

A project was started to build bicycle ambulances and to provide training to the people in the area so more patients can make their way to a health centre. It is hoped that these bicycle ambulances will help save many lives.

State **two** challenges faced by the people living in the area described in Figure 7. 

[2 marks]
State one characteristic of intermediate technology. [1 mark]

Outline one way in which international aid has had an impact on a named LIC or NEE country. [2 marks]

Question 2 continues on the next page
Using a case study of a LIC or NEE country, explain the link between Transnational Corporations (TNCs) and industrial development in the country.

[6 marks]

Name of country: __________________________

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Extra space ____________________________

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Study Figure 8, information about the planned spending on transport infrastructure in England’s regions 2016–2021.

### Figure 8

<table>
<thead>
<tr>
<th>Region</th>
<th>£ per person per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>North East</td>
<td>222</td>
</tr>
<tr>
<td>North West</td>
<td>682</td>
</tr>
<tr>
<td>Yorkshire and the Humber</td>
<td>190</td>
</tr>
<tr>
<td>East Midlands</td>
<td>221</td>
</tr>
<tr>
<td>West Midlands</td>
<td>254</td>
</tr>
<tr>
<td>East of England</td>
<td>413</td>
</tr>
<tr>
<td>London</td>
<td>1943</td>
</tr>
<tr>
<td>South East</td>
<td>226</td>
</tr>
<tr>
<td>South West</td>
<td>212</td>
</tr>
</tbody>
</table>

Using **Figure 8**, calculate the mean planned spending per person per year 2016–2021 in the nine English regions.

[2 marks]

Show your working here.

Mean planned spending = £

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Question 2 continues on the next page
Assess the importance of transport improvements to the UK economy.

[9 marks]
End of Section B

Turn over for Section C
Section C  The challenge of resource management

Answer two questions in this section.

Answer Question 3 and either Question 4 or Question 5 or Question 6.

Question 3  The challenge of resource management

Study Figure 9, a map showing world oil consumption in 2016.

Figure 9

What is the difference between Africa and North America’s share of world oil consumption shown in Figure 9?

[1 mark]
03.2 Using **Figure 9** and your own understanding, suggest how inequalities in the consumption of resources influence well-being.  

[3 marks]

03.3 Outline one advantage of the trend towards agribusiness in the UK.  

[2 marks]

Question 3 continues on the next page
Study Figure 10, a graph showing the UK’s changing energy mix from 2006 to 2016.
034

Using **Figure 10** and your own understanding, discuss the issues arising from the UK’s changing energy mix.

[6 marks]

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End of Question 3

Turn over for the next question
Answer either Question 4 or Question 5 or Question 6.

Question 4 Food

Study Figure 11, a map of South and East Asia showing the percentage of people who were undernourished between 2014 and 2016.

Figure 11

Key
Percentage of the population who were undernourished 2014–2016

- 25.0 or more
- 15.0 – 24.9
- 5.0 – 14.9
- Less than 5.0
- No data

0 4 1 Name one country where less than 5% of the population were undernourished.

[1 mark]
How many of the Asian countries shown in Figure 11 had 15–24.9% of their population undernourished?

Shade one circle only. [2 marks]

A 6
B 7
C 8
D 9

What percentage of the 24 countries in Asia for which data is shown had 15–24.9% of their population undernourished?

Answer to 1 decimal place.

________________________________________________________

Describe the distribution of countries which had 15–24.9% of their population undernourished as shown in Figure 11. [2 marks]

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Outline one reason why some countries have a limited food supply. [2 marks]

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Question 4 continues on the next page
Explain how different strategies can be used to make food supplies more sustainable. [6 marks]

Extra space

End of Question 4
Question 5 Water

Study Figure 12, a map of Africa showing percentage access to basic drinking water services in 2015.

Figure 12

0 5.1 Name one country with a 91–100% access to basic drinking water services. [1 mark]
05.2 How many of the African countries shown in **Figure 12** had less than 50% access to basic drinking water services?

Shade **one** circle only. [2 marks]

A 8
B 9
C 10
D 11

What percentage of the 48 countries in Africa for which data is shown had less than 50% access to basic drinking water services?

Answer to 1 decimal place.

05.3 Describe the distribution of countries which had 76–90% access to basic drinking water services as shown in **Figure 12**. [2 marks]

05.4 Outline **one** reason why some countries have a limited availability of water. [2 marks]

**Question 5 continues on the next page**
Explain how different strategies can be used to make water supplies more sustainable. [6 marks]

Extra space

End of Question 5
There are no questions printed on this page

Turn over for the next question

DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED
Question 6 Energy

Study Figure 13, a map of Europe showing the percentage energy consumption from renewable sources in Europe (excluding Russia) in 2014.

Figure 13

Name one country which had less than 10.0% of energy consumption from renewable sources.

[1 mark]
06.2 How many of the European countries shown in Figure 13 had 35.0–49.9% of energy consumption from renewable sources?

Shade one circle only.

[2 marks]

A 5
B 6
C 7
D 8

What percentage of the 41 countries in Europe for which data is shown had 35.0–49.9% consumption of energy from renewable sources?

Answer to 1 decimal place.

06.3 Describe the distribution of countries which had 20.0–34.9% consumption of energy from renewable sources shown in Figure 13.

[2 marks]

06.4 Outline one reason why some countries have a limited energy supply.

[2 marks]

Question 6 continues on the next page
Explain how different strategies can be used to make energy supplies more sustainable. [6 marks]