GCSE

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WJEC Eduqas GCSE in
GEOGRAPHY A
ACCREDITED BY OFQUAL

SAMPLE ASSESSMENT MATERIALS

Teaching from 2016

wjec
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This Ofqual regulated qualification is not available for candidates in maintained schools and colleges in Wales.

For teaching from 2016
For award from 2018

GCSE (9-1) GEOGRAPHY A

SAMPLE ASSESSMENT MATERIALS

Contents

GCSE

GEOGRAPHY A

COMPONENT 1

CHANGING PHYSICAL AND HUMAN LANDSCAPES

SAMPLE ASSESSMENT MATERIALS

1 hour 30 minutes

Section	Question	Mark	SPaG
A	1	34	
	2	34	4
B	*Either* 3	16	
	Or 4	16	
Total		84	4

ADDITIONAL MATERIALS
In addition to this paper you will require a calculator and a ruler.

INSTRUCTIONS TO CANDIDATES
Answer **both** questions in Section A.
Answer **one** question from Section B.

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.
Write your answers in the spaces provided in this booklet.
If additional space is required you should use the lined pages at the end of this booklet. The question number(s) should be clearly shown.

INFORMATION FOR CANDIDATES
The number of marks is given in brackets [ ] at the end of each question or part-question.
Your ability to spell, punctuate and use grammar and specialist terms accurately will be assessed in your answer to question 2 (c)(iii).
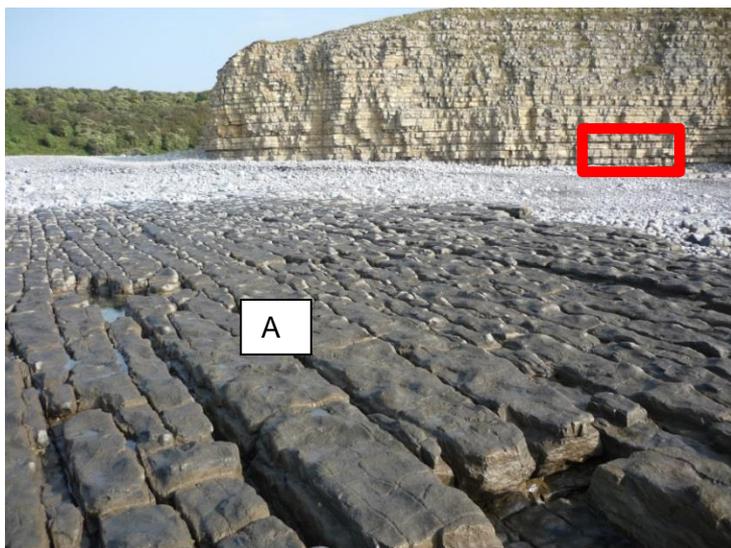
SECTION A CORE THEMES

*Answer **all** of the questions in this section.*

THEME 1: Landscapes and physical processes

1.   (a)   Study the photographs below. They show landforms and smaller scale features of the Glamorgan Heritage Coast.

Photograph 1.1   **Photograph 1.2** is a detail of the cliff in the red box of photograph 1.1

(i)   Use Photographs 1.1 and 1.2 to name the features at A and B.   [2]

A …………………………………………….

B …………………………………………….

(ii)   Feature A includes some shallow rock pools that are exposed at low tide. They have been formed by the process of abrasion. Describe the process of abrasion.   [4]

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(iii)   Over time the cliffs in photograph 1.1 have retreated.

Add annotations and extra detail to Diagram 1.3 **and** Diagram 1.4 to explain why the position of the cliffs has changed over time.   [4]
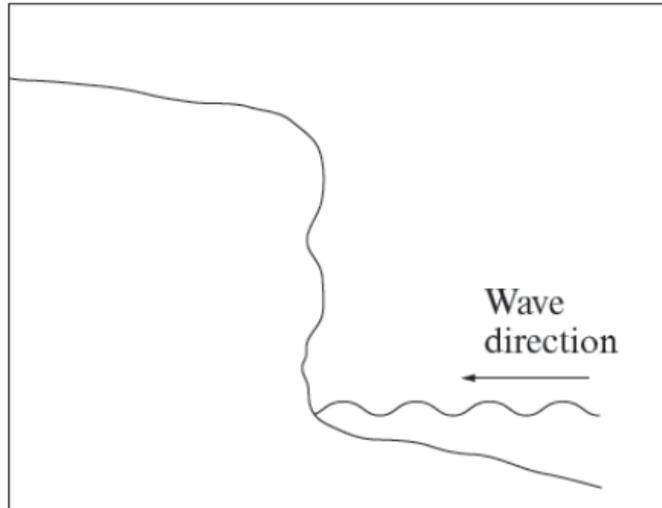
Diagram 1.3

Wave direction

Diagram 1.4

(iv) In 2015 a rock fall on the beach shown in Photograph 1.1 killed a young woman. Rock falls on this coastline also occurred in the years shown in Table 1.5.

Table 1.5 Major rock falls from cliffs of the Glamorgan Heritage Coast

June 2015
November 2011
June 2010
May 2009
June 2008
Feb 2007
November 2004

Calculate the mean frequency of the rock falls shown in Table 1.5 over the twelve year period from January 2004 to December 2015.
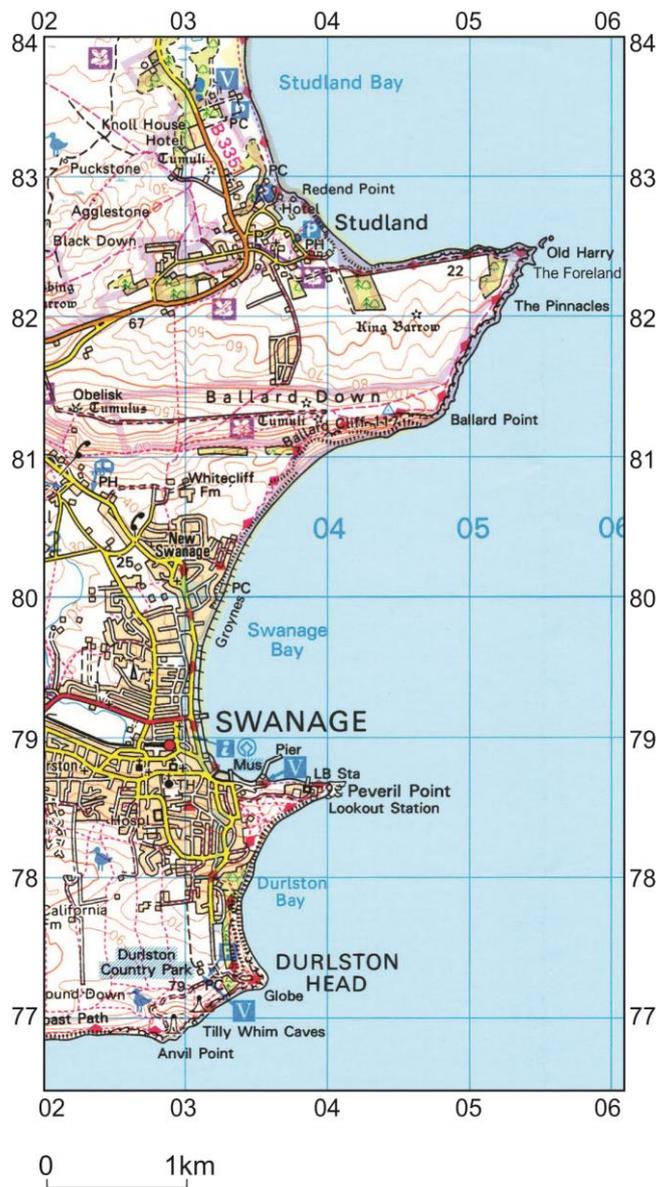Show your workings. [3]

Frequency is …………. months

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(b)   Study the OS map extract in Map 1.6 below. It shows part of the Dorset coastline in southern England.

Map 1.6 The coastline at Swanage

0   1km

(i)   Use map evidence from Map 1.6 to describe the relief in grid squares
0281, 0381 and 0481.   [4]

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(ii)   Explain why differences in rock type and structure can affect rates of
coastal erosion.   [6]

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(c)   Study the map, diagram and photograph below. They show information about the Conwy Valley which is located in the upland region of North Wales. This river valley often floods at Llanrwst.
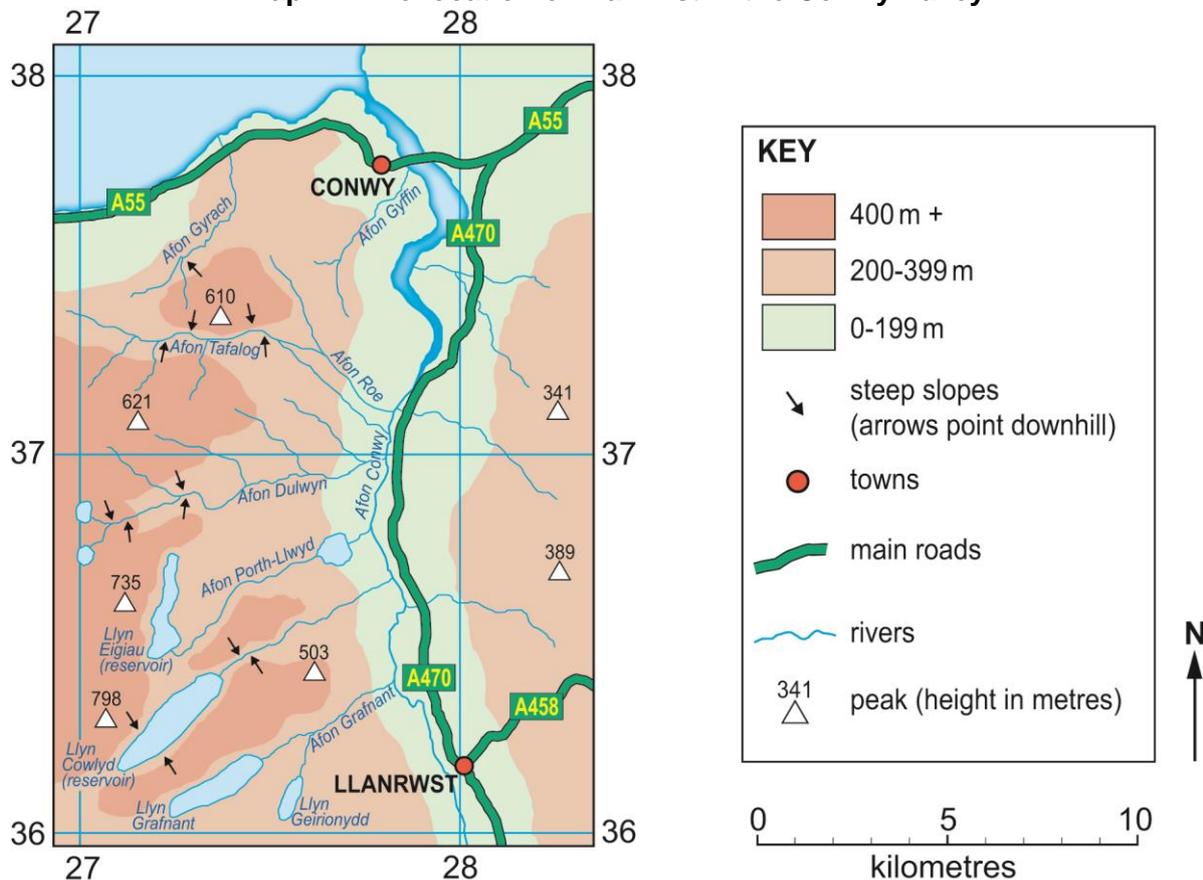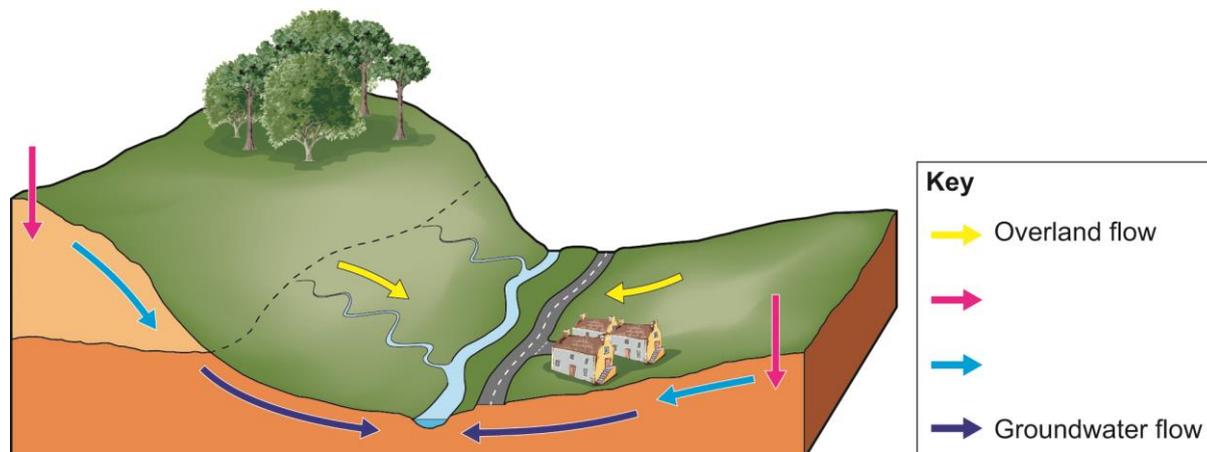
Map 1.7 The location of Llanrwst in the Conwy Valley

Diagram 1.8 Movement of water in the Conwy Valley

Photograph 1.9 The town of Llanrwst in the flooded Conwy Valley

(i)   Use Diagram 1.8. State what movement of water is shown by the pink and pale blue arrows using the correct specialist terms.   [2]

The pink arrow shows …………………………………

The pale blue arrow shows …………………………

(ii)   The hills to the west of the Conwy Valley are impermeable. Suggest **one** way that arrows on Diagram 1.8 could be altered to show how the flow of water will be affected.   [1]

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(iii)   Make use of Map 1.7, Diagram 1.8 and Photograph 1.9 to decide whether you agree with the following statement.
'Physical factors are more likely to cause flooding in Llanwrst than human factors'.
Explain your reasons.

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End of question 1

THEME 2: Rural-urban links

2.   (a)   Study Table 2.1 below. It shows some differences between urban and rural regions of Uganda. Uganda is a Low Income Country (LIC) in sub-Saharan Africa.

Table 2.1 Selected urban/rural data for Uganda

	Urban	**Rural**
Population (millions)	6.6	32.3
Literacy rate	87%	66%
Access to safe drinking water	91%	64%

         (i)   How many million people (to two decimal places) have access to safe drinking water in rural areas of Uganda? Show your working.   [2]

         Answer: ……………….. million

         (ii)   Select (✓) **one** appropriate technique to represent the literacy rate data for urban and rural areas of Uganda from the list below

	Tick (✓)
A block graph	
A pair of pie charts	
A pair of proportional pie charts where the size of the circle is in proportion to the population	

         Explain why your selected technique is more appropriate than the others.   [4]

(iii)   In Uganda many people are moving from rural areas to the capital city, Kampala. Migration like this occurs in many Low Income Countries (LICs).

Explain why people may feel pushed away from the rural environment and attracted to move to towns and cities in LICs.   [6]

(b)   The migration of people into Ugandan cities has led to the growth of informal settlements or shanty towns.

(i)   Describe the location of one shanty town in one global city located in the economically developing world.   [4]

Name of city ....

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(ii)   Describe **one** way in which living conditions have improved in a named shanty town you have studied.   [4]

Name of shanty town ....

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(c) A group of students used the interactive maps and graphs of a GIS to investigate future changes in the UK's population. They compared future population changes in a city (Cardiff) to a rural area (West Dorset). Study the screen shots from the GIS below.

Screen shot 2.2
Population aged 65 and over (2000)

Screen shot 2.3
Population aged 65 and over (2030)

Percentage of total population

■	34 to 41.2
▦	26.9 to 33.9
□	19.7 to 26.8
▨	12.6 to 19.6
▤	5.3 to 12.5
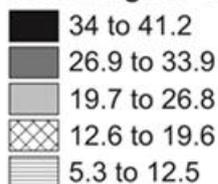
Screen shot 2.4
Population aged 65 and over, Cardiff (1992-2003)
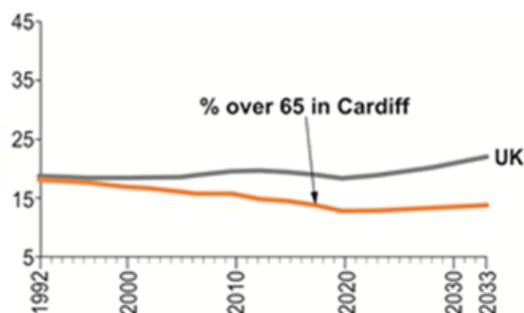
Screen shot 2.5
Population aged 65 and over, West Dorset (1992-2003)
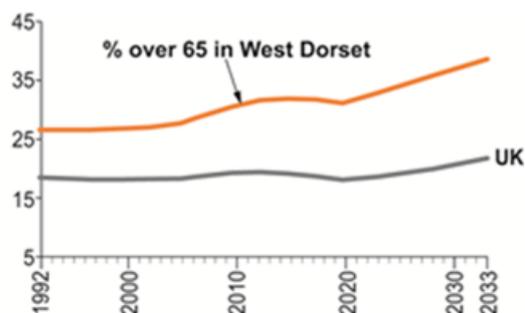
Source: www.ons.gov.uk/ons/interactive/theme-pages-1-2/age-interactive-map.html

(i) Compare the trend of the two graphs in screen shots 2.4 and 2.5. [2]

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(ii)   Screen shots 2.2 and 2.3 show that there is a higher proportion of
        people aged 65 and over in West Dorset than in Cardiff. Give **two**
        reasons why rural areas of the UK tend to have more people aged 65
        and over.   [4]

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(iii)   The ageing population will create future challenges for individuals and
        organisations in the UK.

        Make use of screen shots 2.2 – 2.5 to help you decide whether these
        challenges will be greater in rural or urban areas of the UK. You will
        need to justify your decision by considering the consequences for rural
        and urban communities.   [8 + 4]

        *Your ability to spell, punctuate and use grammar and specialist terms
        accurately will be assessed in your answer to this question.*

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End of question 2

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SECTION B OPTIONS

*Answer **one** question in this section.*
Choose either question 3 (Theme 3) OR question 4 (Theme 4)

THEME 3: Tectonic Landscapes and Hazards

3.   (a)   Study Map 3.1 below. The Solomon Islands are a group of islands in the Pacific Ocean.

Map 3.1 The location of the Solomon Islands

Use Map 3.1. Give the distance and direction to the centre of the Solomon Islands from Wellington, New Zealand. Underline each correct answer.   [2]

Distance:	2900km	3900km	4900km
Direction:	NNW	SSE	WNW

(b)   In 2013 the Solomon Islands were affected by an earthquake of magnitude 8 on the Richter scale.

Tick (✓) **two** correct statements below.   [2]

	Tick (✓) **two** correct statements
Magnitude is a measure of the distance from an earthquake	
Magnitude is a measure of the amount of time of ground shaking during an earthquake	
Magnitude is a measure of the amount of energy released by an earthquake	
Magnitude 8 is ten times greater than magnitude 7	
Magnitude 8 is one hundred times greater than magnitude 7	
Magnitude 8 is ten times less than magnitude 7	

(c)   The 2013 earthquake created a tsunami that killed at least 5 people in the Solomon Islands.

Explain why an earthquake sometimes creates a tsunami.   [4]

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(d)   Average wealth in the Solomon Islands (measured using GNI) is US$1,600 per person. The 2013 tsunami that struck the Solomon Islands was 0.9 metres high. It flooded some remote villages and a small town. The town's airport was damaged. Aid was sent from New Zealand and Australia.

Make use of the information about the Solomon Islands to decide whether you agree with the following statement.
'Remote islands are more vulnerable to tectonic hazards than any other location.'
Explain your answer   [8]

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End of Question 3

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THEME 4: Coastal Hazards and their Management

4. (a) Study Map 4.1 below. Tuvalu is a group of islands in the Pacific Ocean.

Map 4.1 The location of Tuvalu
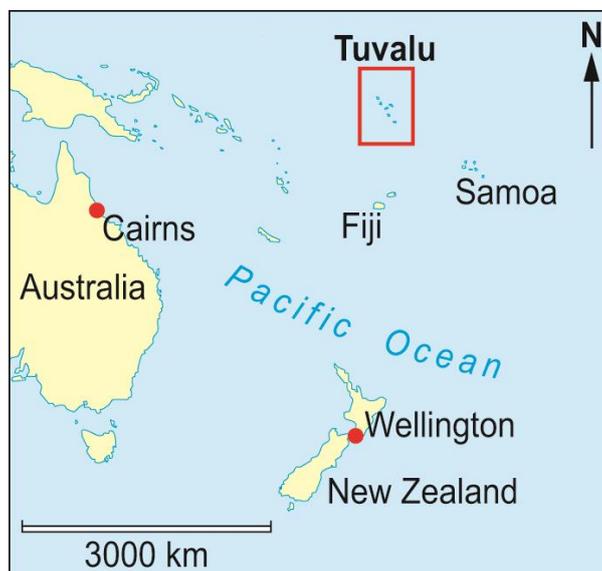
Use Map 4.1. Give the distance and direction to the centre of Tuvalu from Cairns, Australia. Underline each correct answer. [2]

Distance:	2800km	3800km	4800km
Direction:	NNE	WSW	ENE

(b) Tuvalu is vulnerable to the effects of cyclones. In 2015 the islands were hit by Cyclone Pam which was a Category 5 hurricane. During this event a storm surge flooded the islands with sea water, damaging fresh water drinking supplies.

Tick (✓) **two** correct statements below. [2]

	Tick (✓) **two** correct statements
The category of a hurricane is a measure of the amount and intensity of rainfall	
The category of a hurricane is a measure of the intensity of wind speeds	
The category of a hurricane is a measure of the size of the spiral cloud formation	
A Category 5 hurricane is ten times stronger than a Category 4 hurricane	
Category 5 hurricanes have higher wind speeds than Category 4 hurricanes	
Tropical storms are stronger than hurricanes	

(c)   Explain why hurricanes create a storm surge.   [4]

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(d)   Average wealth in Tuvalu (measured using GNI) is US$5,840 per person.

The highest point anywhere in Tuvalu is only 4.6 metres above sea level. The islands are vulnerable to coastal flooding during hurricanes such as Cyclone Pam. After Cyclone Pam aid was sent from Australia and New Zealand.

Climate change also threatens the islands. It is estimated that a sea level rise of between 20 and 40 centimetres would make it impossible for people to continue to live on Tuvalu.

Make use of the information about Tuvalu to decide whether you agree with the following statement.

'Remote islands are more vulnerable to coastal hazards than any other location.' Explain your answer.   [8]

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End of Question 4

COMPONENT 1 – MARKSCHEME

Instructions for examiners of GCSE Geography when applying the marking scheme

1 Positive marking

It should be remembered that learners are writing under examination conditions and credit should be given for what the learner writes, rather than adopting the approach of penalising him/her for any omissions. It should be possible for a very good response to achieve full marks and a very poor one to achieve zero marks. Marks should not be deducted for a less than perfect answer if it satisfies the criteria of the mark scheme.

GCSE Geography marking schemes are presented in a common format as shown below:

This box contains the sub-question.

The columns to the right indicate the assessment objective(s) targeted by the question and its mark tariff.

3 (a) (i) Describe the location of the island of Lefkada.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit two simple statements based on map evidence. Credit accurate use of compass points max 1 Credit accurate use of scale line max 1	In western Greece (1) In Ionian Sea (1) north of Cephalonia (1) 275km (+/-10) from Athens (1) 280km (+/-10) from Thesaloniki (1)					2	**2**

This box contains the rationale i.e. it explains the principles that must be applied when marking each sub-question. The examiner must apply this rationale when applying the marking scheme to the response.

This box contains the candidates' expected responses for point-based marking. For some sub-questions, those with a closed question, this box will indicate the only response that is acceptable. For more open ended sub-questions this box will illustrate a number of likely responses that are credit worthy. It may be that this list will be extended at the examiner's conference after actual scripts have been read. For banded mark schemes this box contains indicative content. For further details see below under Banded mark schemes Stage 2.

2 Tick marking

Low tariff questions should be marked using a points-based system. Each credit worthy response should be ticked in red pen. The number of ticks **must** equal the mark awarded for the sub-question. The mark scheme should be applied precisely using the expected outcomes box as a guide to the responses that are acceptable. Do **not** use crosses to indicate answers that are incorrect. If the candidate has not attempted the question then the examiner should strike through the available dotted lines with a diagonal line.

3 Banded mark schemes

Banded mark schemes are divided so that each band has a relevant descriptor. The descriptor for the band provides a description of the performance level for that band. Each band contains a range of marks. Examiners should first read and annotate a learner's answer to pick out the evidence that is being assessed in that question. **Do not use ticks** on the candidate's response. Once the annotation is complete, the mark scheme can be applied. This is done as a two stage process.

Stage 1 – Deciding on the band

When deciding on a band, the answer should be viewed holistically. Beginning at the lowest band, examiners should look at the learner's answer and check whether it matches the descriptor for that band. Examiners should look at the descriptor for that band and see if it matches the qualities shown in the learner's answer. If the descriptor at the lowest band is satisfied, examiners should move up to the next band and repeat this process for each band until the descriptor matches the answer.

If an answer covers different aspects of different bands within the mark scheme, a 'best fit' approach should be adopted to decide on the band and then the learner's response should be used to decide on the mark within the band. For instance if a response is mainly in band 2 but with a limited amount of band 3 content, the answer would be placed in band 2, but the mark awarded would be close to the top of band 2 as a result of the band 3 content.

Examiners should not seek to mark candidates down as a result of small omissions in minor areas of an answer.

Stage 2 – Deciding on the mark

Once the band has been decided, examiners can then assign a mark. During standardising (marking conference), detailed advice from the Principal Examiner on the qualities of each mark band will be given. Examiners will then receive examples of answers in each mark band that have been awarded a mark by the Principal Examiner. Examiners should mark the examples and compare their marks with those of the Principal Examiner.

When marking, examiners can use these examples to decide whether a learner's response is of a superior, inferior or comparable standard to the example. Examiners are reminded of the need to revisit the answer as they apply the mark scheme in order to confirm that the band and the mark allocated is appropriate to the response provided.

Indicative content is also provided for banded mark schemes. Indicative content is not exhaustive, and any other valid points must be credited. In order to reach the highest bands of the mark scheme a learner need not cover all of the points mentioned in the indicative content but must meet the requirements of the highest mark band. Where a response is not creditworthy, that is contains nothing of any significance to the mark scheme, or where no response has been provided, no marks should be awarded.

Core Themes   Mark **both** questions

Options Themes   Learners are instructed to answer **one** question. If the candidate has responded to both questions then the examiner must mark both questions. Award the higher mark that has been attained.

SECTION A

CORE THEMES

Core Theme 1, Question 1

(a) Study the photographs below. They show landforms and smaller scale features of the Glamorgan Heritage Coast. (i) Use Photographs 1.1 and 1.2 to name the features at A and B.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit these responses only.	A. Wave-cut platform (1) B. Wave-cut notch/notch/bedding plane (1)	2					**2**

(a) (ii) Feature A includes some shallow rock pools that are exposed at low tide. They have been formed by the process of abrasion. Describe the process of abrasion.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit up to **four** valid statements, each for one mark.	Destructive/powerful waves (1) pick up/transport load/rocks/shingle (1) from sea bed/beach (1) roll them around in weak parts/joints of the wave-cut platform (1) eroding/wearing away a circular depression (1)	4					**4**

(a) (iii) Over time the cliffs in photograph 1.1 have retreated. Add annotations and extra detail to Diagram 1.3 **and** Diagram 1.4 to explain why the position of the cliffs has changed over time.			AO1	AO2.1	AO2.2	AO3	AO4	**Total**
This question targets understanding of the interrelationship between process (of cliff retreat) and the environment (coastal landforms). Use the descriptors below, working upwards from the lowest band.			Responses should demonstrate an understanding of the link between the process of erosion and changing coastal landscapes with particular reference to the stages of cliff retreat. Responses may add detail and/or annotation to one or both diagrams to show stages of retreat: 1. Development of wave cut notch 2. Development of stress in overhang 3. Landslide and/or rock fall		4			**4**
Band	**Mark**	**Band Descriptor**						
3	4	Valid extra detail on one/both diagrams is supported by elaborated annotations, using a chain of reasoning.						
2	2-3	Elaborated annotations show understanding of retreat.						
1	1	Valid basic statement(s) show limited understanding.						
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.						

(a) (iv) In 2015 a rock fall on the beach shown in Photograph 1.1 killed a young woman. Rock falls on this coastline also occurred in the years shown in Table 1.5. Calculate the mean frequency of the rock falls shown in Table 1.5 over the eleven year period from Jan 2004 to December 2015. Show your workings.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit this response only for **one** mark. Credit working for max two marks as shown. Award max **one** mark if the correct response is given but the candidate does not show working.	**Frequency = 21 months (1)** 12 years x 12 months = 144 (1) OR 12/7 = 1.57 years (1) 144/7 = 20.57 (1)					3	**3**

(b) Study the OS map extract in Map 1.6 below. It shows part of the Dorset coastline in southern England. (i) Use map evidence from Map 1.6 to describe the relief in grid squares 0281, 0381 and 0481.	AO1	AO2.1	AO2.2	AO3	AO4	**Total**
					4	**4**

<table>
<tr>
<td colspan="2">
This question assesses the element of use of an OS map and the element of communicating finding.

Use the descriptors below, working upwards from the lowest band.

Band	**Mark**	**Band Descriptor**
2	3-4	Elaborated statements successfully use map evidence and specialist terminology to provide detailed description of relief. Meaning is unambiguous. The response has purpose, is organised and well structured.
1	1-2	Valid statements use some map evidence to provide description of relief. Meaning is clear. Statements are linked by a basic structure.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

</td>
<td>
Responses will use map evidence such as the spacing and orientation of contour lines to provide a description of the relief in this part of the map.

The main focus of the response should identify a.

The scarp slope (i.e. steeper slope) faces to the south whilst the dip slope (i.e. gentler slope) faces to the north. The eastern end of the escarpment ends in steep cliffs in grid square 0481.
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(b) (ii) Explain why differences in rock type and structure can affect rates of coastal erosion.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
			6				**6**

This question assesses AO2.1, the concept of process and change (and specifically differential rates of erosion).

Use the descriptors below, working upwards from the lowest band.

Band	Mark	Band Descriptor
3	5-6	Thorough understanding of process and the influence of rock type **and** structure in affecting rates of change.
2	3-4	Understanding of process and the influence of rock type and/or structure in affecting rates of change. The response lacks balance, focusing on either rock type or structure, or it lacks depth if it addresses both elements.
1	1-2	Simple, valid statements demonstrate basic understanding of the role of geology in affecting rates of erosion.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

Responses should link rock type and/or geological structures (such as bedding planes) to the resistance of the coastline and its rate of erosion.

Responses should contrast rates of erosion of two different rock types, for example, slow erosion in igneous rocks (e.g. Pembrokeshire) contrasted with rapid erosion of glacial tills (e.g. Holderness)

Credit explanation of cliff shape (resistant rocks form steep sided cliffs while less resistant rocks are prone to slides and slumps so form gentler slopes) as long as differential rates of erosion of these two cliff types are explained.

(c) (i) Use Diagram 1.8 . State what movement of water is shown by the pink and pale blue arrows using the correct specialist terms.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit these responses only.	pink arrow – infiltration/percolation (1) blue arrow – throughflow (1)	2					**2**

(c) (ii) The hills to the west of the Conwy Valley are impermeable. Suggest **one** way that arrows on Diagram 1.8 could be altered to show how the flow of water will be affected.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit one valid statement with one mark. Credit reference to width or overall size of arrow.	Smaller/narrower infiltration arrow (1) OR larger/wider overland flow arrow (1) OR smaller/narrower throughflow arrow (1)					1	**1**

			AO1	AO2.1	AO2.2	AO3	AO4	Total
(c) (iii) Make use of Map 1.7, Diagram 1.8 and Photograph 1.9 to decide whether you agree with the following statement. 'Physical factors are more likely to cause flooding in Llanwrst than human factors'. Explain your reasons.								
						8		**8**

Use the descriptors below, working upwards from the lowest band.

Band	Mark	Descriptor
4	7-8	Exceptional application of knowledge and understanding: • Comprehensive chains of reasoning provide sophisticated analysis • Balanced and coherent appraisal draws together wider geographical understanding to justify decision(s).
3	5-6	Thorough application of knowledge and understanding: • Chains of reasoning provide elaborated analysis • Balanced appraisal draws together wider geographical understanding to support decision(s).
2	3-4	Sound application of knowledge and understanding: • Some connections provide valid but limited analysis • Limited appraisal uses wider geographical understanding to support decision(s).
1	1-2	Some basic application of knowledge and understanding: • Basic levels of meaning ascribed to the information/issue • Limited and weak appraisal uses some wider geographical understanding to support decision(s).
	0	Award zero marks if the answer is incorrect or wholly irrelevant.

This question requires candidates to synthesise links between different areas of knowledge and understanding and apply this understanding to analyse novel information that requires a judgement. All elements of AO3 are targeted.

Candidates must apply their knowledge of and understanding of the human, climatic and geological factors that determine movement of water through drainage basins to decide which factors are largely responsible for flooding in the context of this particular upland drainage basin with its distinctive features.

Responses will ascribe specific meaning to/analyse the resources, as detailed below, before evaluating their relative importance and reaching a decision.

Physical Factors are more likely to explain flooding in this context because:

steep slopes to the west of the Conwy increase speed of overland flow/run-off, reduces time lag so exceeding channel capacity.

impermeable geology of this drainage basin increase amount of overland flow/run-off

high relief in an upland area of Wales so large amount of rainfall which exceed infiltration capacity so increases overland flow/run-off to river.

flat valley floor / floodplain which is visible in the photograph so land close to river is vulnerable /nowhere for water to drain.

Human Factors may have had a lesser (but not insignificant) impact

concrete/tarmac in Llanrwst are impermeable surfaces so decreased natural infiltration and increased overland flow/run-off so water reaches river rapidly / short time-lag but Llanrwst appears to be a relatively small town.

partial historical deforestation and improved drainage of upland areas (grazing identified in Photograph 1.9) so interception is not reduced as much as if all valley was forested, so increases amount of overland flow/throughflow.

Core Theme 2, Question 2

(a) (i) How many million people (to two decimal places) have access to safe drinking water in rural areas of Uganda? Show your working.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit the correct answer for one mark and credit accurate working for a second mark. If only accurate working out is shown, credit one mark.	20.67 (1) 32.3 x 0.64 (1)					2	**2**

(a) (ii) Explain why your selected technique is more appropriate than the others.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Use the descriptors below, working upwards from the lowest band.	**Block graphs** are accurate and easy to read but should be used for absolute data rather than percentages. **Pie charts** are used to show percentages and literacy rates are presented as percentage figures. They are simpler to construct than proportional circles. Pairs of pie charts are easy to read and compare. **Proportional pie charts** show both population size and proportion so they are more sophisticated than the other options. They are the only option that represents population size as well as literacy rate. The scale of the proportional circle is difficult to construct/read with accuracy.					4	**4**

Band	Mark	Band Descriptor
2	3-4	Balanced rationale comments on all techniques and considers strengths and limitations. Meaning is unambiguous. The response has purpose, is organised and well structured.
1	1-2	Valid statements with limited elaboration demonstrate some reasoning. Meaning is clear. Statements are linked by a basic structure.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

(a) (iii) In Uganda many people are moving from rural areas to the capital city, Kampala. Migration like this occurs in many Low Income Countries (LICs). Explain why people may feel pushed away from the rural environment and attracted to move to towns and cities in LICs.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
				6			**6**

This question assesses AO2.2, the inter-relationship between process (of migration) and the environment or place.

Use the descriptors below, working upwards from the lowest band.

Band	Mark	Band Descriptor
3	5-6	Thorough and elaborated understanding of a range of reasons for rural-urban migration which demonstrates depth of understanding for at least some reasons through chains of reasoning.
2	3-4	Elaborated understanding of some reasons for rural-urban migration which demonstrates breadth of understanding.
1	1-2	Simple, valid statements demonstrate basic understanding of the reasons for rural-urban migration.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

Credit push and/or pull factors but do not double credit unless further detail or elaboration is provided that would indicate a higher band has been achieved.

Do **not** credit direct lifting of evidence from the resources e.g. life expectancy is 45 years in rural areas.

Responses should demonstrate understanding of a range of push or pull factors that are responsible for rural to urban migration.

Push factors

Poor harvests *so lack of food leads to malnourishment / early death*

Desertification *so land is becoming less fertile harder to make profit from farming harder to feed family / malnourishment*

Lack of education / schools *so children have to walk long distances to school remain illiterate do not get employment skills*

Pull factors

More education opportunities / higher education *so children can complete education become fully literate gain employment skills*

More job opportunities *which may also be better paid so money can be sent back to rural families*

(b) The migration of people into Ugandan cities has led to the growth of informal settlements or shanty towns. (i) Describe the location of one shanty town in one global city located in the economically developing world.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit up to **four** valid statements, each for one mark. Reserve one mark for name of city. Credit use of compass and distance to describe location accurately.	The answer will depend on the choice of the city. The following is for illustration only: Kibera is in Nairobi (1) This shanty town is less than 3km (1) to the south (1) of the city centre (1). It is located next to a railway line (1)	4					**4**

(b) (ii) Describe **one** way in which living conditions have improved in a named shanty town you have studied.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Use the descriptors below, working upwards from the lowest band. 	Band	Marks	Descriptor
---	---	---
2	3-4	Elaborated statements which demonstrate detailed knowledge of how shanty town improvements have been made. Description includes detail specific to a named location.
1	1-2	Simple statements that demonstrate general knowledge of how shanty towns may be improved. Location is named.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.		Responses should demonstrate knowledge of one strategy that has improved the urban environment or quality of life in a shanty town. Examples might include: • a self-help scheme to build more permanent homes • the role of an NGO in improving education or health facilities • the creation of a micro-credit scheme • improvement in street lighting to improve safety for women	4					**4**

		AO1	AO2.1	AO2.2	AO3	AO4	Total
(c) A group of students used the interactive maps and graphs of a GIS to investigate future changes in the UK's population. They compared future population changes in a city (Cardiff) to a rural area (West Dorset). Study the screen shots from the GIS below. (i) Compare the trend of the two graphs in screen shots 2.4 and 2.5.							
Credit up to two valid **comparative** statements each with one mark. Statements must make direct comparison. Do **not** credit statements that simply describe one trend.	The trend of % over 65 in Cardiff is decreasing **whereas** the trend in West Dorset is increasing (1) The trend of % over 65 in Cardiff starts at UK average and goes below UK average **whereas** in West Dorset it is always above UK average (1)					2	**2**

		AO1	AO2.1	AO2.2	AO3	AO4	Total
(c) (ii) Screen shots 2.2 and 2.3 show that there is a higher proportion of people aged 65 and over in West Dorset than in Cardiff. Give **two** reasons why rural areas of the UK tend to have more people aged 65 and over.							
This question assesses AO2.1, the concept of population change. Credit up to **two** valid statements each with one mark (to max 2). For **each** valid statement, credit a valid *explanation* for the second mark.	People move to rural areas when they retire (1) *because they want a tranquil life / perceive rural areas to be safer / quieter (1) because they can afford higher house prices (1)* Younger people / young families tend to leave rural areas (1) *because there are too few jobs / more jobs in cities (1)* Young adults move because of lack of higher education / more higher education in cities (1) *so there are relatively more retired people left in the rural area (1)*	4					**4**

(c) (iii) The ageing population will create future challenges for individuals and organisations in the UK. Make use of screen shots 2.2 – 2.5 to decide whether these challenges will be greater in rural or urban areas of the UK. You will need to justify your decision by considering the consequences for rural and urban communities. *Your ability to spell, punctuate and use grammar and specialist terms accurately will be assessed in your answer to this question.*	AO1	AO2.1	AO2.2	AO3	AO4	SPaG	Total
				8		4	**12**

Use the descriptors below, working upwards from the lowest band.

Band	Mark	Descriptor
4	7-8	Exceptional application of knowledge and understanding: • Comprehensive chains of reasoning provide sophisticated analysis • Balanced and coherent appraisal draws together wider geographical understanding to justify decision(s).
3	5-6	Thorough application of knowledge and understanding: • Chains of reasoning provide elaborated analysis • Balanced appraisal draws together wider geographical understanding to support decision(s).
2	3-4	Sound application of knowledge and understanding: • Some connections provide valid but limited analysis • Limited appraisal uses wider geographical understanding to support decision(s).
1	1-2	Some basic application of knowledge and understanding: • Basic levels of meaning ascribed to the information/issue • Limited and weak appraisal uses some wider geographical understanding to support decision(s).
	0	Award zero marks if the answer is incorrect or wholly irrelevant.

This question requires candidates to synthesise links between different areas of knowledge and understanding and apply this understanding to analyse novel information that requires a decision. All elements of AO3 are targeted.

Responses will apply knowledge and understanding of the issues created by the UK's ageing population and draw together (synthesise) separate strands of their understanding about urban-rural links, access to services and the ageing of the UK population to address this specific question about the relative strength of the challenges faced by urban communities as opposed to rural communities.

They may argue that:

• urban areas contain populations that are larger so the number of elderly people who require care will be greater as an absolute number
• rural areas contain a larger proportion of elderly people so represent a bigger pro rata problem
• rural communities will be more isolated and, therefore, further from the health, retail, banking and social services that are required and therefore more likely to suffer issues of multiple deprivation than urban communities
• rural areas are less well connected with broadband than urban communities so elderly residents will feel more isolated and lack access to information and services than elderly residents in urban areas
• rural areas are more socially cohesive and provide better voluntary support for elderly residents than urban communities.

Responses will analyse information provided in the screen shots to demonstrate that these challenges are getting greater in the future / will be greater in rural areas.

After awarding a level and mark for the geographical response, apply the performance descriptors for spelling, punctuation and the accurate use of grammar (SPaG) and specialist terms that follow.

Band	Marks	Performance descriptions
High	4	• Learners spell and punctuate with consistent accuracy • Learners use rules of grammar with effective control of meaning overall • Learners use a wide range of specialist terms as appropriate
Intermediate	2-3	• Learners spell and punctuate with considerable accuracy • Learners use rules of grammar with general control of meaning overall • Learners use a good range of specialist terms as appropriate
Threshold	1	• Learners spell and punctuate with reasonable accuracy • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall • Learners use a limited range of specialist terms as appropriate
	0	• The learner writes nothing • The learner's response does not relate to the question • The learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning

End of Question 2

SECTION B

OPTIONS

Theme 3, Question 3

3 (a) Study Map 3.1 below. The Solomon Islands are a group of islands in the Pacific Ocean. Use map 3.1. Give the distance and direction to the centre of the Solomon Islands from Wellington, New Zealand. Underline each correct answer.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit these responses only.	3900km (1) NNW (1)					2	**2**

3 (b) In 2013 the islands were affected by an earthquake of magnitude 8 on the Richter scale. It created a tsunami that killed at least 5 people in the Solomon Islands. Tick (✓) **two** correct statements below.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit these responses only.	Magnitude is a measure of the amount of energy released by an earthquake (1) Magnitude 8 is ten times greater than magnitude 7 (1)	2					**2**

3 (c) Explain why an earthquake sometimes creates a tsunami.			AO1	AO2.1	AO2.2	AO3	AO4	**Total**
This question assesses the inter-relationship between process and environment. Use the descriptors below, working upwards from the lowest band. **Band / Mark / Band Descriptor** table below	Responses should make connections between the vertical movement of the sea bed during the earthquake and the displacement of the column of water above.				4			**4**

Band	Mark	Band Descriptor
3	4	Thorough and elaborated understanding is demonstrated through chains of reasoning.
2	2-3	Elaborated understanding of cause and effect.
1	1	Simple, valid statements demonstrate basic understanding.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

3 (d) Make use of the information about the Solomon Islands to decide whether you agree with the following statement. 'Remote islands are more vulnerable to tectonic hazards than any other location.' Explain your answer.	AO1	AO2.1	AO2.2	AO3	AO4	**Total**
				8		**8**

<table>
<tr><td colspan="2">Use the descriptors below, working upwards from the lowest band.</td><td>This question requires candidates to synthesise links between different areas of knowledge and understanding and apply this understanding to analyse novel information that requires a judgement. All elements of AO3 are targeted.</td></tr>
</table>

Band	Mark	Descriptor
4	7-8	Exceptional application of knowledge and understanding: • Comprehensive chains of reasoning provide sophisticated analysis • Balanced and coherent appraisal draws together wider geographical understanding to justify decision(s).
3	5-6	Thorough application of knowledge and understanding: • Chains of reasoning provide elaborated analysis • Balanced appraisal draws together wider geographical understanding to support decision(s).
2	3-4	Sound application of knowledge and understanding: • Some connections provide valid but limited analysis • Limited appraisal uses wider geographical understanding to support decision(s).
1	1-2	Some basic application of knowledge and understanding: • Basic levels of meaning ascribed to the information/issue • Limited and weak appraisal uses some wider geographical understanding to support decision(s).
	0	Award zero marks if the answer is incorrect or wholly irrelevant.

This question requires candidates to synthesise links between different areas of knowledge and understanding and apply this understanding to analyse novel information that requires a judgement. All elements of AO3 are targeted.

Responses should **apply** knowledge and understanding of the factors (which may be economic, social, cultural or physical) that increase the vulnerability to tectonic hazards in the novel context of the Solomon Islands or other, similar, remote island communities.

Responses will move beyond a demonstration of pure understanding by ascribing specific meaning to/analysing the resources, as detailed below, before evaluating the relative vulnerability of remote islands and reaching a decision.

They may argue that:

The remote location of the islands in relation to larger, more economically developed nations who could provide assistance, such as New Zealand and Australia means that assistance could be slower to arrive/more difficult to co-ordinate than if a similar disaster occurred in a more accessible location.

The relative poverty of the islands compared to other nations that are susceptible to earthquakes/tsunami such as Japan means that economic recovery will take longer.

The relative vulnerability of poor coastal communities where building technologies are not hazard resistant and where the poorest members of the community are at greatest risk means that these communities are more vulnerable to both primary and secondary hazards such as disease and food/water insecurity than wealthier communities.

Other factors, that determine vulnerability, may be presented to balance the argument. It may be argued that other factors, such as density of population or proximity to a plate boundary are more important when considering vulnerability.

End of Question 3

Theme 4, Question 4

4 (a) Study Map 4.1 below. Tuvalu is a group of islands in the Pacific Ocean. Use Map 4.1. Give the distance and direction to the centre of Tuvalu from Cairns, Australia. Underline each correct answer.		AO1	AO2.1	AO2.2	AO3	AO4	Total
Credit these responses only.	3800km (1) ENE (1)					2	**2**

4 (b) The islands are vulnerable to the effects of cyclones. In 2015 the islands were hit by Cyclone Pam which was a Category 5 hurricane. During this event a storm surge flooded the islands with sea water, damaging fresh water drinking supplies. Tick (✓) **two** correct statements below.		AO1	AO2.1	AO2.2	AO3	AO4	Total
Credit these responses only.	The category of a hurricane is a measure of the intensity of wind speeds (1) Category 5 hurricanes have higher wind speeds than Category 4 hurricanes (1)	2					**2**

4 (c) Explain why hurricanes create a storm surge.		AO1	AO2.1	AO2.2	AO3	AO4	Total
This question assesses the inter-relationship between process and environment. Use the descriptors below, working upwards from the lowest band. **Band / Mark / Band Descriptor** table below	Responses should make connections between the causes (extreme low air pressure and strong winds) and the effects (the bulge in sea level due to low air pressure that is then driven by the wind and which rises more steeply as the storm surge enters shallow water)			4			**4**

Band	Mark	Band Descriptor
3	4	Thorough and elaborated understanding is demonstrated through chains of reasoning.
2	2-3	Elaborated understanding of cause and effect.
1	1	Simple, valid statements demonstrate basic understanding.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

4 (d) Make use of the information about Tuvalu to decide whether you agree with the following statement. 'Remote islands are more vulnerable to coastal hazards than any other location.' Explain your answer.	AO1	AO2.1	AO2.2	AO3	AO4	Total
				8		8

Use the descriptors below, working upwards from the lowest band.

Band	Mark	Descriptor
4	7-8	Exceptional application of knowledge and understanding: • Comprehensive chains of reasoning provide sophisticated analysis • Balanced and coherent appraisal draws together wider geographical understanding to justify decision(s).
3	5-6	Thorough application of knowledge and understanding: • Chains of reasoning provide elaborated analysis • Balanced appraisal draws together wider geographical understanding to support decision(s).
2	3-4	Sound application of knowledge and understanding: • Some connections provide valid but limited analysis • Limited appraisal uses wider geographical understanding to support decision(s).
1	1-2	Some basic application of knowledge and understanding: • Basic levels of meaning ascribed to the information/issue • Limited and weak appraisal uses some wider geographical understanding to support decision(s).
	0	Award zero marks if the answer is incorrect or wholly irrelevant.

This question requires candidates to synthesise links between different areas of knowledge and understanding and apply this understanding to analyse novel information that requires a judgement. All elements of AO3 are targeted.

Responses should **apply** knowledge and understanding of the factors (which may be economic, social, cultural or physical) that increase the vulnerability to tectonic hazards in the novel context of Tuvalu or other, similar, remote island communities.

Responses will move beyond a demonstration of pure understanding by ascribing specific meaning to/analysing the resources, as detailed below, before evaluating the relative vulnerability of remote islands and reaching a decision.

They may argue that:

The remote location of the islands in relation to larger, more economically developed nations who could provide assistance, such as New Zealand and Australia means that assistance could be slower to arrive/more difficult to co-ordinate than if a similar disaster occurred in a more accessible location.

The relative poverty of the islands compared to other nations that are susceptible to earthquakes/tsunami such as Japan means that economic recovery will take longer.

The relative vulnerability of poor coastal communities where building technologies are not hazard resistant and where the poorest members of the community are at greatest risk means that these communities are more vulnerable to both primary and secondary hazards such as disease and food/water insecurity than wealthier communities.

Other factors, that determine vulnerability, may be presented to balance the argument. It may be argued that other factors, such as density of population or the effectiveness of coastal management strategies are more important when considering vulnerability to coastal hazards.

End of Question 4

GCSE

GEOGRAPHY A

COMPONENT 2

ENVIRONMENTAL AND DEVELOPMENT ISSUES

SAMPLE ASSESSMENT MATERIALS

1 hour 30 minutes

Section	Question	Mark	SPaG
A	1	34	
	2	34	4
B	Either 3	16	
	Or 4	16	
Total		84	4

ADDITIONAL MATERIALS
In addition to this paper you will require a calculator and a ruler.

INSTRUCTIONS TO CANDIDATES
Answer **both** questions in Section A.
Answer **one** question in Section B.

Use black ink or black pall-point pen.
Write your name, centre number and candidate number in the spaces at the top of this page.
Write your answers in the spaces provided in this booklet.
If additional space is required you should use the lined pages at the end of this booklet.
The question numbers should be clearly shown.

INFORMATION FOR CANDIDATES
The number of marks is given in brackets [ ] at the end of each question or part question.
Your ability to spell, punctuate and use grammar and specialist terms accurately will be assessed in your answer to question 2 (e).

SECTION A

CORE THEMES
*Answer **all** of the questions in this section.*

CORE THEME 5: Weather, climate and ecosystems

1.　　(a)　　Study the map and climate graph below.

Map 1.1 The distribution of tundra and tropical rainforest (biomes)
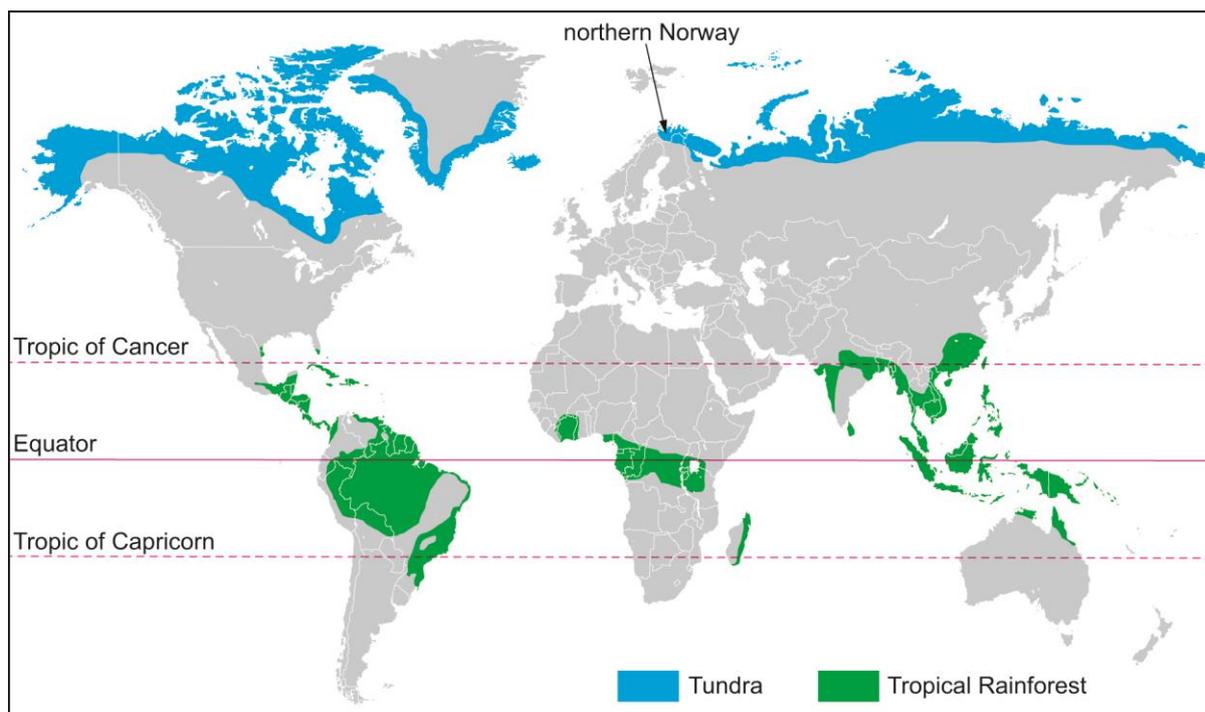
Graph 1.2 The climate of the tundra in northern Norway
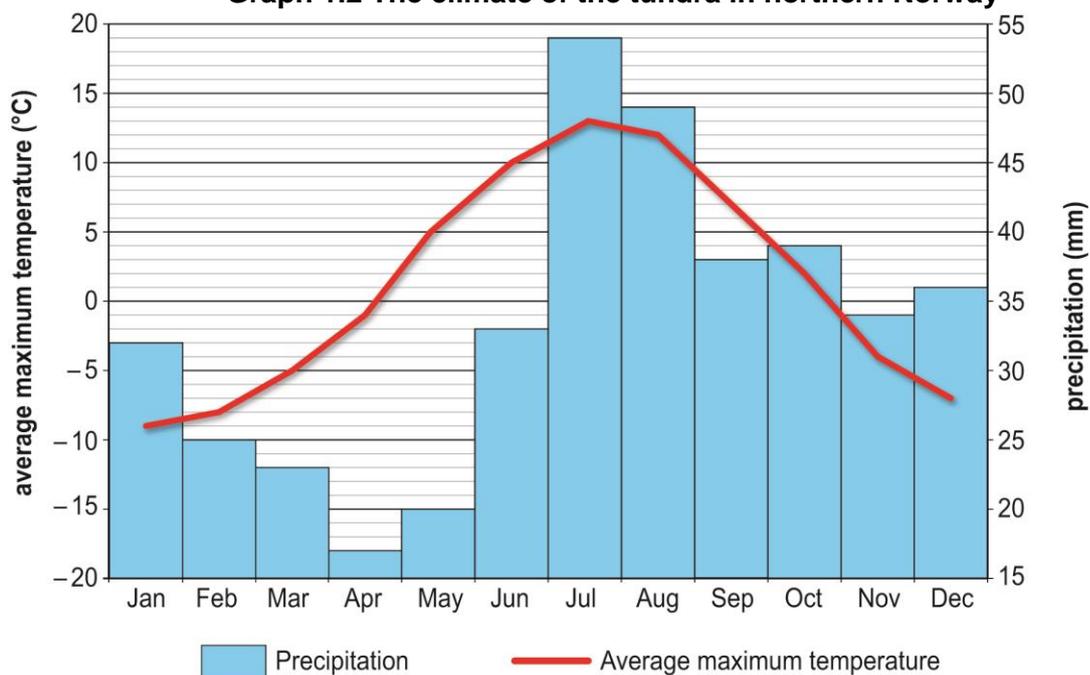
(i)   Describe the climate of the tundra by completing the statements
       below.

       Circle the correct response in each sentence by using Graph 1.2.   [4]

       The temperature is below zero for *4 / 6 / 2* months of the year.

       The average temperature in July is *13 / 15 / 17* °C.

       The annual range of temperature is *9 / 13 / 22* °C.

       The total precipitation for the year is about *200 / 300 / 400* mm.

(ii)   Give **two** reasons why the tundra climate is much colder than the
       tropical climate.   [4]

(iii)   The tundra ecosystem contains both living and non-living parts. Use your knowledge of ecosystems to complete the table by putting the **three** answers from the box into the correct columns.   [2]

arctic hare	moss	bacteria in the soil

	living parts of the tundra		
non-living parts	producer	consumer	decomposer
rocks			

(b)   Study the diagram below.

Diagram 1.3 The structure of the tropical rainforest
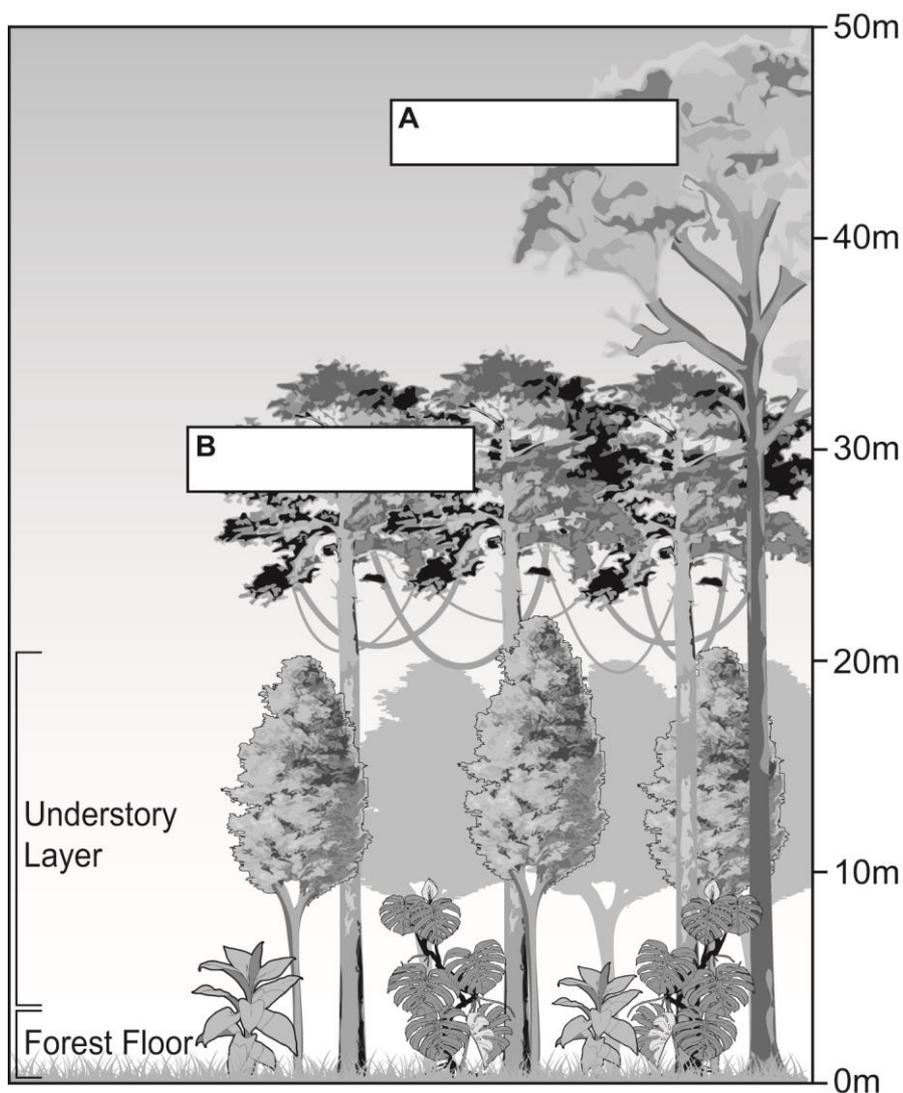
(i)   Add labels to Diagram 1.3 to name the layers in boxes A and B.   [2]

(ii)   Describe the structure of **one *other*** named ecosystem you have studied.   [4]

Name of ecosystem ....

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(c)   Conservationists are concerned about the amount of tropical rainforest cut down each year. Study the graph below.

Graph 1.4 Deforestation of the Amazon rainforest in Brazil
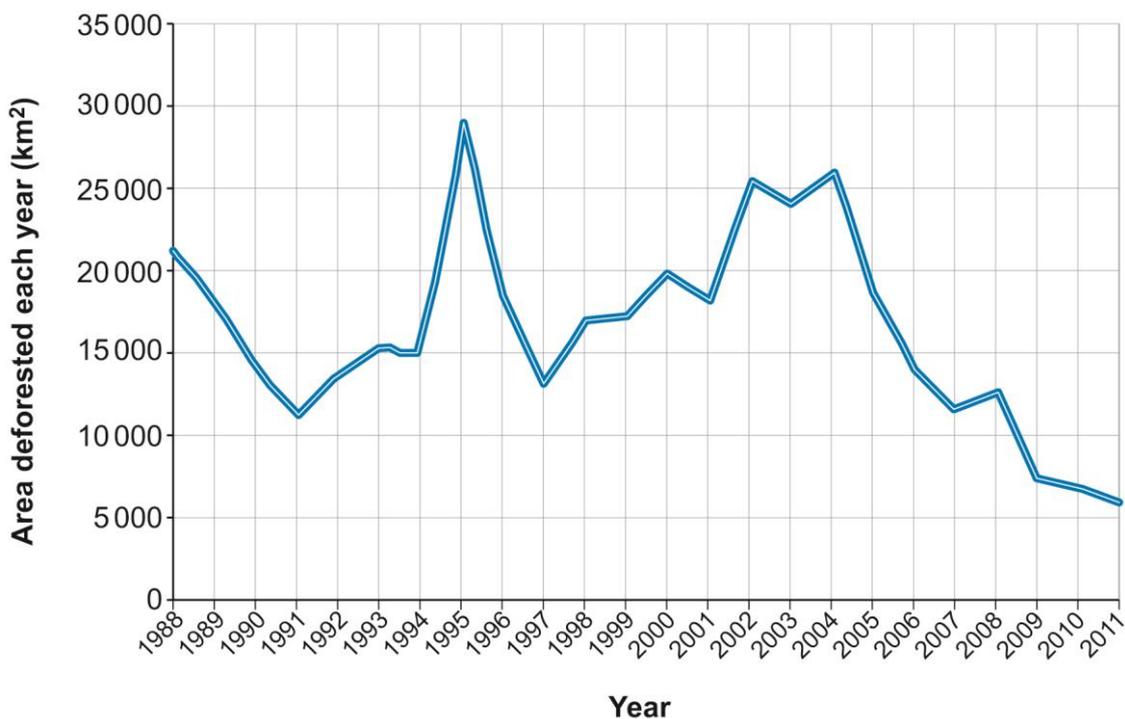
(i)   Which **two** statements best describe the trends on Graph 1.4?
Tick (✓) **two** correct statements.   [2]

	Tick (✓) **two** correct statements
The amount of deforestation has gradually decreased since 1988	
The amount of deforestation has fluctuated but the overall trend is downwards since 1988	
There has been a negative correlation since 1988	
Half as many trees were cut down in 2011 as in 1995	
Almost 5 times as many trees were cut down in 1995 than in 2011	
20,000 less trees were cut down in 2011 than in 1995	

(ii)   Explain why deforestation alters the movement of water through a
         tropical drainage basin.   [6]

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(d)   Study the map 1.5 below

Map 1.5 The Virunga National Park

(i)   Use map 1.5. Give the latitude and longitude of Kabale.   [2]

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The Democratic Republic (DR) of Congo is a low income country in central Africa. Gross National Income (GNI) per person is US$410. Youth unemployment is an issue. More than 70% of those aged 15 to 24 have no work.
Study the newspaper article below and Map 1.5.

Oil exploration threatens biodiversity and water resources

DR Congo is in rich in natural resources. Copper and copper ore make up 35% of the country's exports and oil another 16%. Oil has recently been discovered in the Virunga National Park which is a UNESCO World Heritage Site. This large Park contains tropical rainforest and savanna ecosystems. It is one of the most bio diverse places on Earth. The park is famous for its wildlife, especially hippos and gorillas. Some local people in Virunga make a living from eco-tourism.

The government of DR Congo has given permission for a French multi-national company to begin oil exploration in Virunga. Critics say that oil exploration will harm wildlife and the tourist industry. Oil spills in Lake Edward would harm fish, birds and hippos. It would also damage water resources. Critics also fear that unemployed people will be attracted to the Park looking for work. They may clear trees for firewood and wild animals are killed for their meat.

(ii)   Should the government of the DR Congo allow oil exploration to go ahead in Virunga National Park? Justify your decision. You should consider the impacts of your decision on people and environments. [8]

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End of Question 1

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CORE THEME 6: Economic development

2. (a) Define the following terms. In each question, tick (✓) the correct statement.

    (i) Globalisation is: [1]

	tick (✓)
The change in temperature of the Earth's atmosphere over time	
When charities provide help to poor countries after a disaster	
The way in which countries are linked by people, technology or money	

    (ii) NIC stands for: [1]

	tick (✓)
Non-industrialised Country	
Newly Industrialised Country	
Newly Industrialised Company	

    (iii) One feature of the global economy is that many people in developing economies work in informal jobs.
    Give **four** features of informal work. [4]

(b)   Study the map below. L'Oréal is a global company, or multi-national company (MNC), with employees in 130 different countries. L'Oréal manufactures cosmetics (such as hair colouring).

Map 2.1 The distribution of L'Oréal factories
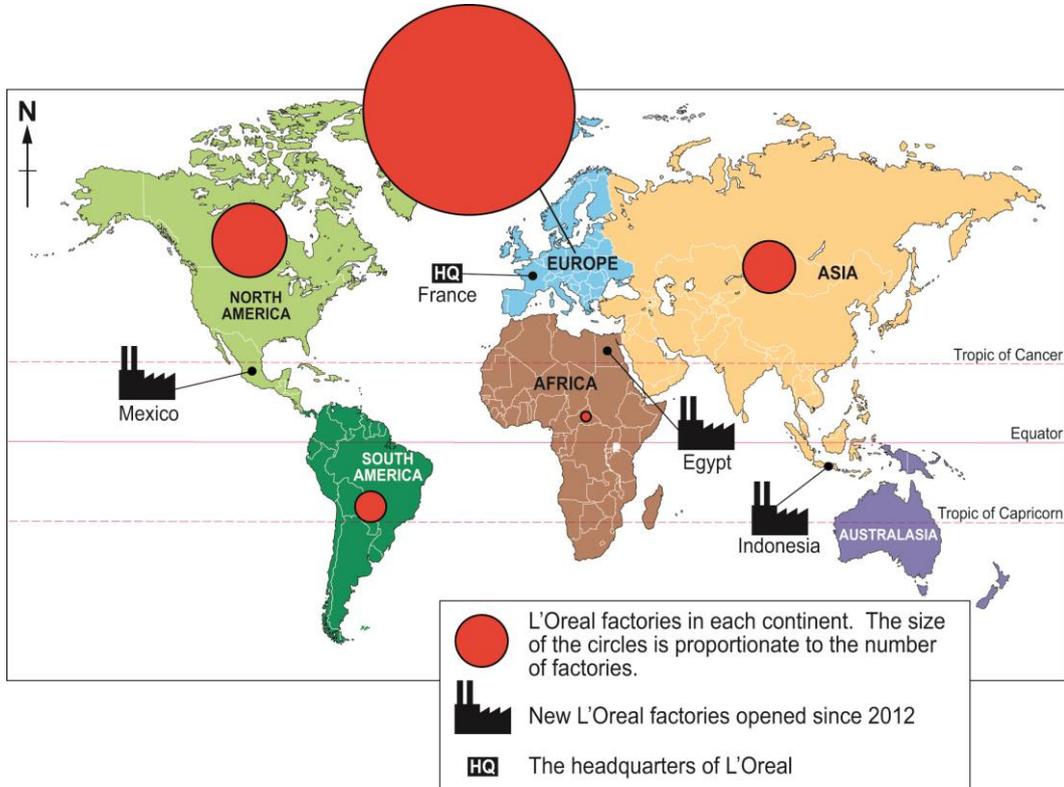
Describe **one** way that Map 2.1 could be adapted to more clearly show the distribution of L'Oréal factories.   [2]

(c) L'Oréal employs 30,000 people in Asia and Central and South America. 66% of these employees are women. Study the table below.

Table 2.2 Selected facts about three countries where L'Oréal has factories

	France	Indonesia	Mexico
Gross National Income (GNI) per person US$ 2011	35,650	4,520	15,060
Per cent of all female workforce that work in secondary industry	11.5	15	18
Internet users per 100 people	76	18	36
Population (millions)	66	255	121

(i) Use data from Table 2.2 to complete Graph 2.3 below. [2]

Graph 2.3 Per cent of all female workforce that work in secondary industry
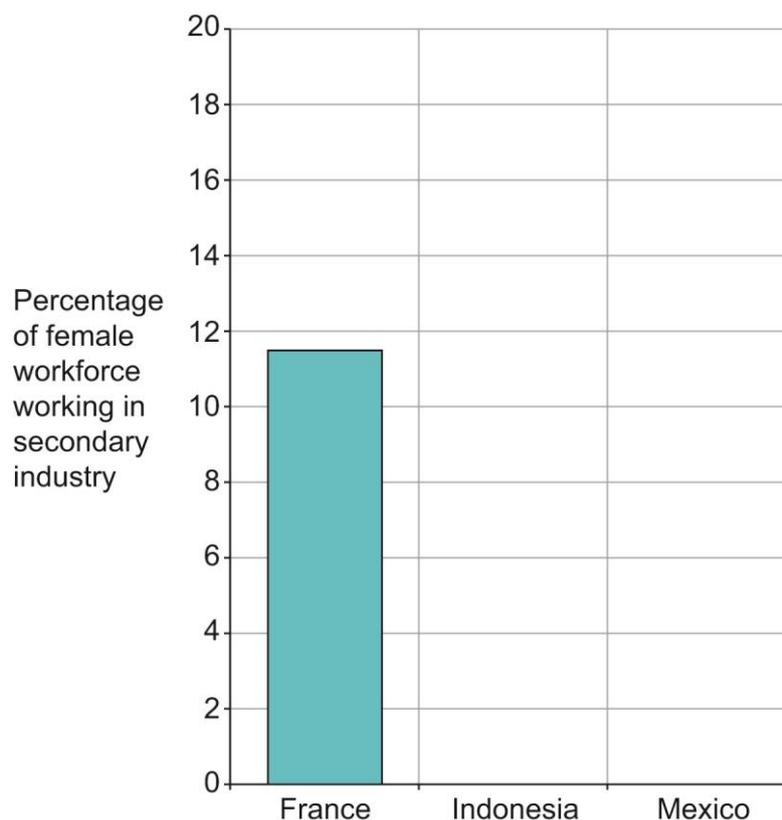
(ii)   Which statement best describes the difference between GNI in France and Indonesia?
Use evidence from Table 2.2. Tick (✓) the correct answer.   [1]

	Tick (✓)
GNI in France is almost 6 times higher than in Indonesia	
GNI in France is almost 8 times higher than in Indonesia	
GNI in France is almost 10 times higher than in Indonesia	

(iii)   Use Table 2.2 to identify which of the three countries has the largest actual number of internet users.

Show your working in the space below.   [3]

The country is …………………

(d)   (i)   Give **two** recent changes in technology that have allowed multi-national companies such as L'Oréal to expand.   [2]

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(ii)   Explain how changes in technology have allowed multi-national companies such as L'Oréal to expand globally.   [4]

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(iii)   Explain why multi-national companies like L'Oréal open factories in countries such as Indonesia and Mexico.   [6]

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(e)   Study the fact box below.

Fact box 2.4

> The population of Mexico is 121 million.
>
> Mexico is an NIC. Wages are rising and more people than ever can afford to spend money on consumer items.
>
> It is estimated that 60% of all workers in Mexico work in the informal sector.
>
> In 2012 L'Oréal opened a new factory in Mexico that employs 1,200 workers. This investment cost L'Oréal US $100million.
>
> 66% of L'Oréal employees are women.

Do you think this investment is good for Mexico?

Evaluate the advantages and disadvantages for Mexico of this type of investment by a multi-national company.   [8+4]

Your ability to spell, punctuate and use grammar and specialist terminology accurately will be assessed in your answer to this question.

End of Question 2

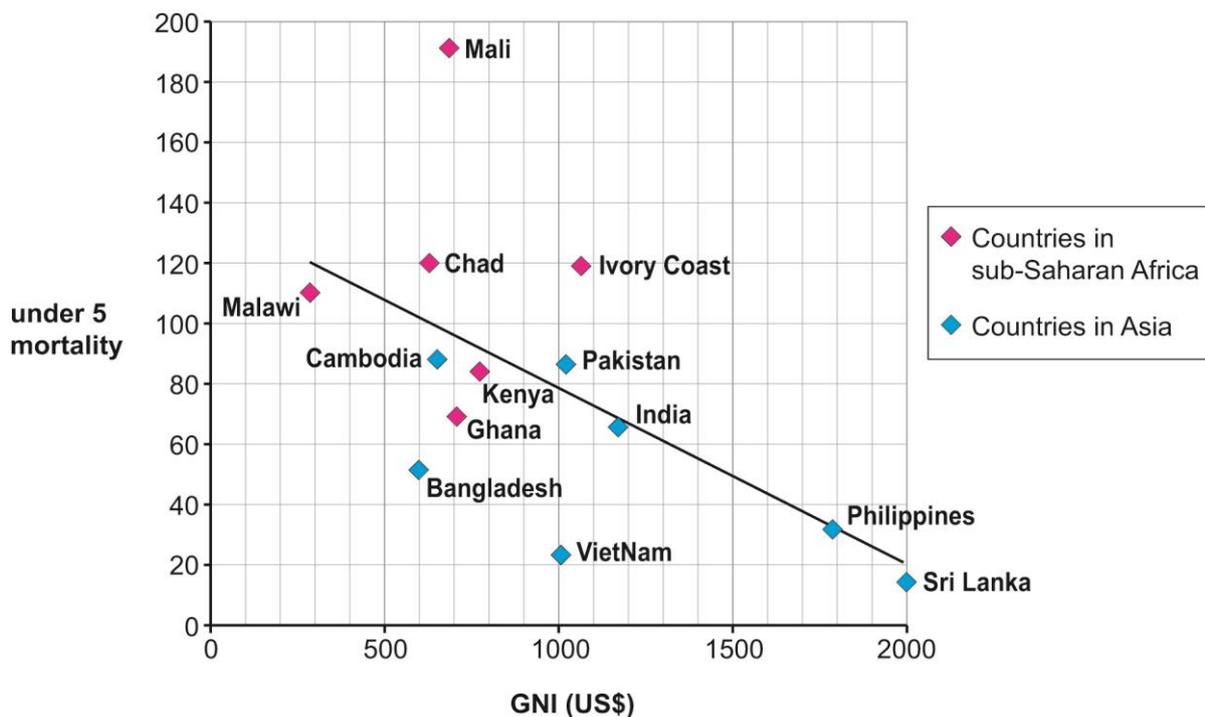**BLANK PAGE**

SECTION B: OPTIONS
*Answer **one** question in this section.*
Choose either question 3 (Theme 7) OR question 4 (Theme 8)

THEME 7: Social development

3.   (a)   Study the scatter graph below. Gross National Income (GNI) is a measure of the wealth of a country.

Graph 3.1

(i)   Use Graph 3.1 to complete the table below.   [2]

Country	GNI (US$) per person	Under 5 mortality
	1020	85
Bangladesh		52

(ii)   Under 5 mortality is one measure of the 'development gap'.
        Describe what is measured by under 5 mortality.   [2]

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(b)   Some countries of sub-Saharan Africa have a large percentage of the
       population infected with HIV/AIDS. Explain why this is a problem for the
       government.   [4]
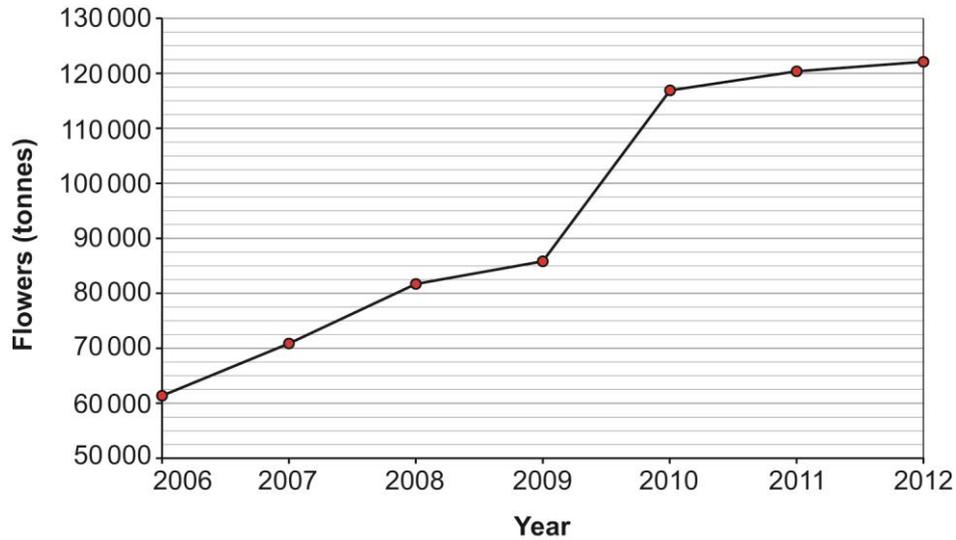
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(c)   Malaria is another health issue that affects sub-Saharan Africa.
        To what extent is progress being made in tackling the spread of malaria in
        sub-Saharan Africa?   [8]

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End of Question 3

THEME 8 – Environmental challenges

4.   (a)   Study the graph below.

Graph 4.1 Export of flowers from Kenya (by weight). Figures in tonnes

    (i)   Use Graph 4.1 to describe the trend in the export of flowers from Kenya between 2006 and 2012.   [2]
Use figures in your answer.

    ....

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    ....

    (ii)   The export of flowers is one way in which the UK and Kenya are interdependent.

    Apart from trade (exports and imports), outline **one** other way in which countries are interdependent.   [2]

    ....

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(b)   Explain why the transport of food products across the world has impacts on the environment.   [4]

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(c)   To what extent are consumers in the UK to blame for damage to tropical ecosystems? In your answer you should consider the ways in which consumer demand in the UK has an impact on tropical farms and ecosystems compared to other factors.   [8]

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End of Question 4

COMPONENT 2 – MARK SCHEME

Instructions for examiners of GCSE Geography when applying the marking scheme

1 Positive marking

It should be remembered that candidates are writing under examination conditions and credit should be given for what the candidate writes, rather than adopting the approach of penalising him/her for any omissions. It should be possible for a very good response to achieve full marks and a very poor one to achieve zero marks. Marks should not be deducted for a less than perfect answer if it satisfies the criteria of the mark scheme.

GCSE Geography marking schemes are presented in a common format as shown below:

This box contains the sub-question.

The columns to the right indicate the assessment objective(s) targeted by the question and its mark tariff.

3 (a) (i) Describe the location of the island of Lefkada.		AO1	AO2.1	AO2.2	AO3	AO4	Total
Credit two simple statements based on map evidence. Credit accurate use of compass points max 1 Credit accurate use of scale line max 1	In western Greece (1) In Ionian Sea (1) north of Cephalonia (1) 275km (+/-10) from Athens (1) 280km (+/-10) from Thessaloniki (1)					2	**2**

This box contains the rationale ie it explains the principles that must be applied when marking each sub-question. The examiner must apply this rationale when applying the marking scheme to the response.

This box contains the candidates' expected responses for point-based marking. For some sub-questions, those with a closed question, this box will indicate the only response that is acceptable. For more open ended sub-questions this box will illustrate a number of likely responses that are credit worthy. It may be that this list will be extended at the examiner's conference after actual scripts have been read. For banded mark schemes this box contains indicative content. For further details see below under Banded mark schemes Stage 2.

2 Tick marking

Low tariff questions should be marked using a points-based system. Each credit worthy response should be ticked in red pen. The number of ticks must equal the mark awarded for the sub-question. The mark scheme should be applied precisely using the expected outcomes box as a guide to the responses that are acceptable. Do **not** use crosses to indicate answers that are incorrect. If the candidate has not attempted the question then the examiner should strike through the available dotted lines with a diagonal line.

3 Banded mark schemes

Banded mark schemes are divided so that each band has a relevant descriptor. The descriptor for the band provides a description of the performance level for that band. Each band contains marks. Examiners should first read and annotate a candidate's answer to pick out the evidence that is being assessed in that question. **Do not use ticks** on the candidate's response. Once the annotation is complete, the mark scheme can be applied.

This is done as a two stage process.

Stage 1 – Deciding on the band

When deciding on a band, the answer should be viewed holistically. Beginning at the lowest band, examiners should look at the candidate's answer and check whether it matches the descriptor for that band. Examiners should look at the descriptor for that band and see if it matches the qualities shown in the candidate's answer. If the descriptor at the lowest band is satisfied, examiners should move up to the next band and repeat this process for each band until the descriptor matches the answer.

If an answer covers different aspects of different bands within the mark scheme, a 'best fit' approach should be adopted to decide on the band and then the candidate's response should be used to decide on the mark within the band. For instance if a response is mainly in band 2 but with a limited amount of band 3 content, the answer would be placed in band 2, but the mark awarded would be close to the top of band 2 as a result of the band 3 content.

Examiners should not seek to mark candidates down as a result of small omissions in minor areas of an answer.

Stage 2 – Deciding on the mark

Once the band has been decided, examiners can then assign a mark. During standardising (marking conference), detailed advice from the Principal Examiner on the qualities of each mark band will be given. Examiners will then receive examples of answers in each mark band that have been awarded a mark by the Principal Examiner. Examiners should mark the examples and compare their marks with those of the Principal Examiner.

When marking, examiners can use these examples to decide whether a candidate's response is of a superior, inferior or comparable standard to the example. Examiners are reminded of the need to revisit the answer as they apply the mark scheme in order to confirm that the band and the mark allocated is appropriate to the response provided.

Indicative content is also provided for banded mark schemes. Indicative content is not exhaustive, and any other valid points must be credited. In order to reach the highest bands of the mark scheme a candidate need not cover all of the points mentioned in the indicative content but must meet the requirements of the highest mark band. Where a response is not creditworthy, that is contains nothing of any significance to the mark scheme, or where no response has been provided, no marks should be awarded.

Core Themes   Mark **both** questions

Options Themes   Candidates are instructed to answer **one** question. If the candidate has responded to both questions then the examiner **must** mark both questions. Award the higher mark that has been attained.

SECTION A
CORE THEMES

Core Theme 5, Question 1

(a) (i) Describe the climate graph for the tundra by completing the statements below. Circle the correct response in each sentence by using Graph 1.2.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit these responses only.	6 (1) 13 (1) 22 (1) 400 (1)					4	**4**

(ii) Give **two** reasons why the tundra climate is much colder than the tropical climate.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
This question assesses the concept of climatic variation. Credit up to **two** valid statements for one mark each and up to two *explanation/ reasons* for one mark each. Credit answers that compare the two regions or which focus on only one.	The sun in the tundra is at a much lower angle than at the equator (1) *so its energy is spread over a much larger area (1).* The sun [at the equator] is overhead/at 90 degrees (1) *so the sun's energy is concentrated over a small surface area so each km (1).* Much of the tundra is covered in snow (1) which reflects the sun's energy (1) whereas tropical regions have less reflection of sun's energy (1).	4					**4**

(iii) The tundra ecosystem contains both living and non-living parts. Use your knowledge of ecosystems to complete the table by putting the **three** answers from the box into the correct columns.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit one or two correct responses with **one** mark. Credit all three correct responses with **two** marks.	Producer: **moss** Consumer: **arctic hare** Decomposer: **bacteria in the soil**	2					**2**

(b) Study the diagram below. (i) Add labels to Diagram 1.3 to name the layers in boxes A and B.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit up to **two** valid labels each with one mark.	A: emergent / emergent layer (1) B: canopy / canopy layer / continuous canopy (1)	2					**2**

(ii) Describe the structure of **one *other*** named ecosystem you have studied.			AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Use the descriptors below, working upwards from the lowest band. <table><tr><th>Band</th><th>Marks</th><th>Descriptor</th></tr><tr><td>2</td><td>3-4</td><td>Elaborated descriptions of specific features of the ecosystem's structure.</td></tr><tr><td>1</td><td>1-2</td><td>Simple statements describe general features of the ecosystem.</td></tr><tr><td></td><td>0</td><td>Award 0 marks if the answer is incorrect or wholly irrelevant. Award 0 marks if the candidate describes the diagram printed in the paper.</td></tr></table>	Responses should describe the **structure** of the ecosystem e.g: • height / layers of vegetation • depth of water in a pond The response may describe how structure affects abiotic features such as light levels (lower under the canopy), interception or evapotranspiration.		4					**4**

(c) Conservationists are concerned about the amount of tropical rainforest cut down each year. Study the graph below. (i) Which **two** statements best describe the trends on Graph 1.4? Tick (✓) **two** correct statements.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit these responses only.	The amount of deforestation has fluctuated but the overall trend is downwards since 1988 (1) Almost 5 times as many trees were cut down in 1995 than in 2011 (1)					2	**2**

(ii) Explain why deforestation alters the movement of water through a tropical drainage basin.	AO1	AO2.1	AO2.2	AO3	AO4	**Total**
			6			**6**

This question assesses AO2.2, the interconnection between human activity and the environment (in this case the flow of water through the tropical drainage basin). Use the descriptors below, working upwards from the lowest band.	Responses should link the impacts of deforestation to changes in hydrological cycle such as: • rates of interception will fall so soil erosion may increase and local rivers may become choked with sediment leading to flooding • transpiration will be reduced so humidity will be reduced and local rainfall patterns may change over time.

Band	Marks	Descriptor
3	5-6	Consequences of deforestation are substantiated by detailed and elaborated understanding of drainage basin flows (supported by correct terminology). Responses may show breadth or depth.
2	3-4	Deforestation is linked to understanding of drainage basin flows which demonstrates breadth of understanding.
1	1-2	Simple, valid statements demonstrate basic understanding of drainage basin flows. The ideas are not elaborated.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant

(d) (i) Use map 1.5. Give the latitude and longitude of Kabale.	AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit these responses only. Latitude may be accepted as degrees and minutes or as a decimal.	1.25° / 1°15m S (1) 30° E (1)					2	**2**

(ii) Should the government of the DR Congo allow oil exploration to go ahead in Virunga National Park? Justify your decision. You should consider the impacts of your decision on people and environments.	AO1	AO2.1	AO2.2	AO3	AO4	**Total**
				8		**8**

Use the descriptors below, working upwards from the lowest band.

Band	Mark	Descriptor
4	7-8	Exceptional application of knowledge and understanding: • Comprehensive chains of reasoning provide sophisticated analysis • Balanced and coherent appraisal draws together wider geographical understanding to justify decision(s).
3	5-6	Thorough application of knowledge and understanding: • Chains of reasoning provide elaborated analysis • Balanced appraisal draws together wider geographical understanding to support decision(s).
2	3-4	Sound application of knowledge and understanding: • Some connections provide valid but limited analysis • Limited appraisal uses wider geographical understanding to support decision(s).
1	1-2	Some basic application of knowledge and understanding: • Basic levels of meaning ascribed to the information/issue • Limited and weak appraisal uses some wider geographical understanding to support decision(s).
	0	Award zero marks if the answer is incorrect or wholly irrelevant.

This question requires candidates to synthesise links between different areas of knowledge and understanding and apply this understanding to analyse novel information about the Virunga NP that requires a decision. All elements of AO3 are targeted.

Responses will move beyond a demonstration of pure understanding by ascribing specific meaning to/analysing the resources, as detailed below, before evaluating the arguments surrounding tropical rainforest conservation and resource exploitation and then reaching a decision.

They may argue that:

DR Congo is a developing country that needs foreign investment and improved exports of oil to support economic and social development and reduce poverty.

Oil exploration will require improved road infrastructure so will encourage damage habitats through logging and adversely affect biodiversity which is a distinctive feature of this locality

Oil extraction would have the potential to pollute water courses with oil spills and as these are water supplies for local communities this would adversely affect water security

The development of extractive industries will encourage informal settlement and informal economy in the National Park leading to the growth of slum settlements, pollution of water courses and illegal poaching of wildlife.

End of Question 1

Core Theme 6, Question 2

2. (a) Define the following terms. In each question, tick (✓) the correct statement. (i) Globalisation is:		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit this response only.	The way in which countries are linked by people, technology or money (1)	1					**1**

(ii) NIC stands for:		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit this response only.	Newly Industrialised Country (1)	1					**1**

(iii) One feature of the global economy is that many people work in informal jobs. Give **four** features of informal work.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit up to **four** valid statements, each with one mark, that correctly identify a **specific feature** of informal work. Allow one mark (max) for **general statements**.	**Specific features**: Not regulated (1), no sick pay (1), no health insurance (1), no holiday pay (1), no union representation (1), workers do not pay tax / declare income (1), no formal education required (1) **General statements**: hours are irregular, (1) pay is irregular, (1) may be illegal (1).	4					**4**

(b) Study the map below. L'Oréal is a global company, or multi-national company (MNC), with employees in 130 different countries. L'Oréal manufactures cosmetics (such as hair colouring). Describe **one** way that Map 2.1 could be adapted to more clearly show the distribution of L'Oreal factories.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit one valid statement for one mark and its elaboration with a further mark.	Provide a scale for the proportional circles (1) *so that the actual number per continent may be read from the map (1)* Show the information as a dot distribution map (1) *so that density / actual distribution can be seen (1)*					2	**2**

(c) L'Oréal employs 30,000 people in Asia and Central and South America. 66% of these employees are women. Study the table below. (i) Use data from Table 2.2 to complete Graph 2.3 below.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit **one** mark for the addition of **each** bar to the correct height. The width of the bar is irrelevant.	Indonesia must be between the lines for 14 and 16 (1) Mexico must touch 18 line (1)					2	**2**

(ii) Which statement best describes the difference between GNI in France and Indonesia? Use evidence from Table 2.2. Tick (✓) the correct answer.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit this response only.	GNI in France is almost 8 times higher than in Indonesia (1)					1	**1**

(iii) Use Table 2.2 to identify which of the three countries has the largest actual number of internet users. Show your working in the space below.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit this response only for one mark. Credit working for max two marks as shown. Award max **one** mark if the correct response is given but the candidate does not show working.	The country is: France / 50.16 million/ 66x0.76 + 50.16 (1) Indonesia: 255x0.18 =45.9 (1) Mexico : 121x0.36=43.56 (1)					3	**3**

(d) (i) Give **two** recent changes in technology that have allowed multi-national companies such as L'Oréal to expand.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit up to **two** valid statements, each for one mark.	Faster internet connections (1) More/faster satellite connections (1) Larger ports/airports (1) Cheaper aviation/greater fuel efficiency (1)	2					**2**

(ii) Explain how changes in technology have allowed multi-national companies such as L'Oréal to expand globally.				AO1	AO2.1	AO2.2	AO3	AO4	Total
This question assesses the concept of globalisation. Use the descriptors below, working upwards from the lowest band.			Responses should link changes in technology (such as mobile technologies, growth of global media and / or changes in internet banking) to the reasons for global growth e.g. growth of internet in Mexico means that Mexican consumers now see adverts for L'Oreal products.		4				**4**

Band	Marks	Descriptor
2	3-4	Elaborated descriptions which <u>link</u> changes in technology to global growth.
1	1-2	Basic statements identify examples of changing technology.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

(iii) Explain why multi-national companies like L'Oréal open factories in countries such as Indonesia and Mexico.		AO1	AO2.1	AO2.2	AO3	AO4	Total
			6				**6**

This question assesses AO2.1, the concept of location factors for global industries (teachers/examiners will recognise this concept as the new international division of labour).

Use the descriptors below, working upwards from the lowest band.

Band	Marks	Descriptor
3	5-6	Detailed understanding of reasons for location of MNCs in NICs. Responses must be elaborated and may show breadth (several reasons) or depth (one reason fully developed).
2	3-4	Understanding of one or more reasons is demonstrated. Responses contain some elaboration.
1	1-2	Basic understanding demonstrated by a list of possible reasons. The ideas are not elaborated.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

Responses should demonstrate understanding of the advantages to the MNC of locating factories in NICs. Responses may develop one or more of the following ideas:

- access to new markets where wealth/disposable income is growing
- lower labour costs
- greater involvement of women in manufacturing
- less rigorous regulation / environmental laws
- cheap land/building costs
- access to new technology/ expertise
- government incentives

    access to free trade blocs.

(e) In 2012 L'Oréal opened a new factory in Mexico that employs 1,200 workers. This investment cost L'Oréal US$100million. Do you think this investment is good for Mexico? Evaluate the advantages and disadvantages for Mexico of this type of investment by a multi-national company. *Your ability to spell, punctuate and use grammar and specialist terminology accurately will be assessed in your answer to this question.*	AO1	AO2.1	AO2.2	AO3	AO4	SPaG	**Total**
				8		4	**12**

<table>
<tr>
<td colspan="3">Use the descriptors below, working upwards from the lowest band.</td>
<td>This question requires candidates to synthesise links between different areas of knowledge and understanding and apply this understanding to analyse novel information about Mexico that requires a decision. All elements of AO3 are targeted.</td>
</tr>
<tr>
<td>

Band	Mark	Descriptor
4	7-8	Exceptional application of knowledge and understanding: • Comprehensive chains of reasoning provide sophisticated analysis • Balanced and coherent appraisal draws together wider geographical understanding to justify decision(s).
3	5-6	Thorough application of knowledge and understanding: • Chains of reasoning provide elaborated analysis • Balanced appraisal draws together wider geographical understanding to support decision(s).
2	3-4	Sound application of knowledge and understanding: • Some connections provide valid but limited analysis • Limited appraisal uses wider geographical understanding to support decision(s).
1	1-2	Some basic application of knowledge and understanding: • Basic levels of meaning ascribed to the information/issue • Limited and weak appraisal uses some wider geographical understanding to support decision(s).
	0	Award zero marks if the answer is incorrect or wholly irrelevant.

</td>
<td>

Responses should **apply** knowledge and understanding of the positive and negative impacts of multi-national investments and evaluate the advantages and disadvantages of such investments for Mexico, which is a novel context.

Advantages: Creation of jobs both directly and indirectly will create positive multipliers, economic and social benefits may trickle down into wider community / ease regional deprivation.

Disadvantages:

Best paid jobs (in management and R&D) remain in parent company's country, changes in global market leave investments insecure if TNC has to contract.

Use of evidence

Multinational companies will create formal jobs (tax paying) that will replace informal jobs (Fact box 2.4).

Mexican women will benefit from the investment (Fact box 2.4).

</td>
</tr>
</table>

After awarding a level and mark for the geographical response, apply the performance descriptors for spelling, punctuation and the accurate use of grammar (SPaG) and specialist terms that follow.

Band	Marks	Performance descriptions
High	4	• Learners spell and punctuate with consistent accuracy • Learners use rules of grammar with effective control of meaning overall • Learners use a wide range of specialist terms as appropriate
Intermediate	2 - 3	• Learners spell and punctuate with considerable accuracy • Learners use rules of grammar with general control of meaning overall • Learners use a good range of specialist terms as appropriate
Threshold	1	• Learners spell and punctuate with reasonable accuracy • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall Learners use a limited range of specialist terms as appropriate
	0	• The learner writes nothing • The learner's response does not relate to the question • The learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning

End of Question 2

SECTION B

OPTIONS

Theme 7, Question 3

3 (a) Study the scatter graph below. Gross National Income (GNI) is a measure of the wealth of a country. (i) Use Graph 3.1 to complete the table below.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit these responses only.	Pakistan (1) 600 (1)					2	**2**

(ii) Under 5 mortality is one measure of the 'development gap'. Describe what is measured by under 5 mortality.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit up to **two** valid statements, each for 1 mark.	The number of children in every 1000 (1) who die before the age of 5 (1)	2					**2**

(b) Some countries of sub-Saharan Africa have a large percentage of the population infected with HIV/AIDS. Explain why this is a problem for the government.		AO1	AO2.1	AO2.2	AO3	AO4	Total
This question assesses AO2.2, the inter-relationship between places and the process of change. Use the descriptors below, working upwards from the lowest band. 	**Band**	**Mark**	**Descriptor**
2	3-4	Detailed understanding of one or more national scale problems associated with HIV/AIDs.
1	1-2	Basic understanding of one or more problems associated with HIV/AIDS.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant. | The focus of this question is on national scale problems for the government. Do not credit the challenges created by HIV/AIDS for individuals or families.	Responses should demonstrate understanding of one or more of the following problems which are created at the national scale for the government: Many people are unable to work which results in poverty, less taxes are paid and governments have less money to spend on services Children have to leave education to care for parents or orphaned brothers and sisters which means more pressure on health care services. Reduces life expectancy which reduces the number of economically active people in the country			4			**4**

(c) Malaria is another health issue that affects sub-Saharan Africa. To what extent is progress being made in tackling the spread of malaria in sub-Saharan Africa?	AO1	AO2.1	AO2.2	AO3	AO4	Total
				8		**8**

Band	Mark	Descriptor
4	7-8	Exceptional application of knowledge and understanding. Balanced and coherent appraisal draws together wider geographical understanding to justify decision(s).
3	5-6	Thorough application of knowledge and understanding. Balanced appraisal draws together wider geographical understanding to support decision(s).
2	3-4	Sound application of knowledge and understanding. Limited appraisal uses wider geographical understanding to support decision(s).
1	1-2	Some basic application of knowledge and understanding. Limited and weak appraisal uses some wider geographical understanding to support decision(s).
	0	Award zero marks if the answer is incorrect or wholly irrelevant.

This question requires candidates to develop material beyond pure conceptual understanding when they develop lines of argument to **evaluate and make judgements** on the geographical issue of health care. Elements (c) and (d) are targeted.

Responses should **apply** knowledge and understanding of the factors that affect the ability of countries in sub-Saharan Africa to alleviate health issues and make a judgement about the extent to which strategies/targets have been successful. They will need to evaluate progress and weigh up the limitations and strengths of efforts by applying knowledge and understanding of the problems of combatting malaria and/or the successful strategies that may be employed.

Allow for candidates arguing either that progress is being made or that it isn't being made.

Arguments that progress is being made in relation to targets (such as Sustainable Development Goals) could be based on evaluating the strengths and weaknesses of different strategies that are used to combat the disease including the use of development aid, education programmes and/or the use of treated bed-nets.

Arguments that progress is not being made could be based on evaluating the health data that indicates the scale of the problem, the lack of money to combat the disease and the inaccessibility of many rural areas.

End of Question 3

Theme 8, Question 4

4 (a) Study the graph below. (i) Use Graph 4.1 to describe the trend in the export of flowers from Kenya between 2006 and 2012.		AO1	AO2.1	AO2.2	AO3	AO4	Total
Reserve **one** mark for statement of overall trend. Credit either qualification or quantification with **one** mark.	**Overall trend**: Increase / gone up (1) **Qualification or quantification**: from 60000/62000 to 120000/122000 (1) it has doubled (1) Particularly steep between 2009 and 2010 (1)					2	**2**

(ii) The export of flowers is one way in which the UK and Kenya are interdependent. Apart from trade (exports and imports) outline **one** other way in which countries are interdependent.		AO1	AO2.1	AO2.2	AO3	AO4	Total
Credit one mark for a valid statement and up to **one** mark for its development.	Mobile systems/internet/satellite (1) link ideas/communications between countries (1) Flows of people/migrants/refugees (1) creates family connections between countries (1) Political alliances/agreements (1) create regional/global co-operation (1) Common culture/sport/music (1) shared by different countries (1) Travel/tourism (1) create financial dependency (1) Banking/investment/MNCs (1) link countries financially (1)	2					**2**

(b) Explain why the transport of food products across the world has impacts on the environment.			AO1	AO2.1	AO2.2	AO3	AO4	**Total**
This question assesses AO2.2, the interconnection between human activity and its impacts on the environment. Use the descriptors below, working upwards from the lowest band. **Band / Mark / Descriptor** (see table below)		Responses should demonstrate understanding of the link between globalised transport and its impact on the environment. Responses may discuss one or more of the following: • more 'food' miles, higher carbon footprints • pollution of the air and the sea • extra packaging • the problem of waste disposal.			4			**4**

Band	Mark	Descriptor
2	3-4	Detailed understanding of a number of ways in which the transport of food products impacts on the environment.
1	1-2	Basic understanding of how the transport of food products impacts on the environment or a simple list of general effects.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

(c) To what extent are consumers in the UK to blame for damage to tropical ecosystems? In your answer you should consider the ways in which consumer demand in the UK has an impact on tropical farms and ecosystems compared to other factors.	AO1	AO2.1	AO2.2	AO3	AO4	**Total**
				8		**8**

Use the descriptors below, working upwards from the lowest band.

Band	Mark	Descriptor
4	7-8	Exceptional application of knowledge and understanding. Balanced and coherent appraisal draws together wider geographical understanding to justify decision(s).
3	5-6	Thorough application of knowledge and understanding. Balanced appraisal draws together wider geographical understanding to support decision(s).
2	3-4	Sound application of knowledge and understanding. Limited appraisal uses wider geographical understanding to support decision(s).
1	1-2	Some basic application of knowledge and understanding. Limited and weak appraisal uses some wider geographical understanding to support decision(s).
	0	Award zero marks if the answer is incorrect or wholly irrelevant.

This question requires candidates to develop material beyond pure conceptual understanding when they develop lines of argument to **evaluate and make judgements** on the geographical issue of consumerism. Elements (c) and (d) are targeted.

Responses should **apply** knowledge and understanding of the impacts of consumerism on tropical ecosystems and make a judgement about the extent to which consumers can be held responsible for this damage.

They will evaluate the impacts of individual consumers against the impacts made by big business and/or governments.

Allow for candidates arguing either that consumes are to blame or that they are not to blame.

Responses may argue that consumerism has greater impacts on the tropical environment than other factors. These might be due to increasing demand for:

- the products of tropical agribusinesses in UK supermarkets, such as palm oil or soya whereas consumers could avoid these processed items.
- Travel to exotic tropical locations such as Caribbean islands that result in damage to coral reefs or mangrove ecosystems (due to clearance for tourist resorts) whereas consumers could choose to take holidays close to home/staycations.
- Prawns and other fish/shellfish that are over-fished or farmed in tropical waters whereas consumers could choose to only buy sustainably caught fish/shellfish.

However, the counter-argument is that big business is exploiting weak governance, for example, the incentives (paid by African and European governments) for the growth of bio-fuels to create 'eco-alternatives' for vehicles. Some may argue that individuals cannot operate on a large enough scale to influence corporate or government decisions.

GCSE

GEOGRAPHY A

COMPONENT 3

APPLIED FIELDWORK ENQUIRY

SAMPLE ASSESSMENT MATERIALS

1 hour 30 minutes

For examiner's use only		SPaG
Part A	18	0
Part B	18	0
Part C	36	4
Total Marks	72	4

ADDITIONAL MATERIALS
Resource folder. You will also require a calculator and a ruler.

INSTRUCTIONS TO CANDIDATES
Answer **all** of the questions in this examination paper.
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.

Write your answers in the spaces provided in this booklet.
If additional space is required you should use the lined pages at the end of this booklet. The question number(s) should be clearly shown.

INFORMATION FOR CANDIDATES
The number of marks is given in brackets [ ] at the end of each question or part-question.
You are reminded that assessment will take into account your ability to spell, punctuate and use grammar and specialist terms accurately in your answer to Part C, Question 3 (d) (ii).

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Part A: Investigating flows through fieldwork

Answer all parts of this question. You should use your fieldwork experience of **measuring flows** to support your answers.

1. (a) Study Photographs 1.1 and 1.2. They show two places where data could be collected about flows.

Photograph 1.1

Photograph 1.2

Photo A: Andy Owen, Photo B: Bob Digby

State what data could be collected about flows in each place. [2]

Photograph 1.1 ………………………………………………………………………

Photograph 1.2 ………………………………………………………………………

(b)   Study **page 2** of the separate Resource Folder.

Students carried out an enquiry into the movement of pebbles along a beach. Their enquiry question was 'How does the prevailing wind direction affect the flow of pebbles along this beach?'

Their data is shown in Graph 1.3 below.

Graph 1.3 The relationship between pebble size (mm) and distance along the beach (m)
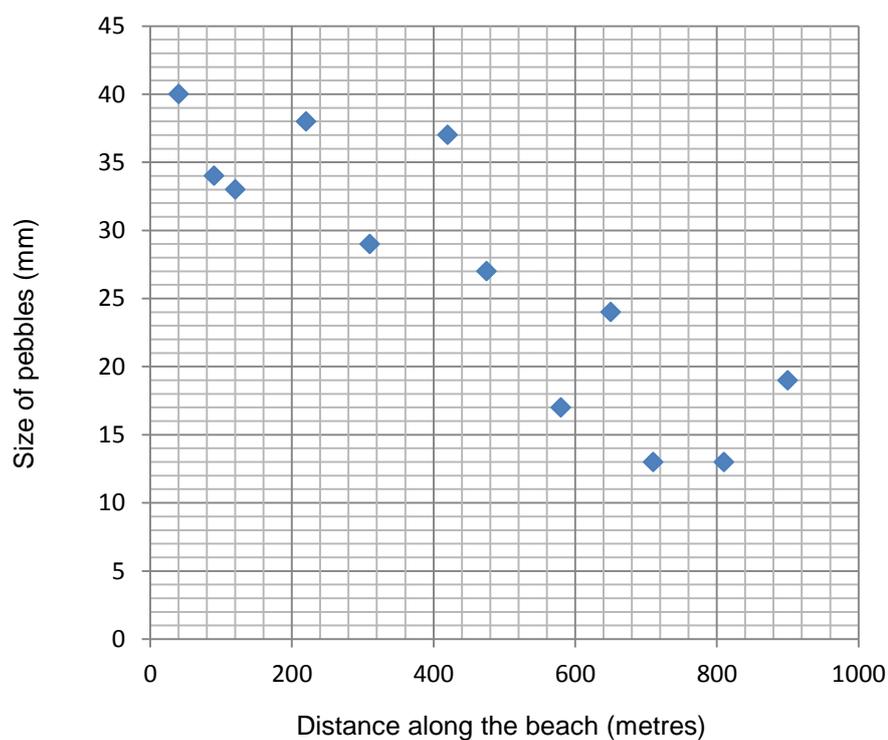
(i)   Draw a line of best fit on Graph 1.3 to show the relationship between pebble size and distance along the beach.   [2]

(ii) The students decided to collect some more evidence about pebble size at the beach.

They randomly collected pebbles at site A and site B. These sites are shown on the sketch map on **page 2** of the separate Resource Folder. The size of the pebbles is shown in Table 1.4 below.

Table 1.4 Raw data on pebble sizes

	Pebble size (mm)										
Site A	40	32	45	18	55	15	28	43	16	42	38
Site B	13	12	15	13	15	12	14	13	15	14	14

Calculate the median sediment size and the inter quartile range (IQR) for each site.
Show your workings in the space below. [4]

Site A median = ………. Site A IQR = ……….

Site B median = ………. Site B IQR = ……….

(iii) Using your answers to parts (i) and (ii), which of the following **two** statements about the movement of pebbles along this beach is true? Place a tick (✓) beside the **two** correct answers. [2]

	Tick (✓) two correct answers
The process of longshore drift is moving pebbles in an easterly direction (from site A to site B).	
The process of longshore drift is moving pebbles in a westerly direction (from site B to site A).	
There is no evidence that longshore drift is moving pebbles along the beach.	
The process of longshore drift has sorted the pebbles so that they are more uniform at site A than at site B.	
The process of longshore drift has sorted the pebbles so that they are more uniform at site B than at site A.	
There is no evidence that the process of longshore drift has sorted the pebbles.	

(c)   Another group of students collected data about traffic flows in a small town. They counted the cars going in both directions along three main roads at 8:30am for 5 minutes. They repeated the survey at 5:00pm. The **aim** of the enquiry was to prove that patterns of traffic are affected by commuter movements.

You can see how they represented their results on **page 3** of the separate Resource Folder.

Study the patterns shown on **both** maps on **page 3** of the separate Resource Folder. What **conclusion**(s) can you reach? [4]

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(d)   This question is about **your own experience** of collecting data in the field on flows.

Explain why it is better to measure flows several times during a day (or over a few days) rather than once when collecting data about flows. [4]

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End of Part A

Part B: Investigating inequalities through fieldwork

Answer all parts of this question. You should use your fieldwork experience of **inequalities** to support your answers.

2.   A group of students carried out fieldwork in east London. Their enquiry was located in Newham which is where the Olympic Games were held in 2012.

        (a)   Study Photograph 2.1 and Photograph 2.2 which show two areas of housing in Newham. The photos were taken by students on their fieldtrip. They wanted to show how the well-being of local people can be affected by the environment.

                Add annotations (explanatory notes) to Photographs 2.1 and 2.2 to show how the environment may affect the well-being of local residents.   [3]

        Photograph 2.1 Housing in Newham (built around 1960)

Photo: Bob Digby

Photograph 2.2 Housing overlooking the Olympic Park (built around 2010)

Photo: Bob Digby

(b) The students used a bi-polar technique to record how they felt about different parts of Newham. Part of their draft survey is given in Table 2.3 below.

Table 2.3 Draft bi-polar survey

The area would be safe at night	+5	+4	+3	+2	+1	-1	-2	-3	-4	-5	The area could be unsafe at night
Neighbours look out for one another											Neighbours keep themselves to themselves

(i) Add **two** more pairs of bi-polar statements to Table 2.3 that you could use to investigate **access to services** in a study of inequality. [2]

(ii)   The students decided to use their bi-polar technique at 15 survey sites around Newham. At each site they recorded the views of 10 people. The raw values for three of their sites are shown in Table 2.4.

Table 2.4 The raw bi-polar scores for three of the 15 sites

	The scores given by 10 different people									
Site A	+5	+4	+3	-1	+4	+2	+5	+1	-1	-1
Site B	+3	-2	-4	-1	-1	-3	+1	-3	-5	-4
Site C	+4	+1	+2	+1	+2	+2	+3	+1	-1	+3

Which of these three sites had the highest mean score and which site had the largest range of scores? Show your working in the space below.   [4]

Site with the highest mean is site ….

The site with the largest range of scores is ….

(iii)   The students calculated the mean bi-polar score for each site.

Study **page 4** of the separate Resource Folder which shows their results. What **three conclusions** can you reach?   [3]

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(c)   Newham is one of the UK's most **deprived** (poor) areas. The students collected some secondary data about Newham from the internet which included census data from the Office for National Statistics.
Evaluate the use of the internet as a source of secondary data to support fieldwork into inequality.
*You should support your answer by referring to actual examples from **your own fieldwork.*** [6]

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End of Part B

Part C: The wider UK dimension

Answer **all** parts of this question. You should use your understanding of UK geography to support your answers.

3.   (a)   Inequalities exist at a national scale as well as within local communities. Study **page 5** of the separate Resource Folder. It shows the location of the 10 towns and cities which had the UK's highest average wages (2012).

         (i)   Name the town or city located 75km to the south of central London.   [1]

                 ....

         (ii)   Describe the distribution of the UK's towns and cities which have the highest weekly wages. Tick (✓) **two** true statements in the list below.   [2]

	Tick (✓) **two** statements
The pattern is random	
The cities are evenly spread across the UK	
There is a significant cluster within 100km of London	
They form a linear pattern	
They are all in England	
50% are in the south-east region	
10% are in Scotland	

       (b)   Study the map on **page 6** of the separate Resource Folder. The line on the map is known as the North-South divide. The economy of the UK is growing faster to the south of this line.

         (i)   Compare the patterns shown by the map and graph on **page 6** of the separate Resource Folder.   [6]

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(ii)   Explain why the population of UK cities is increasing.   [6]

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(c)   Explain why population change puts pressure on access to services in rural
        locations of the UK.   [6]

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(d)   Study the information on page 7 of the separate Resource Folder.

   (i)   Describe the location of Lincoln. Use distance and direction to support your
           answer.   [3]

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   (ii)   Study the information on **pages 7 to 12** of the separate Resource Folder.

           What should the priority be for reducing the problems of inequality in
           Lincolnshire?

           Choose **one** of the three issues from the list below:

           Issue 1: The ageing coastal communities of East Lindsey

           Issue 2: Rural population change

           Issue 3: Urban deprivation

           Write a letter to Lincolnshire County Council. Explain why your chosen issue
           should become a priority. Justify your decision using information from **pages
           7 to 12** of the separate Resource Folder.   [12+4]

           *Your ability to spell, punctuate and use grammar and specialist terms
           accurately will be assessed in your answer to this question.*

   In tackling inequality in Lincolnshire, my priority would be to target:

	Tick (✓) one issue
Issue 1: The ageing coastal communities of East Lindsey	
Issue 2: Rural population change	
Issue 3: Urban deprivation	

I would make this a priority because

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End of Part C

END OF PAPER

GCSE

GEOGRAPHY A

COMPONENT 3

SAMPLE ASSESSMENT MATERIALS

RESOURCE FOLDER

This folder is for use with questions in **Component 3.**
This folder need not be handed in with your answer booklet.

Students collected data about the size of pebbles at 12 locations along the beach. They started at site A and finished at site B. These sites are shown on the sketch map below. Sites A and B are 1000 metres apart.

Sketch map showing the sites of the beach survey

Traffic flows at 8:30am

Sample point 1

No data was collected on this road

Town centre

Sample point 2

Sample point 3

Key

The arrows point in the direction cars were travelling. The width of the arrow is in proportion to the number of cars. This arrow represents 10 cars in 1 minute.

N

Traffic flows at 5:00pm

Sample point 1

No data was collected on this road

Town centre

Sample point 2

Sample point 3

Key

The arrows point in the direction cars were travelling. The width of the arrow is in proportion to the number of cars. This arrow represents 10 cars in 1 minute.

N

Page 3

Students collected bi-polar scores at a number of sites.

The **aim** of their enquiry was to see how living next to a busy road or next to a green space or park might affect well-being of local residents. They plotted their results onto a sketch map of their study area. You can see their results below.

Student sketch map of bi-polar mean values
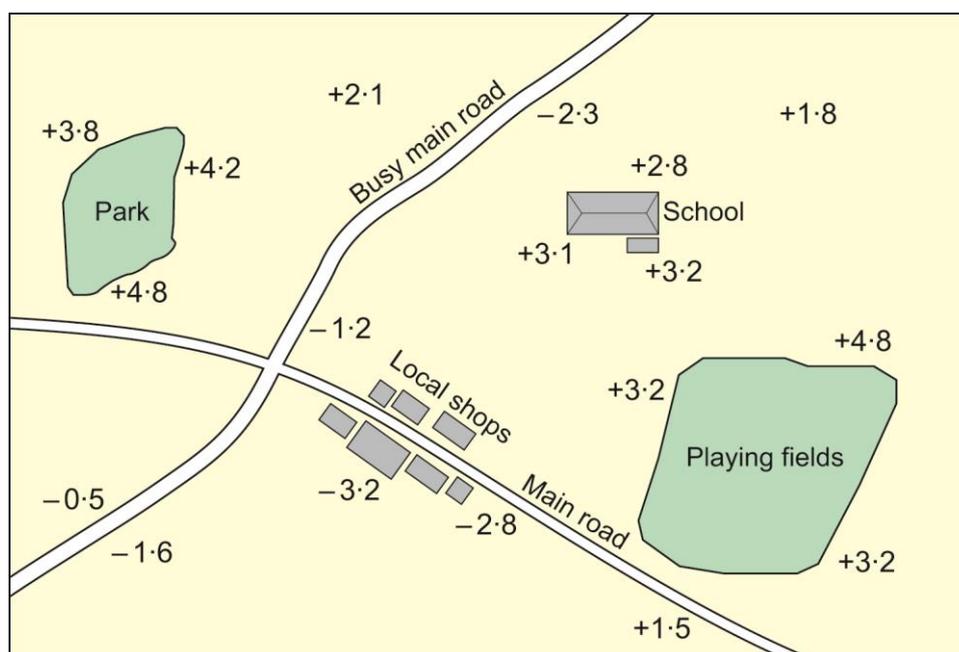
Towns / cities in the UK with the highest weekly wages (in rank order)

1. London
2. Reading
3. Crawley
4. Aldershot
5. Edinburgh
6. Cambridge
7. Milton Keynes
8. Aberdeen
9. Southend-on-Sea
10. Brighton

Page 5

Population Increase 2001-12 in each of the UK economic regions (in hundreds of thousands) *Source: Office of National Statistics*

N

Key

Population increase (2001 - 2012) in thousands

247
Scotland

135
Northern Ireland

307
North West

63
North East

336
Yorks & The Humber

955
London

683
South East

491
East of England

355
West Midlands

374
East Midlands

163
Wales

384
South West
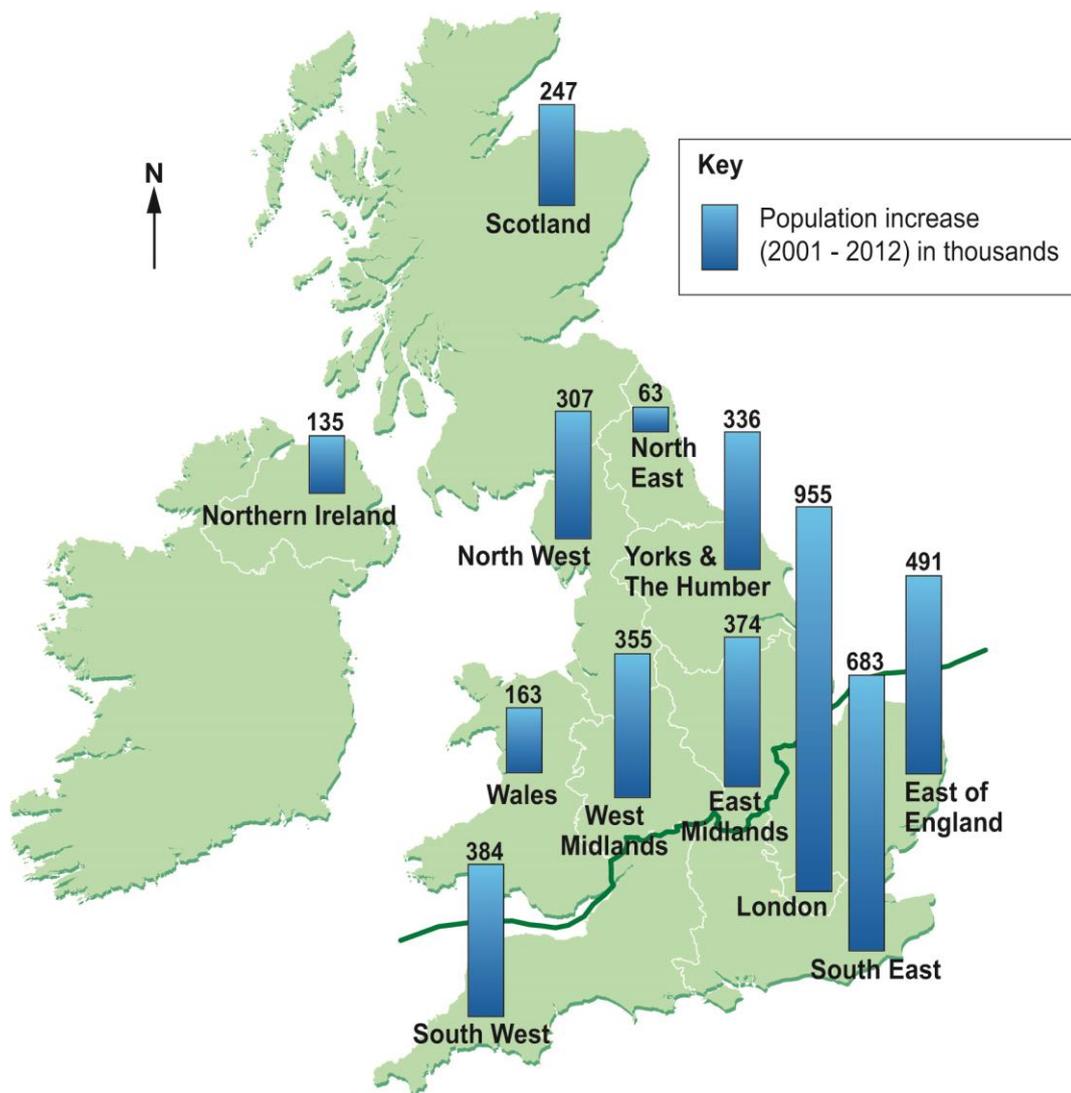
Total number of jobs (in millions) in each of the UK economic regions

Region	Jobs (millions)
Scotland	2.7
Wales	1.4
South West	2.8
South East	4.7
London	5.6
East of England	3.0
West Midlands	2.8
East Midlands	2.2
Yorkshire & The Humber	2.6
North West	3.7
North East	1.1
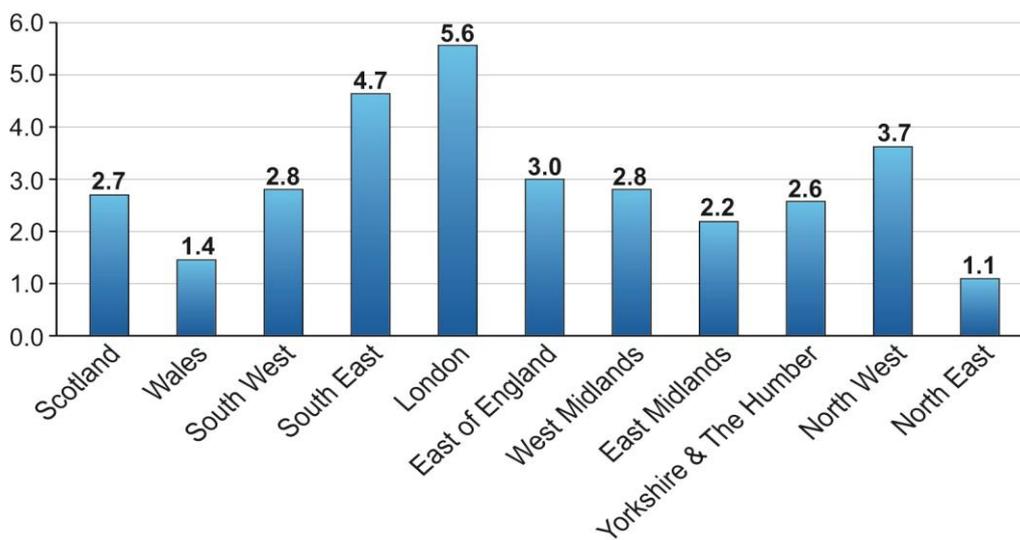
Issues created by inequality in Lincolnshire

Lincolnshire is a large rural county in the East of England. Many people are employed in farming occupations. Since 2001 many migrants have moved from Eastern Europe to work on Lincolnshire farms.

Lincoln is the largest city in the county. There are a number of old seaside towns along the coast including Skegness and Ingoldmells. These towns are popular with people who want to retire.

Many small towns and villages in Lincolnshire are isolated from larger towns in the county and from the rest of England. The county has only one motorway, the M180, which connects Grimsby in the north of the county to the UK motorway network.

Map of Lincolnshire

Page 7

Individual issues that may lead to multiple problems of deprivation and inequality

Low pay and season work e.g farm labourer

Rural isolation because of long distances to health or education services

Unemployment due to factory or office closures

Specific social or health issues perhaps as a result of migration or ageing of the population

Poor urban environment. Lack of retail and leisure facilities due to 'death of the high street.
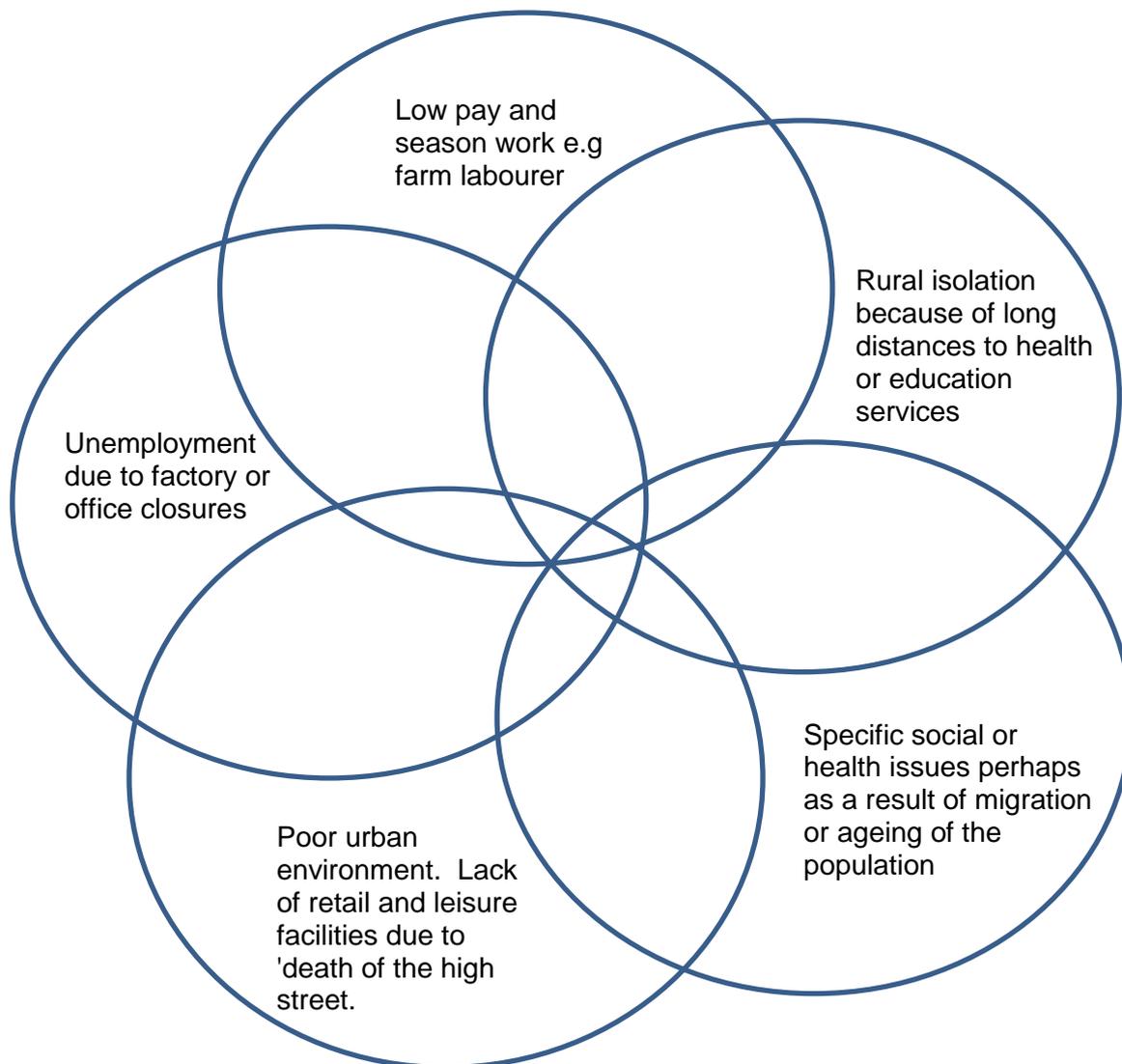
Issue 1 The ageing coastal communities of East Lindsey

Skegness and Ingoldmells are seaside towns that used to be popular holiday resorts. The tourist industry has declined. Some jobs remain on static caravan sites and small hotels but jobs are seasonal. Levels of deprivation in these seaside towns are more than twice as high as the UK average. The biggest inequality issues here are related to health and disability. Unemployment is also a problem.

The average age of the coastal communities of East Lindsey is greater than anywhere else in the county. 28% of the population is over 65. This compares to 17% for England as a whole. The ageing population of Skegness and other coastal communities means that small schools face merger or closure.

Static caravan site and 'Fantasy Island' holiday park in Ingoldmells

Page 9

Issue 2 Rural population change

The districts of Boston and South Holland are at the centre of a large farming region which employs thousands of farm labourers. About 10,000 people in Boston were born abroad. 3,000 are from Poland. This is the highest number of Polish migrants in any area of the UK, outside the South East of England.

Many migrant workers have young children and this is putting pressure on local services such as primary schools. Some schools in Boston and South Holland are full. Schools find it difficult to provide resources and staffing to support children who speak English as an additional language. Deprivation in Boston is lower than the average for England, however about 17.7% (2,100) children live in poverty.

Migrant workers picking daffodils in South Holland

Page 10

Issue 3 Urban deprivation

Lincoln is the largest city in the county. The city contains some deprived neighbourhoods where unemployment is high. The National Census provides detailed information about every local area across England. One neighbourhood within Lincoln is ranked as 132nd out of 32,482 neighbourhoods in England for its high levels of deprivation.

Unemployment is a key factor in creating deprivation. In recent years a number of small manufacturing firms have closed in Lincoln. A specialist communications firm closed in 2014 with a loss of 85 jobs. A fertiliser manufacturer employing 74 people closed in 2015.

Measures of inequality in Lincolnshire from the 2011 census

People's general health

The 2011 Census asked people to describe their general health over the preceding 12 months as 'very good', 'good', 'fair', 'bad' or 'very bad'.

Place	Very good (%)	Bad (%)
Suburb of NE Lincoln	40.8	5.5
Suburb of SW Lincoln	50.3	2.4
Lincoln (mean)	44.2	4.2
Ingoldmells (in East Lindsey)	32.0	8.9
East Lindsey (mean)	38.2	6.4
Long Sutton (in South Holland)	35.7	6.4
South Holland (mean)	40.5	4.7
England (mean)	47.2	4.2

Employment

The 2011 Census asked people to describe their occupation.
Managers are usually highly qualified. Elementary occupations are low skilled, they include jobs such as farm work or supermarket work.

Place	Managers (%)	Elementary occupations (%)
NE suburb of Lincoln	5.2	28.0
SW suburb of Lincoln	8.7	14.0
Ingoldmells	12.5	34.0
Long Sutton	8.0	19.1
England	10.9	11.1

Page 11

Multiple deprivation

The 2011 Census has ranked all 32,482 neighbourhoods in England on a range of deprivation topics. This information is shown on a scale of 1 to 20 in the table below where 1 shows that the neighbourhood is among the least deprived in England and where a score of 20 is the most deprived.

NE suburb of Lincoln

Income deprivation

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Employment deprivation

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Health deprivation

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Barriers to housing and services

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Ingoldmells in East Lindsey

Income deprivation

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Employment deprivation

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Health deprivation

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Barriers to housing and services

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Sutton Bridge in South Holland

Income deprivation

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Employment deprivation

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Health deprivation

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Barriers to housing and services

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Page 12
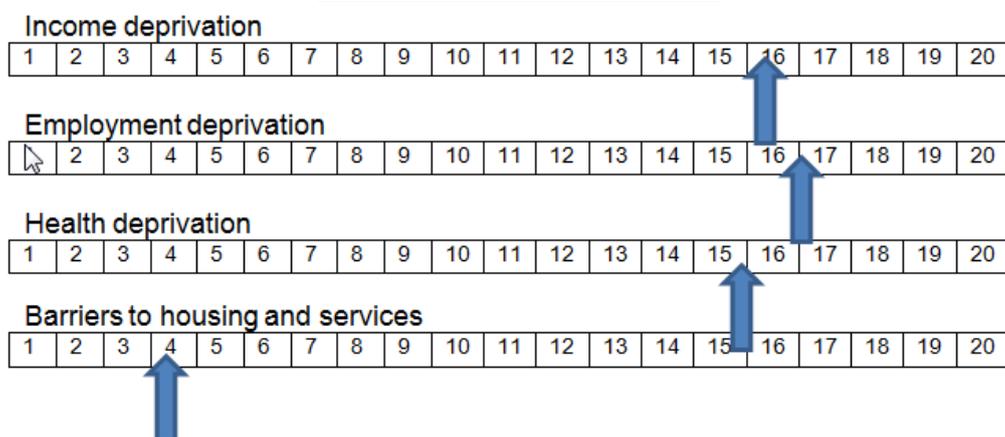
COMPONENT 3 – MARKSCHEME

Instructions for examiners of GCSE Geography when applying the marking scheme

1 Positive marking

It should be remembered that learners are writing under examination conditions and credit should be given for what the learner writes, rather than adopting the approach of penalising him/her for any omissions. It should be possible for a very good response to achieve full marks and a very poor one to achieve zero marks. Marks should not be deducted for a less than perfect answer if it satisfies the criteria of the mark scheme.

GCSE Geography marking schemes are presented in a common format as shown below:

This box contains the sub-question.

The columns to the right indicate the assessment objective(s) targeted by the question and its mark tariff.

3 (a) (i) Describe the location of the island of Lefkada.		AO1	AO2.1	AO2.2	AO3	AO4	Total
Credit two simple statements based on map evidence. Credit accurate use of compass points max 1 Credit accurate use of scale line max 1	In western Greece (1) In Ionian Sea (1) north of Cephalonia (1) 275km (+/-10) from Athens (1) 280km (+/-10) from Thessaloniki (1)					2	**2**

This box contains the rationale i.e. it explains the principles that must be applied when marking each sub-question. The examiner must apply this rationale when applying the marking scheme to the response.

This box contains the candidates expected responses for point-based marking. For some sub-questions, those with a closed question, this box will indicate the only response that is acceptable. For more open ended sub-questions this box will illustrate a number of likely responses that are credit worthy. It may be that this list will be extended at the examiner's conference after actual scripts have been read. For banded mark schemes this box contains indicative content. For full details see below under Banded mark schemes Stage 2.

2 Tick marking

Low tariff questions should be marked using a points-based system. Each credit worthy response should be ticked in red pen. The number of ticks **must** equal the mark awarded for the sub-question. The mark scheme should be applied precisely using the expected outcomes box as a guide to the responses that are acceptable. Do **not** use crosses to indicate answers that are incorrect. If the candidate has not attempted the question then the examiner should strike through the available dotted lines with a diagonal line.

3 Banded mark schemes

Banded mark schemes are divided so that each band has a relevant descriptor. The descriptor for the band provides a description of the performance level for that band. Each band contains a range of marks. Examiners should first read and annotate a learner's answer to pick out the evidence that is being assessed in that question. **Do not use ticks** on the candidate's response. Once the annotation is complete, the mark scheme can be applied. This is done as a two stage process.

Stage 1 – Deciding on the band

When deciding on a band, the answer should be viewed holistically. Beginning at the lowest band, examiners should look at the learner's answer and check whether it matches the descriptor for that band. Examiners should look at the descriptor for that band and see if it matches the qualities shown in the learner's answer. If the descriptor at the lowest band is satisfied, examiners should move up to the next band and repeat this process for each band until the descriptor matches the answer.

If an answer covers different aspects of different bands within the mark scheme, a 'best fit' approach should be adopted to decide on the band and then the learner's response should be used to decide on the mark within the band. For instance if a response is mainly in band 2 but with a limited amount of band 3 content, the answer would be placed in band 2, but the mark awarded would be close to the top of band 2 as a result of the band 3 content.

Examiners should not seek to mark candidates down as a result of small omissions in minor areas of an answer.

Stage 2 – Deciding on the mark

Once the band has been decided, examiners can then assign a mark. During standardising (marking conference), detailed advice from the Principal Examiner on the qualities of each mark band will be given. Examiners will then receive examples of answers in each mark band that have been awarded a mark by the Principal Examiner. Examiners should mark the examples and compare their marks with those of the Principal Examiner.

When marking, examiners can use these examples to decide whether a learner's response is of a superior, inferior or comparable standard to the example. Examiners are reminded of the need to revisit the answer as they apply the mark scheme in order to confirm that the band and the mark allocated is appropriate to the response provided.

Indicative content is also provided for banded mark schemes. Indicative content is not exhaustive, and any other valid points must be credited. In order to reach the highest bands of the mark scheme a learner need not cover all of the points mentioned in the indicative content but must meet the requirements of the highest mark band. Where a response is not creditworthy, that is contains nothing of any significance to the mark scheme, or where no response has been provided, no marks should be awarded.

Part A: Investigating flows through fieldwork

1 (a) Study Photographs 1.1 and 1.2. They show two places where data could be collected about flows. State what data could be collected about flows in each place.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit one correct statement per photo. Max1 mark for each photo. The answer must refer to a flow in each case. **Do not** credit 'flow' if it is not qualified.	**Photo 1.1** Flow of water/discharge/channel flow (1) Infiltration rate (1) wind (1) **Photo 1.2** Movement /flow of people / pedestrians (1) Traffic (1) wind (1)				2		**2**

1 (b) (i) Draw a line of best fit on Graph 1.3 to show the relationship between pebble size and distance along the beach.		AO1	AO2.1	AO2.2	AO3	AO4	Total
Credit up to two marks: One mark for the correct direction of the line. One mark if the number of points above the line is equal to the number of points below the line. Award zero marks if a diagonal line is drawn through the origin of the graph.	A straight line must be drawn sloping in a negative direction (1) Six points on either side of line (1)					2	2

(ii) Calculate the median sediment size and the inter quartile range (IQR) for each site. Show your workings in the space below.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit these responses only with no tolerance. If there is a wrong answer indicated on the answer line, check the working in the body of the script, and award any marks appropriate from the mark scheme.	Site A median = 38 (1) Site A IQR = 25 (1) Site B median = 14 (1) Site B IQR = 2 (1) Numbers from Table 1.4 are written in rank order but medians / IQRs are incorrectly calculated award max 1 mark					4	**4**

(iii) Using your answers to parts (i) and (ii), which of the following **two** statements about the movement of beach sediment along this beach is true? Place a tick (✓) beside the **two** correct answers.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit these responses only.	The process of longshore drift is moving pebbles in an easterly direction (from site A to site B) (1) The process of longshore drift has sorted the pebbles so that it is more uniform at site B than at site A (1)				2		**2**

(c) Another group of students collected data about traffic flows in a small town. They counted the cars going in both directions along three main roads at 8:30am for 5 minutes. They repeated the survey at 5:00pm. The **aim** of their enquiry was to prove that patterns of traffic are affected by commuter movements. Study the patterns shown on **both** maps on page 3 of the Separate Resource folder. What **conclusion(s)** can you reach?		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Use the descriptors below, working upwards from the lowest band.	This question requires candidates to apply their understanding of the use of techniques to analyse patterns on the maps and relate the conclusion to the aim stated in the stem of the question i.e. the conclusion relates the patterns of the maps to commuting. Responses might conclude that: The north-south road is always busier than the east-west road which suggests more people live to the north and south than the east. On every road there is more traffic travelling **into** the town in the morning and less in the evening which suggests that people are commuting into work.				4		**4**

Band	Marks	Descriptor
3	4	Substantiated conclusion(s) are developed which take into account the **aim** of the enquiry and the patterns on **both** maps.
2	2-3	Statements are elaborated which take into account the patterns on **both** maps.
1	1	Simple statements based on the direction and width of the arrows.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

(d) This question is about your own experience of collecting data in the field on flows. Explain why it is better to measure flows several times during a day (or over a few days) rather than once when collecting data about flows.	AO1	AO2.1	AO2.2	AO3	AO4	**Total**
This question targets AO3, specifically the candidates' ability to evaluate/identify limitations and strengths. Credit up to **two** valid statements each with one mark (to max 2). For **either** valid statement, credit up to two valid *elaboration/ development points* for one additional mark each (1+3 or 2+2). **Or** credit one valid statement that is explained by a chain of reasoning (1+1+1+1). **Do not** award marks for fieldwork which is unrelated to flows.	This question requires candidates to apply their understanding of the use of techniques to evaluate sampling strategies. The responses will depend on the context of the fieldwork. The following are examples only: River flow: Discharge varies constantly, so you need to measure it several times a day / season (1) It will increase after a rainfall event (1) The lag time will be variable depending on the season (1) or intensity of the rainfall (1). Pedestrian flow: The movement of people in any town or city varies constantly, so you need to measure it several times a day or across days of the week / times of the year (1) At commuting times it will be higher as people walk from the bus station (1) lunchtimes are busier as office workers take a lunch break (1) On Sundays many shops are closed so city centres are less busy (1) In the middle of the night people are generally at home asleep (1)				4		**4**

End of Part A

Part B: Investigating deprivation and inequalities through fieldwork

2 (a) Study Photograph 2.1 and Photograph 2.1 which show two areas of housing in Newham. The photos were taken by students on their fieldtrip. They wanted to show how the well-being of local people can be affected by the environment. Add annotations (explanatory notes) to Photographs 2.1 and 2.2 to show how the environment may affect the well-being of local residents.		AO1	AO2.1	AO2.2	AO3	AO4	Total
Use the descriptors below, working upwards from the lowest band. **Table**	This question requires candidates to apply their understanding to ascribe meaning to the photograph. **The effect of the environment may be positive or negative.** Annotations should link features of the urban environment (such as parks, open space, places to park vehicles, building design) to the well-being of local residents. Photo 2.1: parking spaces close to homes is a benefit for local residents. On street parking means that the roads may be dangerous to cross, especially for young children / those with mobility problems. Photo 2.2: the large area of green space provides a safe environment for leisure e.g. ball games or cycle rides so people can keep fit.				3		**3**

Band	Marks	Descriptor
3	3	Elaborated statements based on features of the urban environment are linked to well-being of local residents.
2	2	Elaborated statements based on features of the urban environment.
1	1	Simple statements based on features of the urban environment.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

(b) The students used a bi-polar technique to record how they felt about different parts of Newham. Part of their draft survey is given in Table 2.3. (i) Add **two** more pairs of bi-polar statements to Table 2.3 that you could use to investigate **access to services** in a study of inequality.		AO1	AO2.1	AO2.2	AO3	AO4	Total
Award one mark for each pair. Credit statements that are bi-polar i.e. opposites. The positive statement must be on the left. Credit statements that refer to services **only**.	The following are examples only: Schools are close by <> there are no local schools (1) Local schools are high achieving <> local schools are failing (1) Regular bus services <> Irregular / no bus services (1)					2	**2**

(b) (ii) Which of these three sites had the highest mean score and which site had the largest range of scores? Show your working in the space below.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit these responses only. If there is a wrong answer indicated on the answer line, check the working in the body of the script, and award any marks appropriate from the mark scheme. Award max **two** marks if the correct responses are given but the candidate does not show working.	Credit working to show mean mark at site B (1) Credit working to show mean mark at site C (1) The highest mean mark is +2.1/at A (1) The largest range is 8/at site B (1)					4	**4**

(b) (iii) The students calculated the mean bi-polar score for each site. The aim of their enquiry was to see how living next to a busy road or next to a green space or park might affect well-being of local residents. They plotted their results onto a sketch map of their study area. You can see their results on page 4 of the separate Resource Folder. Study page 4 of the separate Resource Folder. What **three** conclusions can you reach?		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit up to **three** separate valid conclusions, each for **one** mark. NB that the results are 'messy' because they do not necessarily meet the students' expectations. Conclusions must relate directly to the evidence from the sketch map.	This question requires candidates to apply their understanding of the use of techniques to analyse and find connections. The scores for locations near green spaces are always high and positive/well-being is enhanced (1) The scores adjacent to main roads are mostly negative/well-being is harmed (1) The scores near main roads where shops are present are particularly low/ well-being is badly affected (1) The highest scores are close to a school/well-being is enhanced (1)				3		**3**

(c) Evaluate the use of the internet as a source of secondary data to support fieldwork into inequality. *You should support your answer by referring to actual examples from your own fieldwork.*			AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Use the descriptors below, working upwards from the lowest band.		This question requires candidates to apply their understanding of the use of techniques to evaluate the advantages and disadvantages (or strengths and limitations) of using the internet in the candidate's own fieldwork. **Inequalities** can be social, economic, or environmental. **Secondary** sources could refer to objective data, for example, census data on unemployment, local authority data on housing need, house price data. It may also be a reference to opinions expressed in, for example, an on-line news article or weblog. **Advantages / disadvantages** could refer to the validity or accuracy of the evidence, or the reliability of the source of the evidence				6		**6**

Band	Marks	Descriptor
3	5-6	Detailed/specific evaluation which address advantages **and** disadvantages and which use relevant illustrations from the candidate's own fieldwork.
2	3-4	Elaborated statements which provide evaluation of the advantages / disadvantages and which use illustrations from the candidate's own fieldwork.
1	1-2	Simple statements based on general advantages / disadvantages of secondary sources.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

End of Part B

Part C: The wider UK dimension

3 (a) Inequalities exist at a national scale as well as within local communities. Study Figure 7. It shows the location of the 10 towns and cities which had the UK's highest average wages (2012). (i) Name the town or city located 75km to the south of central London.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit this response only.	Brighton (1 mark)					1	**1**

(ii) Describe the distribution of the UK's towns and cities which have the highest weekly wages.		AO1	AO2.1	AO2.2	AO3	AO4	**Total**
Credit these responses only.	There is a significant cluster within 100km of London (1) 50% are in the south-east region (1)					2	**2**

(b) (i) Compare the patterns shown by the map **and** graph on page 6 of the separate Resource Folder.	AO1	AO2.1	AO2.2	AO3	AO4	**Total**
					6	**6**

This question targets the skills elements of use of the map and graph **and** the ability to communicate findings. Use the descriptors below, working upwards from the lowest band.	Responses will use map evidence to make comparisons between population increase with total number of jobs. Some candidates will note that both sets of data are higher to the south of the north/south divide which is marked on the map.

Band	Mark	Descriptor
3	5-6	Elaborated statements which make direct comparisons between the regions to the north and south and which make effective use of both sets of data. Meaning is unambiguous. The response has clear purpose, is fluent and logically structured.
2	3-4	Statements which make comparisons between the regions to the north and south. Meaning is clear. The response has purpose, is organised and well structured.
1	1-2	Simple valid statements that describe patterns. Meaning is generally clear. Statements are linked by a basic structure.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

Population increase is lower to the north of the line / higher to the south.

The lowest area is the North East which has only increased by 63000 whereas London and the South East have the two largest increases.

The South East has grown 10 times more than the North East.

(b) (ii) Explain why the population of cities in the UK is increasing.	AO1	AO2.1	AO2.2	AO3	AO4	**Total**
		6				**6**

| This question assesses AO2.1 the concept of population change. | Responses should demonstrate understanding of a range of push factors that are responsible for population change in one major UK city. |

This question assesses AO2.1 the concept of population change.

Use the descriptors below, working upwards from the lowest band.

Band	Mark	Band Descriptor
3	5-6	Thorough and elaborated understanding of reasons for population change. Some demonstrate depth of understanding through chains of reasoning.
2	3-4	Elaborated understanding of some reasons for population change which demonstrates breadth of understanding.
1	1-2	Simple, valid statements demonstrate basic understanding of the reasons for population change.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

The question does not explicitly ask for push or pull factors but these should be credited if they are given. Do not double credit unless further detail or elaboration is provided that would indicate a higher band has been achieved.

Responses should demonstrate understanding of a range of push factors that are responsible for population change in one major UK city.

Migration

Booming urban economies attract young adults to find work. Some jobs are better paid than in rural regions (eg London weighting allowance) and other jobs are advertised widely because of skill shortages (eg in health and education services). Some migrants are from within the UK, others are foreign migrants.

Responses may focus on pull factors (such as 'bright lights') or push factors.

Natural increase

Youthful populations, attracted initially by booming urban economies are in the fertile age range and are likely to have young children which leads to further growth of the urban population.

(c) Explain why population change puts pressure on access to services in rural locations of the UK.			AO1	AO2.1	AO2.2	AO3	AO4	Total
					6			**6**

This question assesses AO2.2, the relationship between population change and access to services in rural places. Use the descriptors below, working upwards from the lowest band.			Responses should link population change to named services. Credit responses that refer to either population growth or loss (or both) in rural areas.

Band	Mark	Descriptor
3	5-6	Elaborated statements which demonstrate a clear understanding of the links between population change and the consequential pressures on a wide range of services.
2	3-4	Elaborated statements which demonstrate an understanding of the link between population change and the consequential pressure on services.
1	1-2	Simple, valid statements demonstrate a general understanding of how population change may impact on service provision.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

Population change is likely to be based on population growth as the question asks candidates to explain the 'pressure' on the services. Examples will include pressure on the availability of schools (places / class sizes), health services (doctors / maternity services), roads (congestion / new build) and policing.
More sophisticated responses may refer to socio-economic aspects of population change and / or demographics. Examples include the inward migration of younger people (maternity provision / school places) or older people (health care / community services).

Credit responses which make the link between de-population and the closure of services (isolated rural villages losing post offices / bus services).

(d) (i) Describe the location of Lincoln. Use distance and direction to support your answer.		AO1	AO2.1	AO2.2	AO3	AO4	Total
Credit up to **three** valid statements, each with one mark. Max 1 if no use of distance or direction.	It is in Lincolnshire (1) in the west of the county (1) It is 45km (1) south west of Grimsby (1) It is 60km (1) west north west of Skegness (1)					3	**3**

(d) (ii) Write a letter to Lincolnshire County Council. Explain why your chosen issue should become a priority. Justify your decision using information from pages 7 to 12 of the separate Resource Folder. *Your ability to spell, punctuate and use grammar and specialist terms accurately will be assessed in your answer to this question.*	AO1	AO2.1	AO2.2	AO3	AO4	SPaG	**Total**
Use the descriptors in the banded mark scheme below. Work upwards from the lowest to the highest band.				12		**4**	**16**

Band	Mark	Descriptor
4	10-12	The candidate writes a comprehensive response that: • reaches a substantiated decision that includes an effective justification • provides consistently detailed analysis throughout that is substantiated by a range of evidence in the Resource Folder • provides effective evaluation of the issue(s) • applies wider geographical knowledge and understanding of the UK to effectively substantiate the chain of reasoning.
3	7-9	The candidate writes a detailed response that: • reaches a decision that is justified • provides detailed analysis that is supported by evidence in the Resource Folder • provides some evaluation of the issue(s) • applies wider geographical knowledge and understanding of the UK to support reasoning.
2	4-6	The candidate writes a response that: • provides a decision that is simply justified • provides some analysis that is supported by evidence in the Resource Folder • makes limited evaluation of the issue(s) • applies some limited geographical knowledge/understanding of the UK.
1	1-3	The candidate writes a basic response that: • provides a simple but unsubstantiated decision • briefly explores some of the issues in one place.
	0	Award 0 marks if the answer is incorrect or wholly irrelevant.

Once a mark (out of 12) has been awarded for the geographical content, apply the performance descriptors for spelling, punctuation and the accurate use of grammar and specialist terms that follow.

Band	Marks	Performance descriptions
High	4	• Learners spell and punctuate with consistent accuracy • Learners use rules of grammar with effective control of meaning overall • Learners use a wide range of specialist terms as appropriate
Intermediate	2 - 3	• Learners spell and punctuate with considerable accuracy • Learners use rules of grammar with general control of meaning overall • Learners use a good range of specialist terms as appropriate
Threshold	1	• Learners spell and punctuate with reasonable accuracy • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall • Learners use a limited range of specialist terms as appropriate
	0	• The learner writes nothing • The learner's response does not relate to the question • The learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning