Please write clearly in block capitals.

Centre number | | | | | | Candidate number | | | | |

Surname _____

Forename(s) _____

Candidate signature _____

AS GEOGRAPHY

Paper 1 Physical geography and people and the environment

Tuesday 15 May 2018 Afternoon Time allowed: 1 hour 30 minutes

Materials

For this paper you must have:
- a pencil
- a rubber
- a ruler.

You may use a calculator.

For Examiner's Use	
Section	Mark
A	
B	
TOTAL	

Instructions
- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **either** Question 1 **or** Question 2 **or** Question 3 in Section A.
- Answer **either** Question 4 **or** Question 5 in Section B.
- You must answer the questions in the spaces provided. Do **not** write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information
- The marks for questions are shown in brackets.
- The total number of marks available for this paper is 80.

Do not write outside the box

For the multiple-choice questions, completely fill in the circle alongside the appropriate answer.

CORRECT METHOD  WRONG METHODS 

If you want to change your answer you must cross out your original answer as shown. 

If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown. 

Section A

Answer **one** question in this section.

Answer **either** Question 1 **or** Question 2 **or** Question 3.

Question 1 Water and carbon cycles

0 1 . 1 Which of the following are **all** stores of water in a drainage basin?

[1 mark]

A Channel flow, infiltration, runoff ⬭

B Evaporation, interception, soil water ⬭

C Ground water, soil water, surface water ⬭

D Precipitation, runoff, soil water ⬭

0 1 . 2 Which **one** of the following could be a natural cause of variation in the water cycle?

[1 mark]

A The rate of transfer of water from lithosphere stores to hydrosphere stores can be increased by urbanisation. ⬭

B Hydrosphere stores of water can be reduced by abstraction of water for agriculture. ⬭

C The amount of water stored in the biosphere could be reduced by deforestation. ⬭

D Storm events transfer significant amounts of water from the atmosphere store to the hydrosphere and lithosphere stores. ⬭

Do not write outside the box

0 1 . 3 Outline an example of positive feedback in the water cycle.

[3 marks]

Question 1 continues on the next page

Do not write outside the box

Figure 1 and **Figure 2** show information about emissions of carbon dioxide into the atmosphere from fossil fuel use in 1960 and 2016.

Figure 1 - 1960

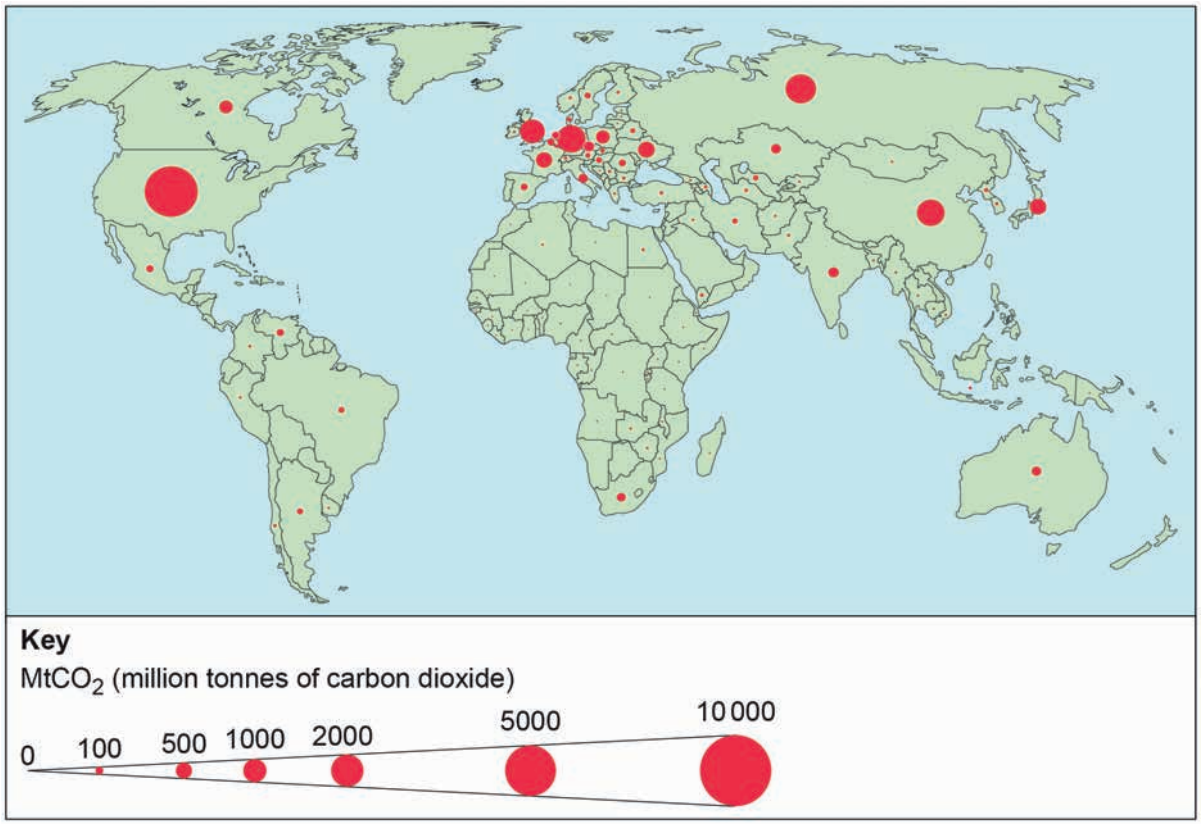
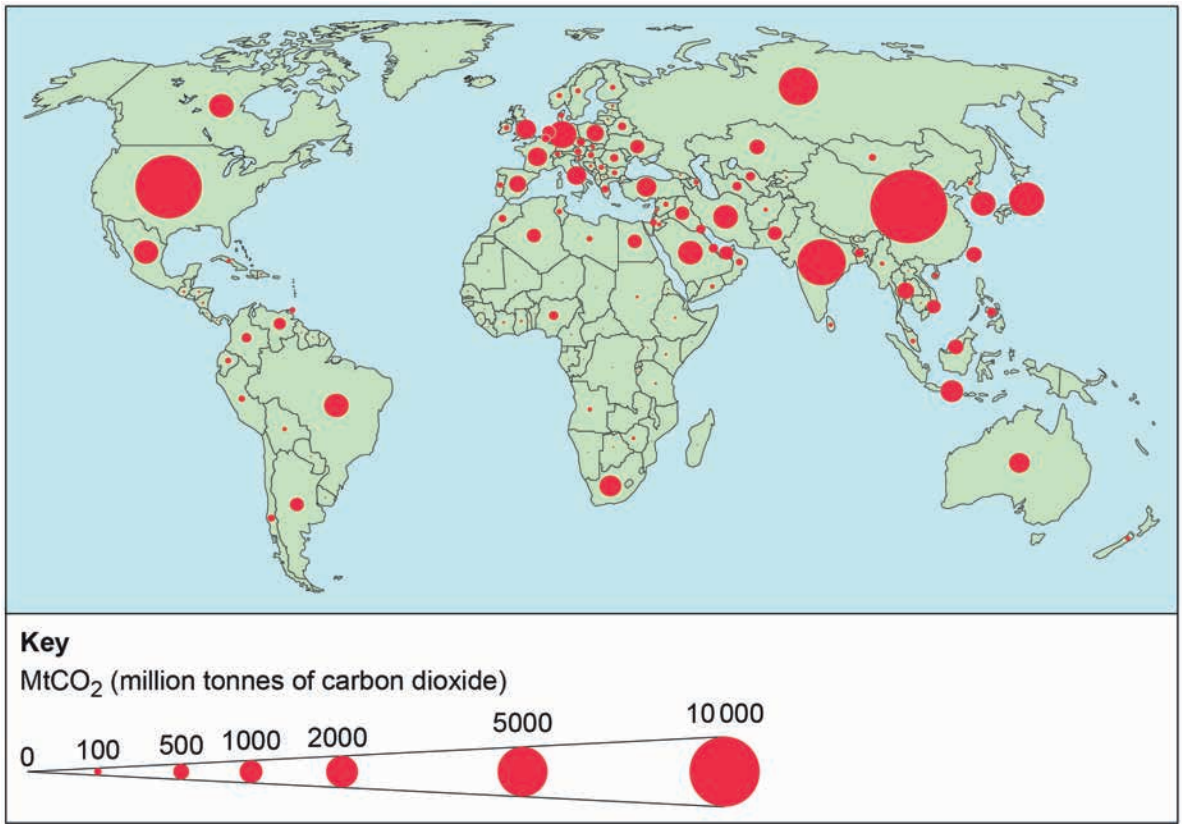


Figure 2 - 2016



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0 1 . 4 Analyse the data shown in **Figure 1** and **Figure 2**.

[6 marks]

Question 1 continues on the next page

Do not write outside the box

0 1 . 5 Assess the impact of natural changes to the carbon cycle upon life on Earth.

[9 marks]

Do not write outside the box

0 1 . 6 ‘The size of major stores of water change over time more because of human activity than natural variation.’

To what extent do you agree with this statement?

[20 marks]

Do not write outside the box

End of Question 1

40

Do not write outside the box

Question 2 Coastal systems and landscapes

0 2 . 1 Which of the following are **all** processes of coastal transportation?

[1 mark]

A Corrasion, hydraulic action, wave quarrying ⬭

B Abrasion, cavitation, attrition ⬭

C Mass movement, runoff, sub-aerial weathering ⬭

D Solution, suspension, traction ⬭

0 2 . 2 Which of the following describes a Dalmatian coast?

[1 mark]

A An emergent coastline of former wave-cut platforms and their beaches at a higher level than the current sea level. ⬭

B A series of ridges on a beach running parallel to the coast marking successively higher tides between neap and spring tides. ⬭

C A sheltered area on the landward side of a spit where coastal sediments accumulate and become stabilised by vegetation like marram grass. ⬭

D A submergent coastline where valleys have been flooded by a rise in sea level leaving a series of islands parallel to the coastline. ⬭

0 2 . 3 Outline the concept of eustatic sea level change.

[3 marks]

Question 2 continues on the next page

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Figure 3 and **Figure 4** provide information about the changes in coastal landforms in the Kuala Baram region of Sarawak, East Malaysia.

Figure 3

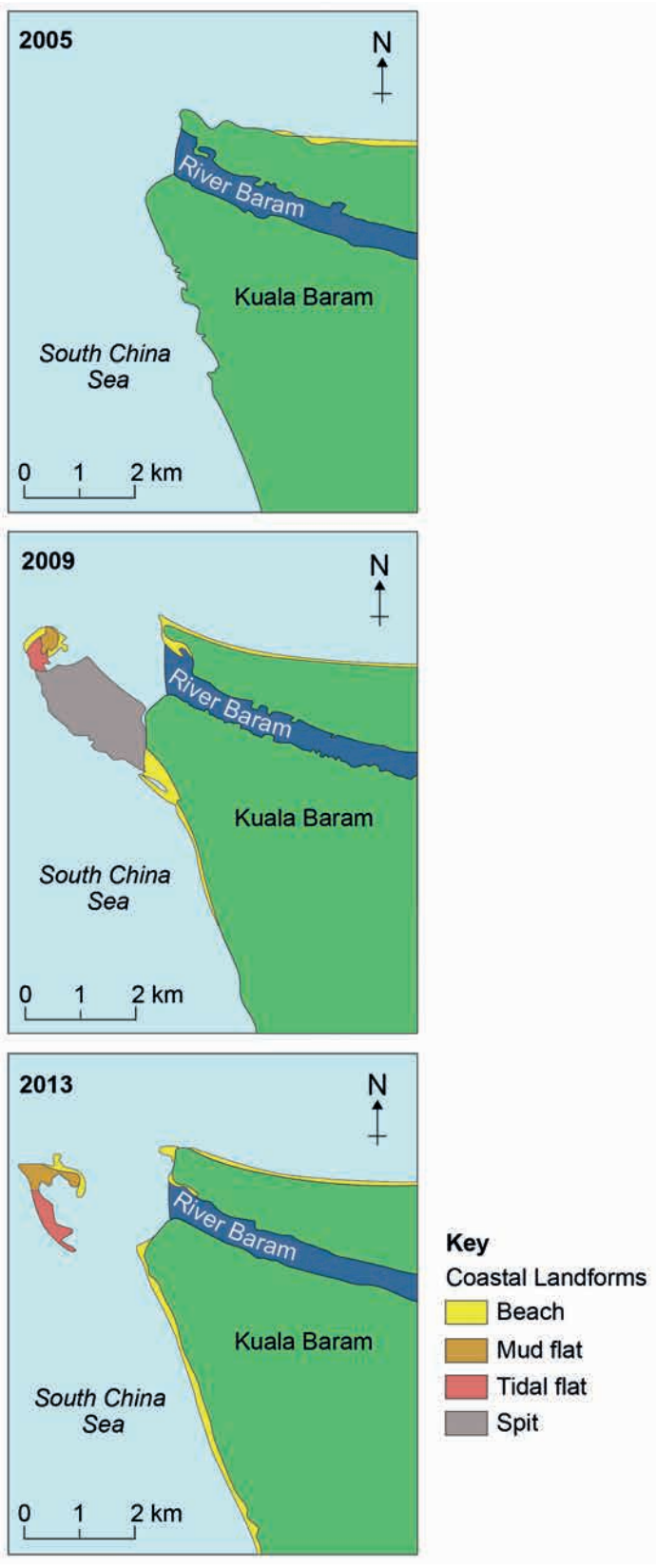

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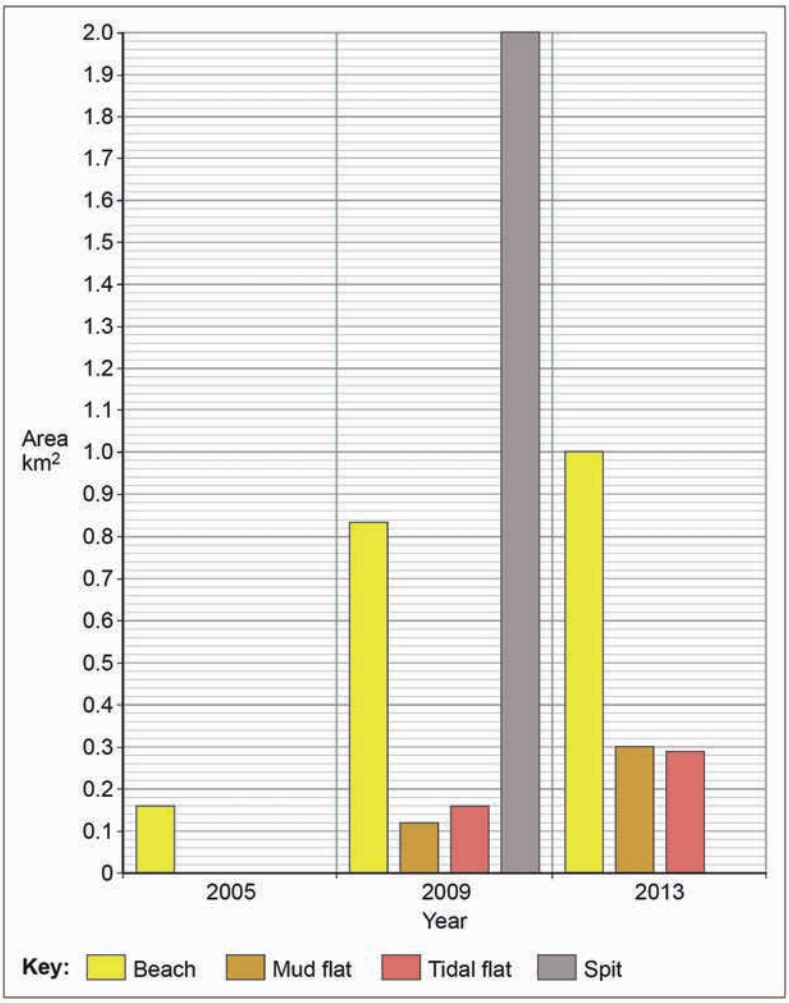
Figure 4



0 2 . 4 Analyse the data shown in **Figure 3** and **Figure 4**.

[6 marks]

Do not write outside the box

0 2 . 5 Assess the role of weathering in the development of coastal landforms.

[9 marks]

Do not write outside the box

0 2 . 6 ‘Sustainable approaches to coastal management will become more important than traditional approaches in dealing with the impacts of climate change.’

To what extent do you agree with this view?

[20 marks]

Do not write outside the box

40

End of Question 2

Do not write outside the box

Question 3 Glacial systems and landscapes

0 3 . 1 What is the geomorphological process of plucking?

[1 mark]

A A process leading to the loss of mass from the glacier mainly due to melting. ⬭

B One of a range of processes by which ice within a glacier is transported downhill from the zone of accumulation to the zone of ablation. ⬭

C Erosion caused by a glacier freezing to the valley floor and sides, removing pieces of bedrock as the glacier moves. ⬭

D Where material carried by a glacier wears away at the valley floor and sides. ⬭

0 3 . 2 Which of the following describes a till plain?

[1 mark]

A A continental size mass of ice that is dome-shaped with flows of ice radiating from the centre. ⬭

B A steep-sided ridge of unsorted material stretching across a glacial valley at right angles to the direction of ice advance. ⬭

C A swarm of streamlined elongated 'whale back' hills often found on glaciated lowland plains. ⬭

D A thick covering of unsorted glacial deposits found behind a terminal moraine. ⬭

0 3 . 3 Outline the concept of the glacial budget.

[3 marks]

Question 3 continues on the next page

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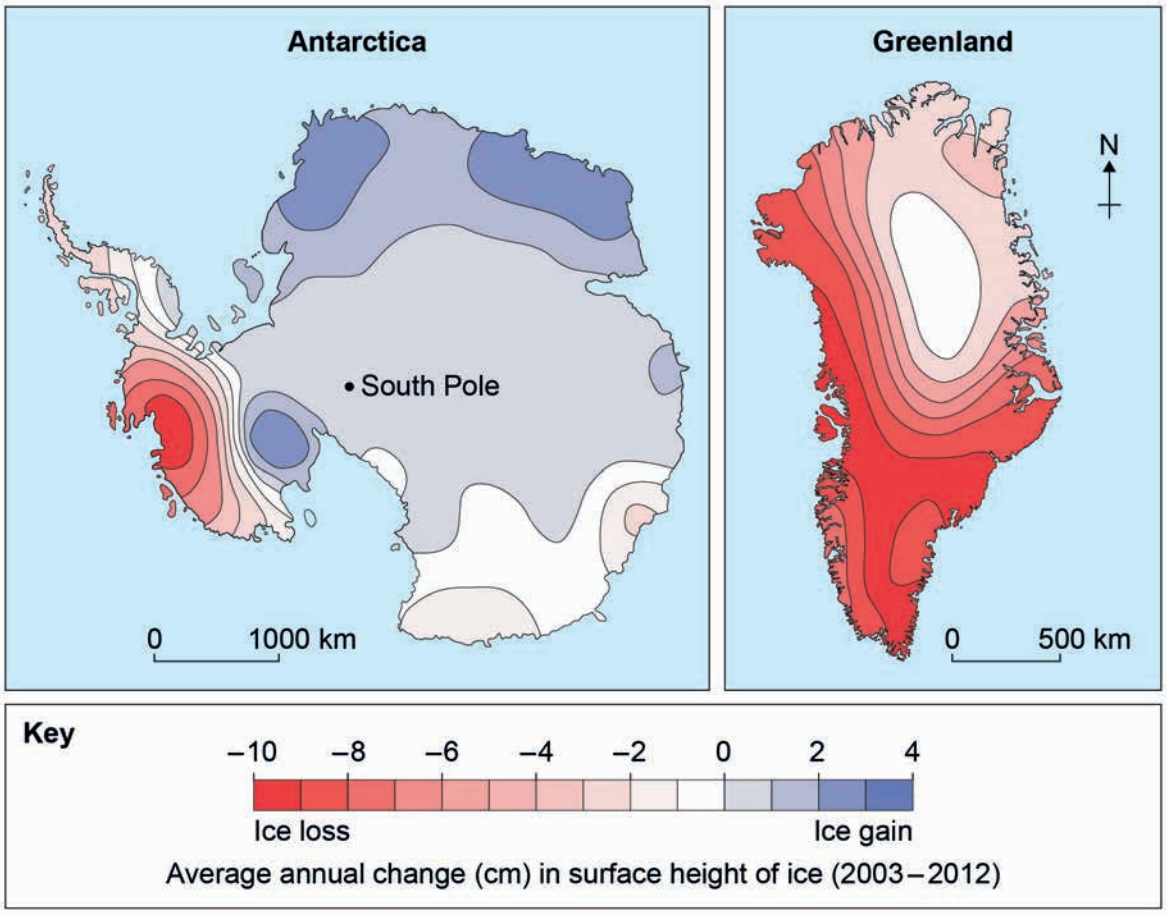
Figure 5 and **Figure 6** provide information about changes to the amount of ice in Antarctica and Greenland.

Figure 5 **Figure 6**



0 3 . 4 Analyse the data shown in **Figure 5** and **Figure 6**.

[6 marks]

Do not write outside the box

0 3 . 5 Assess the extent to which erosion has been the dominant process in a local scale glaciated environment that you have studied.

[9 marks]

Question 3 continues on the next page

0 3 . 6 Assess the potential impact of climate change on periglacial landscapes.

[20 marks]

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Do not write outside the box

End of Section A

40

Do not write outside the box

Section B

Answer **one** question in this section.

Answer **either** Question 4 **or** Question 5.

Question 4 Hazards

0 4 . 1 Which of the following best describes an island arc?

[1 mark]

A An archipelago formed of a series of volcanoes rising above sea level associated with an ocean trench and destructive plate margin. ⬭

B An underwater mountain range associated with sea-floor spreading at a constructive plate boundary. ⬭

C A linear lowland area between highlands formed as tectonic processes begin to pull tectonic plates apart. ⬭

D Linear mountain ranges formed as two or more tectonic plates are pushed together often causing layers of sedimentary rocks to buckle and warp. ⬭

0 4 . 2 Which of the following are **all** hazards resulting from seismic events?

[1 mark]

A Lava flows, nuées ardentes, shockwaves ⬭

B Liquefaction, landslides, tsunamis ⬭

C Earthquakes, pyroclastic flows, tephra ⬭

D Ash flows, liquefaction, mudflows ⬭

Do not write outside the box

0 4 . 3 Outline the process of slab pull in relation to plate movement.

[3 marks]

Question 4 continues on the next page

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Figure 7 shows tropical storm basins where storms occur on a regular basis.

Figure 7

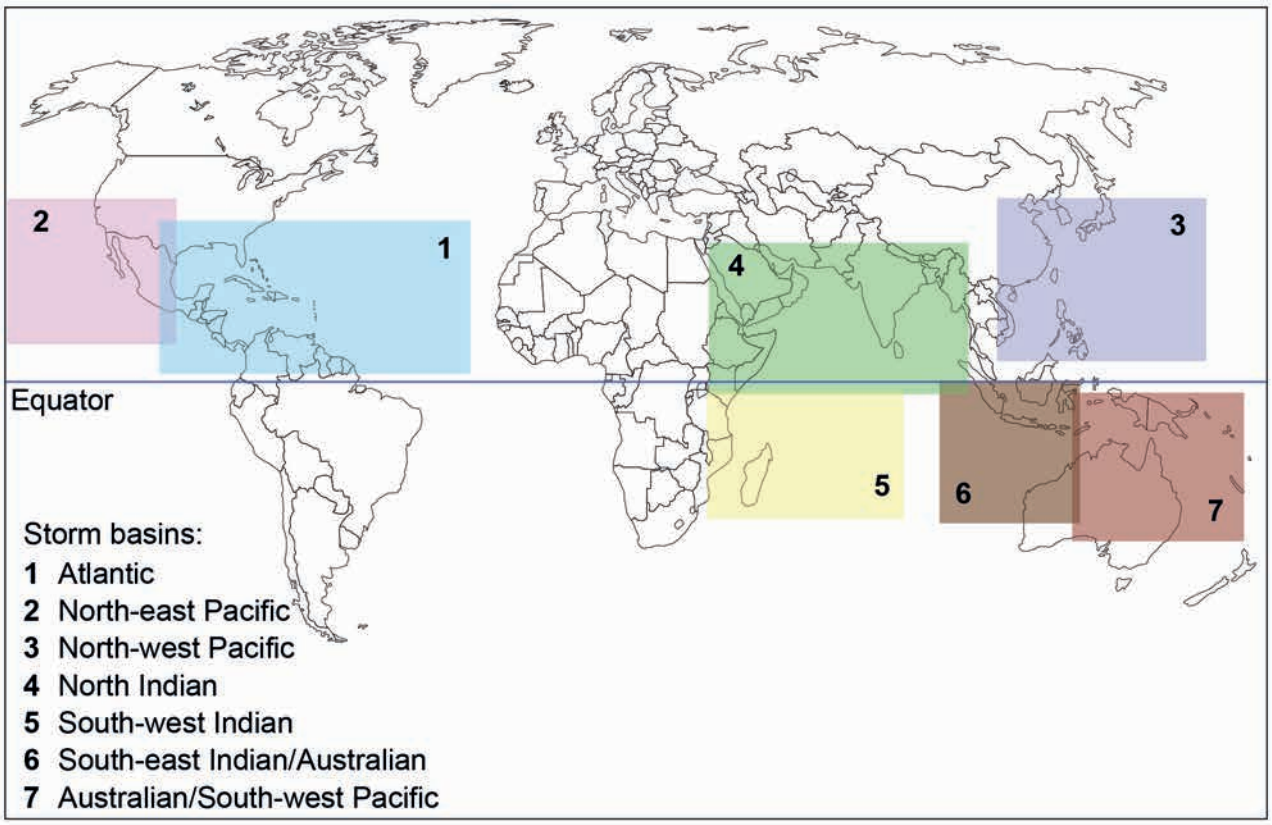

Figure 8 shows data about the frequency of storm events in each tropical storm basin between 1981 and 2010.

Figure 8

Storm basin	Tropical storms		
	Most in one year	Least in one year	Average per year
Atlantic	15	2	6.4
North-east Pacific	16	3	8.9
North-west Pacific	26	5	16.5
North Indian	5	0	1.5
South-west Indian	8	1	5.0
South-east Indian/Australian	8	1	3.6
Australian/South-west Pacific	12	1	5.2

Do not write outside the box

0 4 . 4 Analyse the data shown in **Figure 7** and **Figure 8**.

[6 marks]

Question 4 continues on the next page

Do not write outside the box

0 4 . 5 Assess the impacts of a recent wildfire event upon people's lived experience of the place.

[9 marks]

Do not write outside the box

0 4 . 6 'The severity of the impacts of the volcanic hazards experienced in a place is affected more by the nature of plate boundaries than the level of development of the place.'

To what extent do you agree with this view?

[20 marks]

Do not write outside the box

End of Question 4

40

Do not write outside the box

Question 5 Contemporary urban environments

0 5 . 1 Which of the following best describes a world city?

[1 mark]

A A city that has experienced economic and structural regeneration following a period of decline. ⬭

B A city that has very significant economic or financial and/or political influence on an international scale. ⬭

C A large metropolitan urban area with a population of at least 10 million. ⬭

D A self-contained settlement that has developed beyond the original city boundary and become a city in its own right. ⬭

0 5 . 2 Which of the following is a form of air pollution where exhaust fumes interact with sunlight to produce low-level ozone?

[1 mark]

A Methane released from landfill ⬭

B Particulate pollution ⬭

C Photo-chemical pollution ⬭

D Urban heat island effect ⬭

0 5 . 3 Outline the process of suburbanisation.

[3 marks]

Question 5 continues on the next page

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Figure 9 shows the Index of Multiple Deprivation for the city of Preston, Lancashire in 2015.

Figure 9

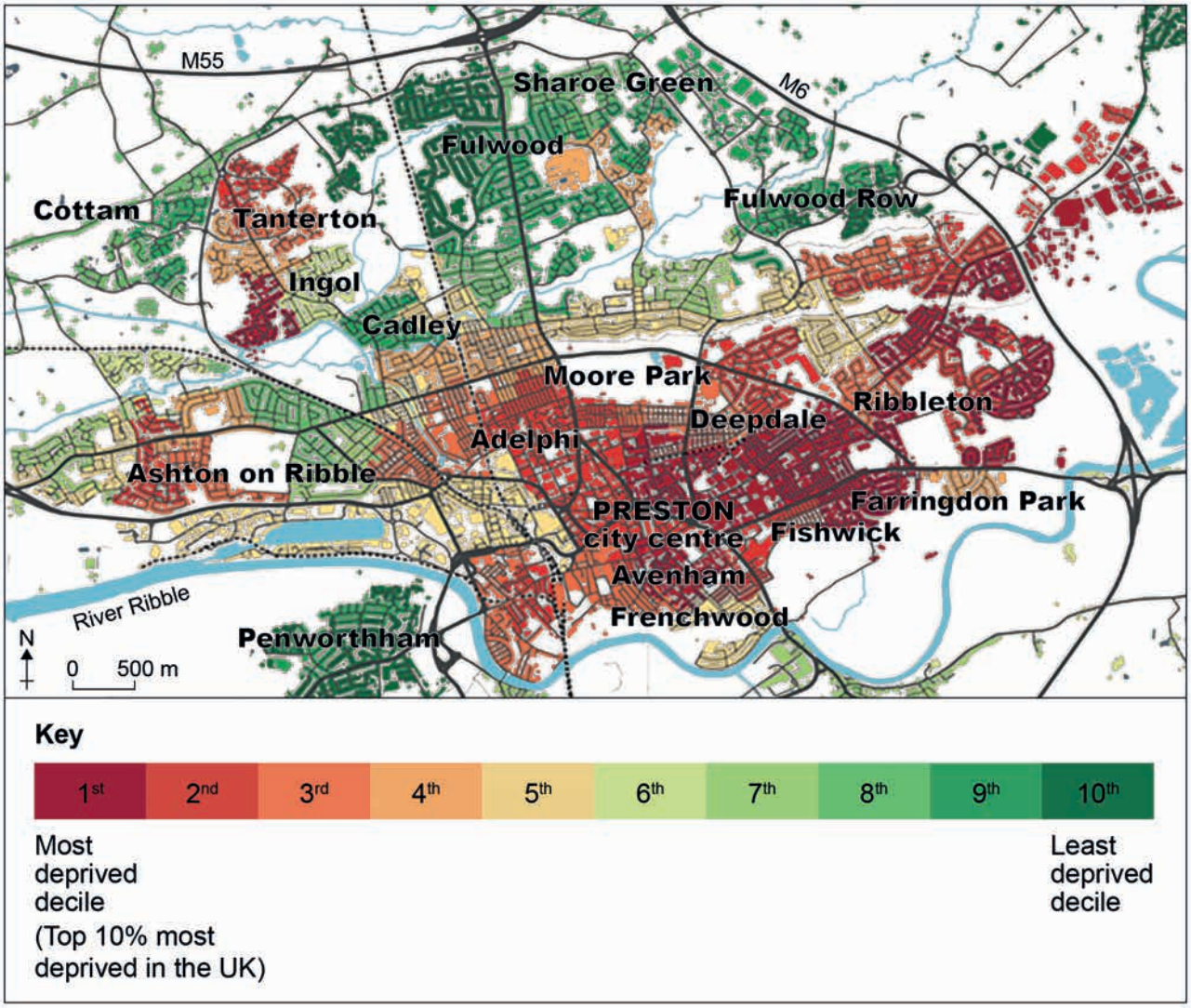

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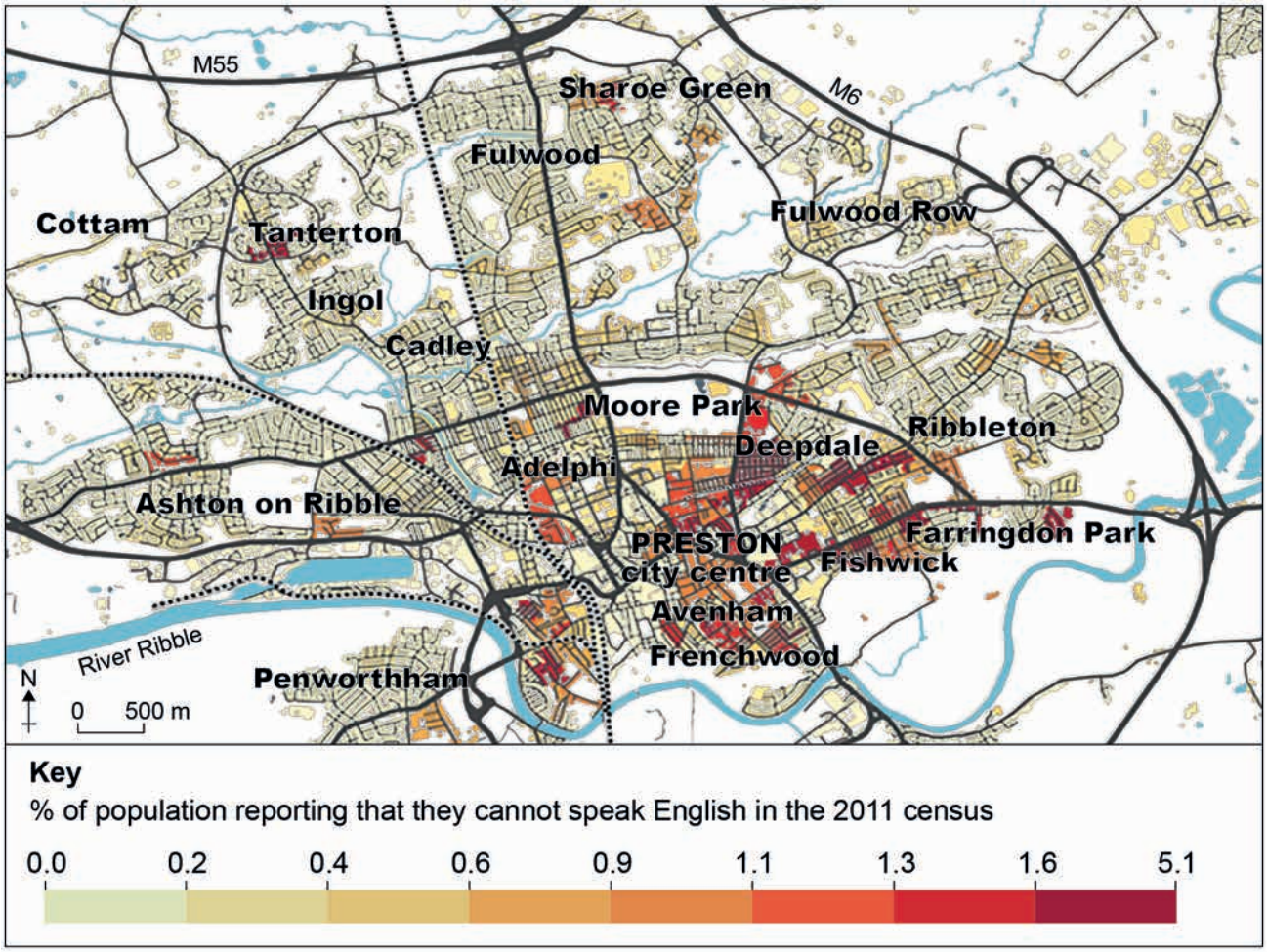
Figure 10 shows the percentage of Preston residents who cannot speak English (2011 census).

Figure 10



0 5 . 4 Analyse the data shown in **Figure 9** and **Figure 10**.

[6 marks]

Question 5 continues on the next page

Do not write outside the box

0 5 . 5 Assess the impact on the character of a place of a river restoration and conservation project in a damaged urban catchment.

[9 marks]

Do not write outside the box

0 5 . 6 ‘Environmental issues in urban areas will always emerge despite attempts to be more sustainable.’

With reference to **two** contrasting urban areas that you have studied, to what extent do you agree with this statement?

[20 marks]

Do not write outside the box

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END OF QUESTIONS