

Surname	Centre Number	Candidate Number
Other Names		0



GCSE

3110U10-1



GEOGRAPHY

Unit 1: Changing Physical and Human Landscapes

TUESDAY, 21 MAY 2019 – AFTERNOON

1 hour 30 minutes

For Examiner's use only		
	Maximum Mark	Mark Awarded
Question 1	28	
Question 2	28	
Writing accurately	3	
either Question 3	24	
or Question 4	24	
Total	83	

ADDITIONAL MATERIALS

Resource folder.

In addition to this paper you may use a calculator and a ruler if required.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen. Do not use correction fluid.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **both** questions in Section A.

Answer **one** question from Section B.

Write your answers in the spaces provided in this booklet.

If additional space is required you should use the additional page(s) 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.

Your ability to communicate and organise your ideas will be assessed in questions that are worth 6 or 8 marks. The accuracy of your writing will be assessed in your answer to question 2(c)(iii).



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SECTION A – CORE THEMES

Answer all questions in this section.

THEME 1: Landscapes and Physical Processes

1. (a) Study the OS map extract in the Resource Folder. It shows an area of coastline around Pwllheli in North Wales. A key for the OS map appears on the back page of the Resource Folder.

- (i) Identify the landform **A**.

Tick (✓) **one** choice below.

[1]

Landform	Tick (✓)
Beach	
Wave-cut platform	
Headland	

- (ii) Give the six figure grid reference of the lighthouse at Point **B** on the map.

Tick (✓) **one** choice below.

[1]

Grid reference	Tick (✓)
348389	
387349	
349388	
389348	

- (iii) Complete the following paragraph by underlining the correct answer in each of the brackets. [3]

The sand spit extends towards the (**west** / **north-east** / **north-west**) from Crochan Berw in grid square 3834. The distance to the lighthouse at Point **B** is (**0.6** / **2.5** / **0.3**) kilometres from Crochan Berw. The track along the northern edge of the sand spit is open to (**all traffic** / **horses only** / **pedestrians only**).



(iv) Describe the process of longshore drift.

[3]

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(v) Analyse how longshore drift and other processes have affected the shape of the landforms along the coastline on this map. Use evidence from the map to help your answer.

[6]

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(b) Study the photographs below.

Flooding in Carlisle, North-West England, December 2015

Photo 1



Photo 2



(i) Give the drainage basin process shown in **Photo 1**.

Tick (✓) the correct answer from the box below.

[1]

Process	Tick (✓)
Infiltration	
Overland Flow	
Interception	
Throughflow	

(ii) Suggest **one** impact of the 2015 flood on people in Carlisle. Use evidence from the photographs. [3]

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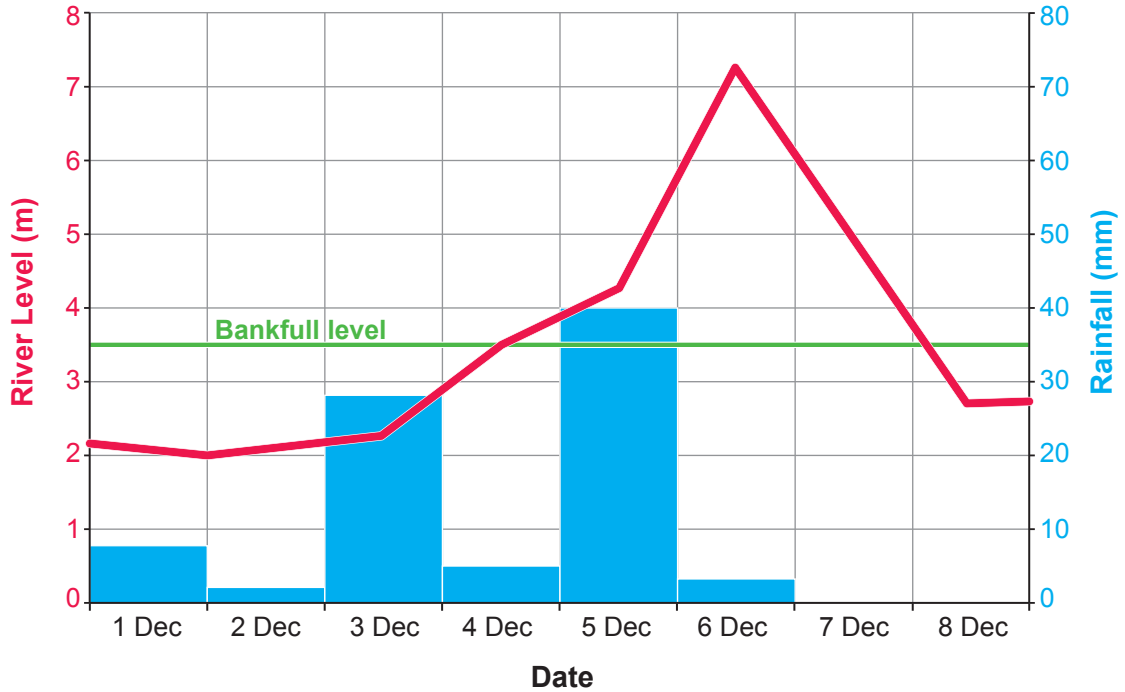
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(c) Study the storm hydrograph below.

A storm hydrograph for the River Eden at Carlisle during the 2015 flood



(i) Bankfull level is the river level above which the channel overflows to cause a flood. Give the number of days Carlisle was flooded. [1]

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(ii) Describe the relationship between rainfall and river level from 1st to 8th December. [3]

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(iii) Explain why the shape of a storm hydrograph can be affected by different land uses. [6]

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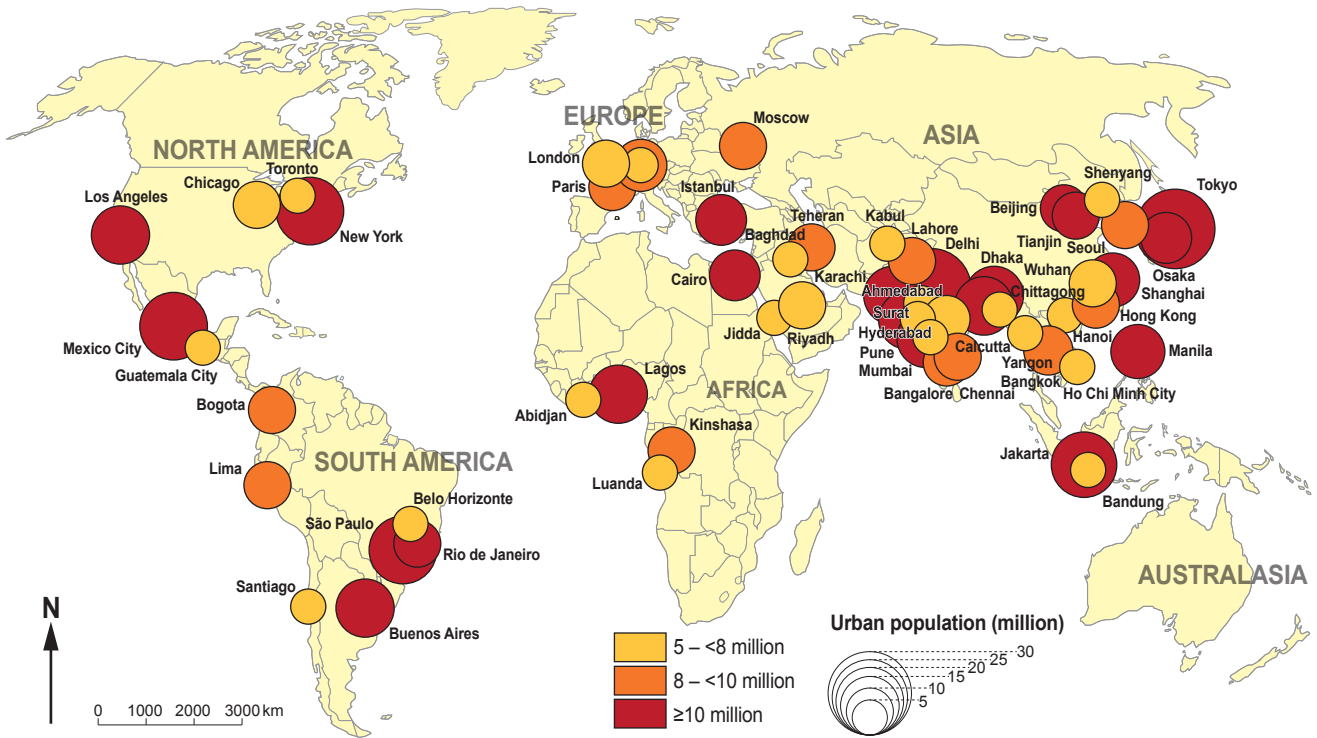
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THEME 2: Rural-Urban Links

2. (a) Study the map below.

The World's Largest Global Cities



(i) Tick (✓) **three** statements in the box below that are true.

[3]

Statement	True (✓)
Los Angeles is the largest global city.	
The greatest concentration of global cities is in South Asia.	
London has a population of less than 8 million.	
New York has a population of 30 million.	
The majority of global cities have a population of between 8 and 10 million.	
Tokyo is the largest global city.	



(ii) Global cities often grow because of migration. Describe **two** pull factors which can lead to migration to global cities. [4]

Factor 1

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Factor 2

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(b) Retailing is an important function in towns and cities in the UK. Retailing in UK towns and cities is changing. Study the data below.

Openings and Closures of Shops in UK Urban Areas 2015-2016

Vacant shops in Newport, Wales

Type of Location	Difference in number of retail units
Town centre high street shops	-373
Out of town retail park shops	+304
Town centre shopping centre	+22



Source: Local Data Company

(i) Give the type of location in which more retail units have closed than opened. [1]

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Newport, South Wales, has one of the highest percentages of vacant city centre retail units in the UK.

Total number of retail units in Newport city centre	Number of vacant retail units in Newport city centre
507	138

Source: Local Data Company

(ii) Calculate the percentage of vacant retail units in Newport to one decimal place. Show your working. [2]

Answer



(iii) Give **two** reasons why many people prefer to shop in out of town retail parks than in town centre high streets. [4]

Reason 1

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Reason 2

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(c) (i) What is a brownfield site? [2]

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(ii) Give **two** reasons why brownfield sites are often preferred to greenfield sites for new developments. [4]

Reason 1

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Reason 2

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(iii) Study the **Resource Box** below.

Resource Box

In recent years, the dockland area of Bristol has undergone major change.

The development of Bristol Docks has created a commercial environment of café bars, restaurants, shops and other tourist and leisure facilities generating over 3 000 new jobs in a previously run-down part of the city. There are also sports facilities, an industrial museum and a maritime heritage museum.

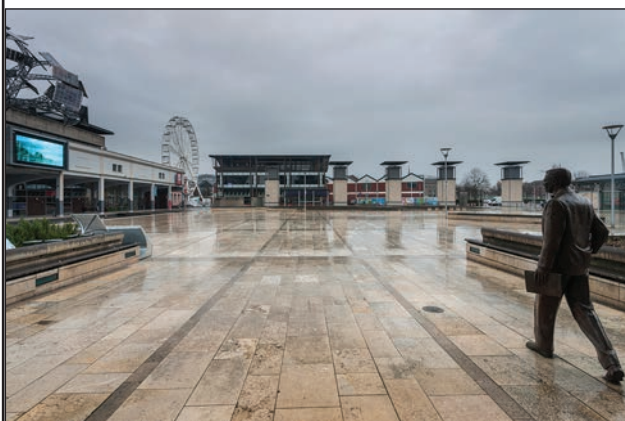
Part of Bristol Docks before redevelopment



Bristol Docks Waterfront



Millennium Square, Bristol Docks



New housing development in Bristol Docks



To what extent do you agree that sites such as Bristol Docks have been developed sustainably?

Use the **Resource Box** and **Egan’s Wheel** to support your answer. You may also refer to examples you have studied. [8]

The accuracy of your writing will be assessed in your answer to this question. [3]

Egan’s Wheel



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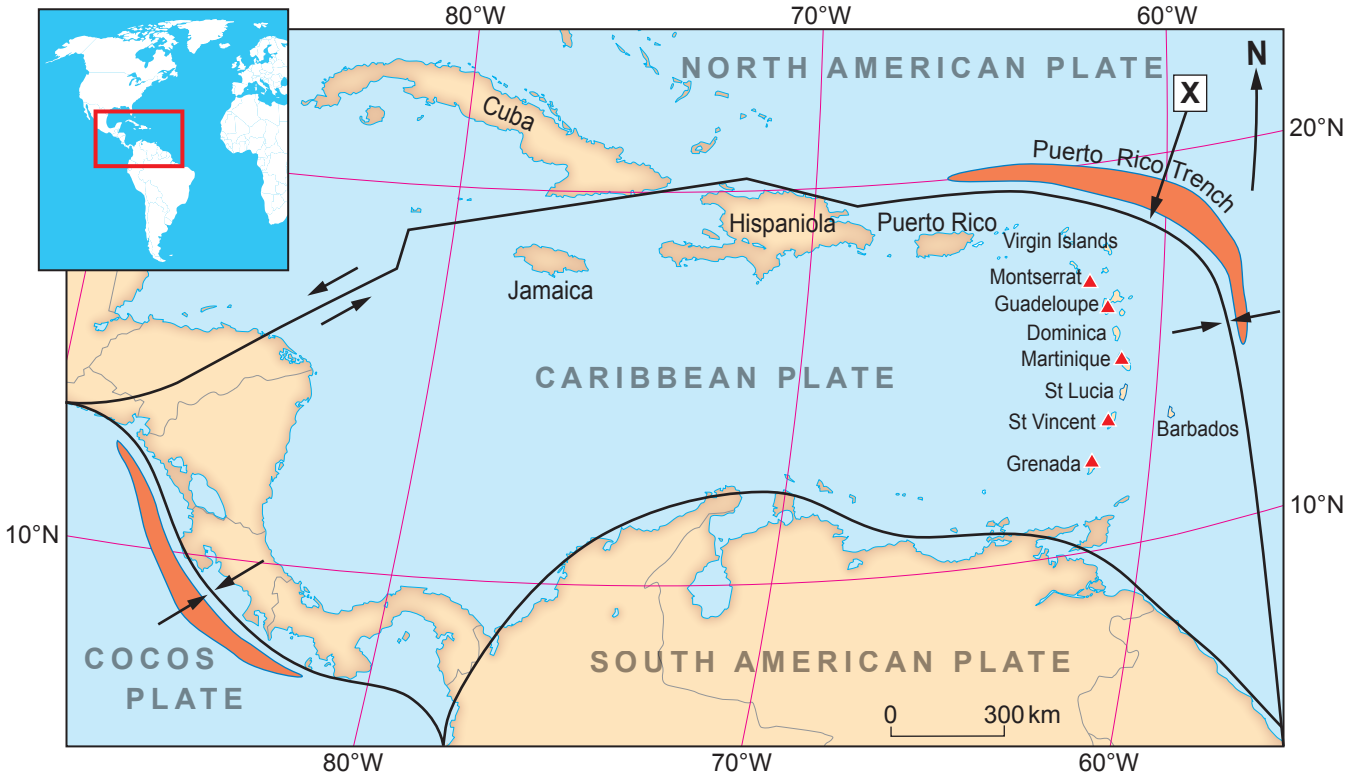
SECTION B – OPTIONS

Answer one question in this section, either Question 3 or Question 4

THEME 3: Tectonic Landscapes and Hazards

3. (a) Study the map below.

Plate boundaries in the Caribbean region



Key:

- ▲ Active volcanoes
- Trench
- Plate boundary
- ↗ Direction of plate movement

(i) Give the name of **one** active volcanic island shown on the map. [1]

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(ii) Complete the box below to give the latitude and longitude of Puerto Rico. [2]

	Latitude	Longitude
Puerto Rico	18°° West



(iii) Complete the following paragraph choosing your answers from the box below. [4]

- | | | | |
|-------------|-----------------|------------|--------------|
| mantle | rift valleys | core | constructive |
| subduction | conservative | convection | divergence |
| destructive | stratovolcanoes | crust | hot spots |

The Earth's is made up of segments called plates which move relative to each other. At **X**, the Caribbean Plate is colliding with the North American Plate. This is called a plate margin where the process of leads to one plate sinking underneath the other and melting. Landforms like are often formed at this type of boundary.

(iv) Explain why ocean trenches are formed where two plates collide. You may use a diagram to help your answer. [4]

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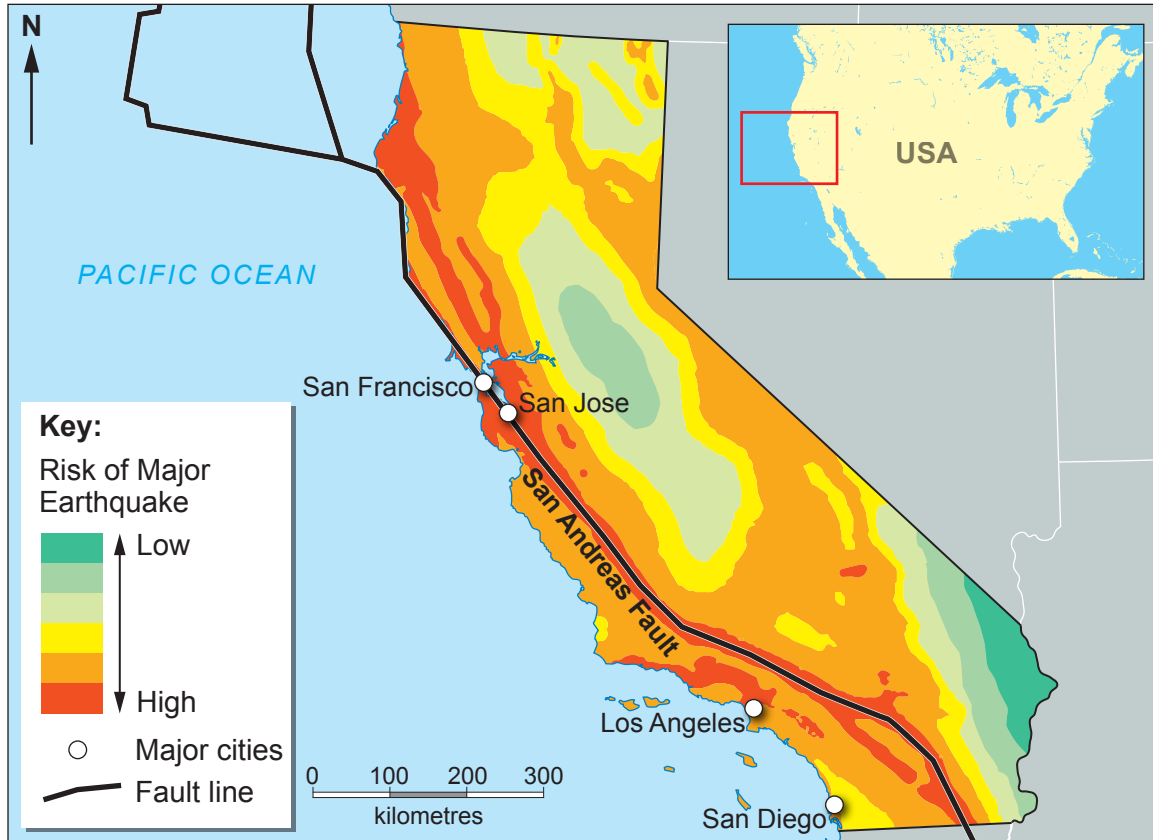
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(b) Study the map below.

Earthquake Hazard Risk in California, USA



(i) Describe the pattern of high risk earthquakes in California. [3]

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(ii) Suggest **one** way this map might help planners in San Francisco to reduce the risks associated with earthquakes. [2]

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(iii) Explain why earthquakes can affect infrastructure in large cities.

[2]

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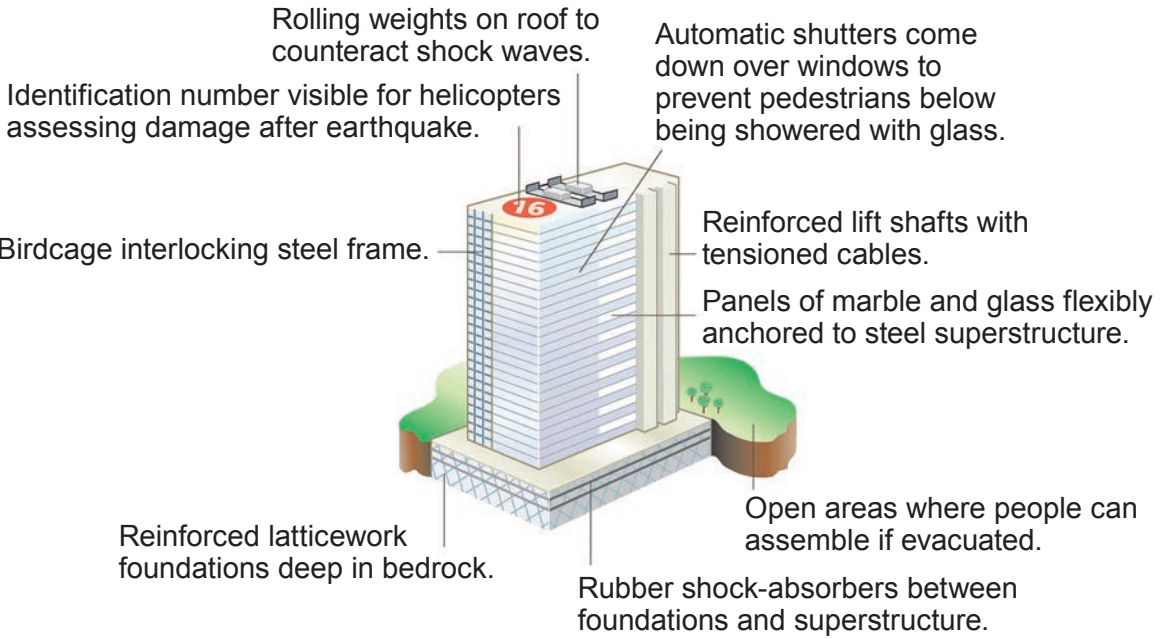
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(c) Study the resources below.

Earthquake Resistant Design



Earthquake Drill in California



Evaluate different strategies that can be used to protect people in different places that experience powerful earthquakes. [6]

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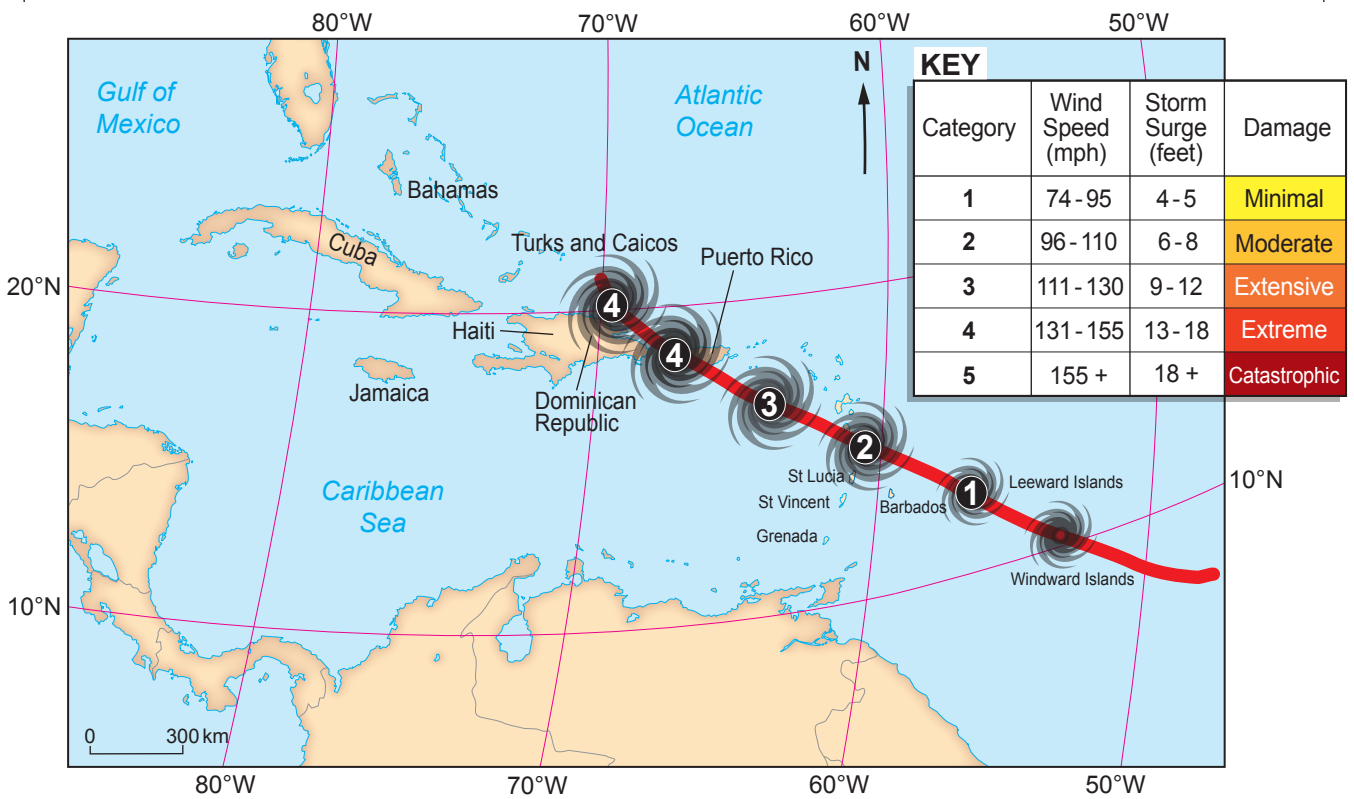
If you have answered Question 3 do not answer Question 4.

THEME 4: Coastal Hazards and their Management

4. (a) Study the information box and map below.

Hurricane Maria was a severe storm that affected parts of the Caribbean in September 2017. Hurricanes can cause severe flooding from storm surges, where the sea level is raised at the centre of the storm and when strong winds drive large waves onto the coast.

Hurricane Maria in the Caribbean, September 2017



(i) Give the name of **one** island affected by Hurricane Maria when it was at category 4. [1]

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(ii) Complete the box below to give the latitude and longitude of Puerto Rico. [2]

	Latitude	Longitude
Puerto Rico	18°° West



(iii) Complete the following paragraph choosing your answers from the box below. [4]

sparsely	geology	evenly	wealth
soils	education	relief	strength
health	densely	rainfall	direction

Severe weather events can pose a risk for people living in coastal environments. Physical factors that increase the risk can include the low-lying of many coastal areas which means they can be easily flooded.

Another physical factor is the and frequency of events.

Human factors include the number of people affected as coastal areas are often more populated and the of a country which determines whether it can afford to protect its people.

(iv) Explain why rising sea levels are likely to be a problem in the future for people who live in Small Island States. [4]

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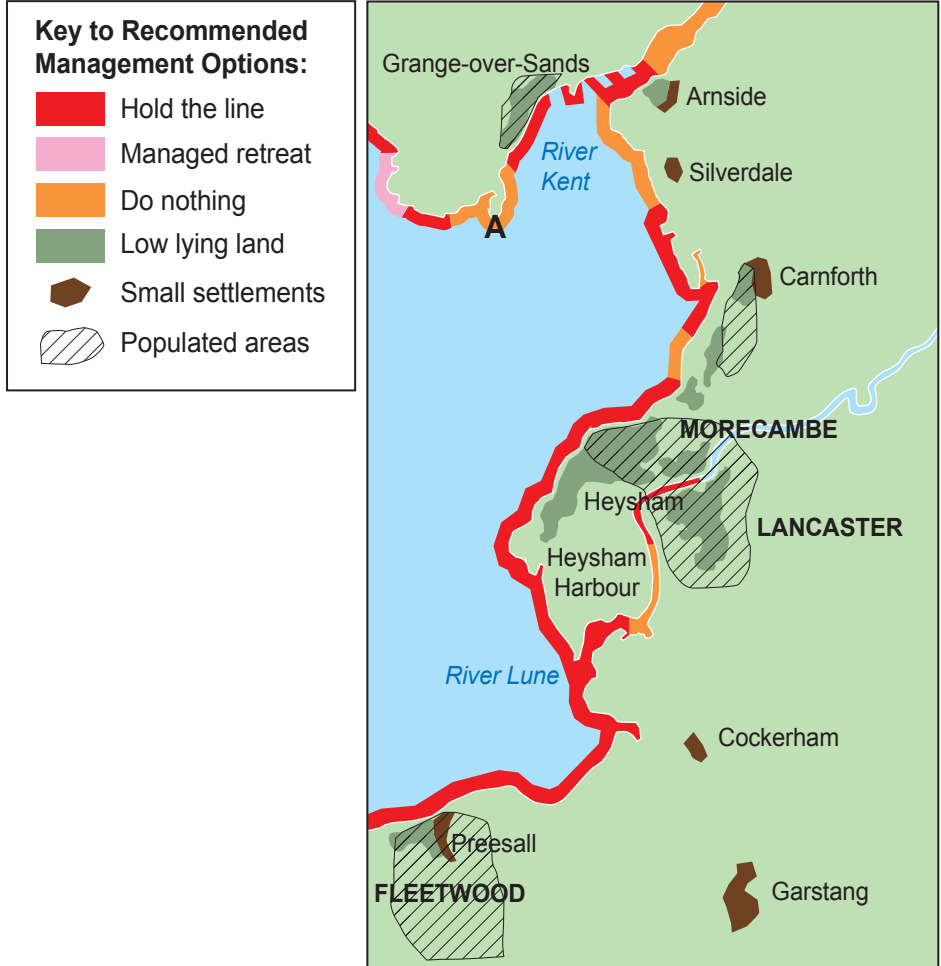
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(b) Study the map below.

Shoreline Management Plan, NW England



(i) Describe the distribution of areas where 'Hold the Line' is the planned option to manage this stretch of coastline. [3]

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(ii) Suggest **one** reason why the planned option is to 'Do Nothing' in the Area **A** in the north of the map. [2]

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(iii) The opinions of residents who live at the coast are often different to those of local councils about how the coastline should be managed.

Give **one** reason to explain this. [2]

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(c) Study the photographs below.

Soft Engineering, UK



Hard Engineering, UK



Evaluate different strategies that can be used to protect coastlines in the future.

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