Surname	Centre Number	Candidate Number
Other Names		0

GCSE

3110U10-1

S19-3110U10-1

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	

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01

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)***.

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(iv) Describe the process of longshore drift. [3]

(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]

Examiner only

(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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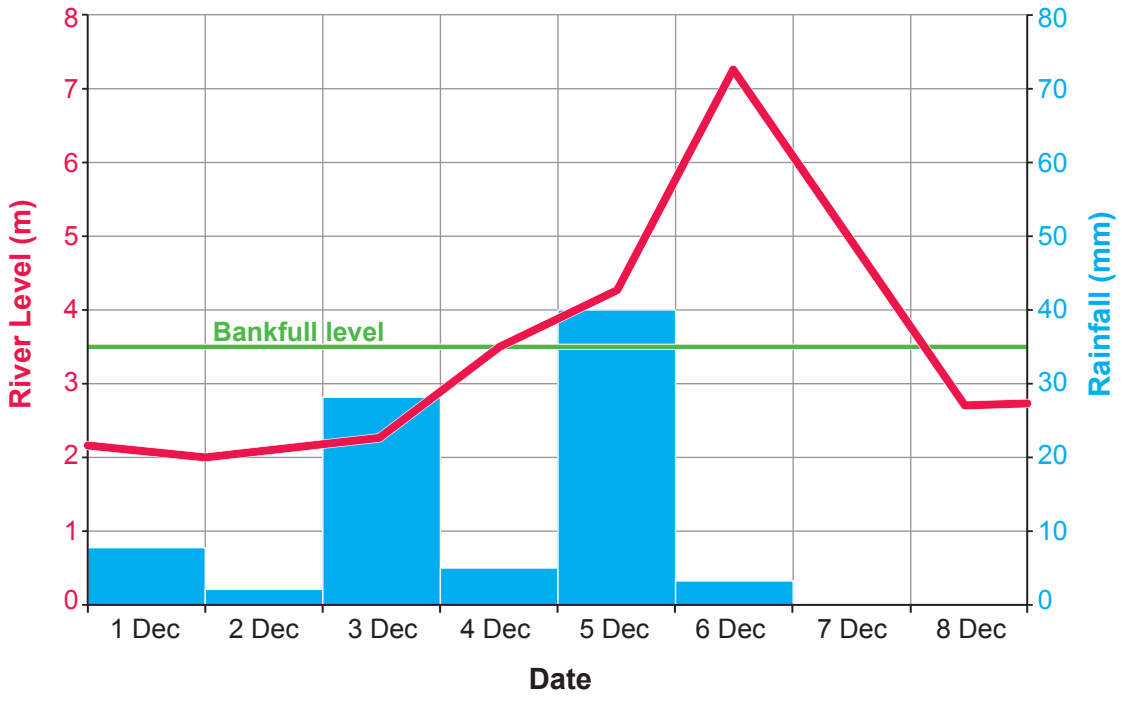
(c) Study the storm hydrograph below.

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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Examiner only

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

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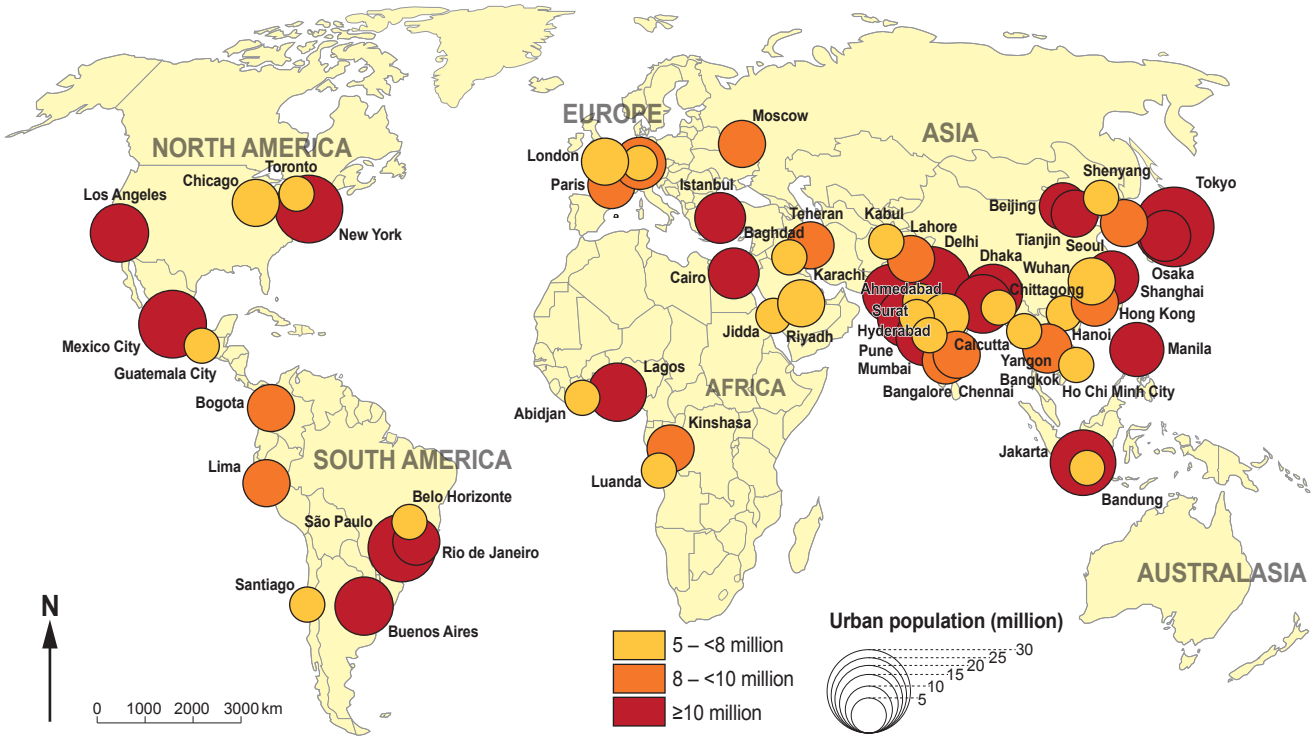
End of Question 1

Examiner only

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.	

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(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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Turn over.

Examiner only

(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

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

Vacant shops in Newport, Wales

(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 .....

Examiner only

(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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Turn over.

(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

Examiner only

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

Turn over.

Examiner only

End of Question 2

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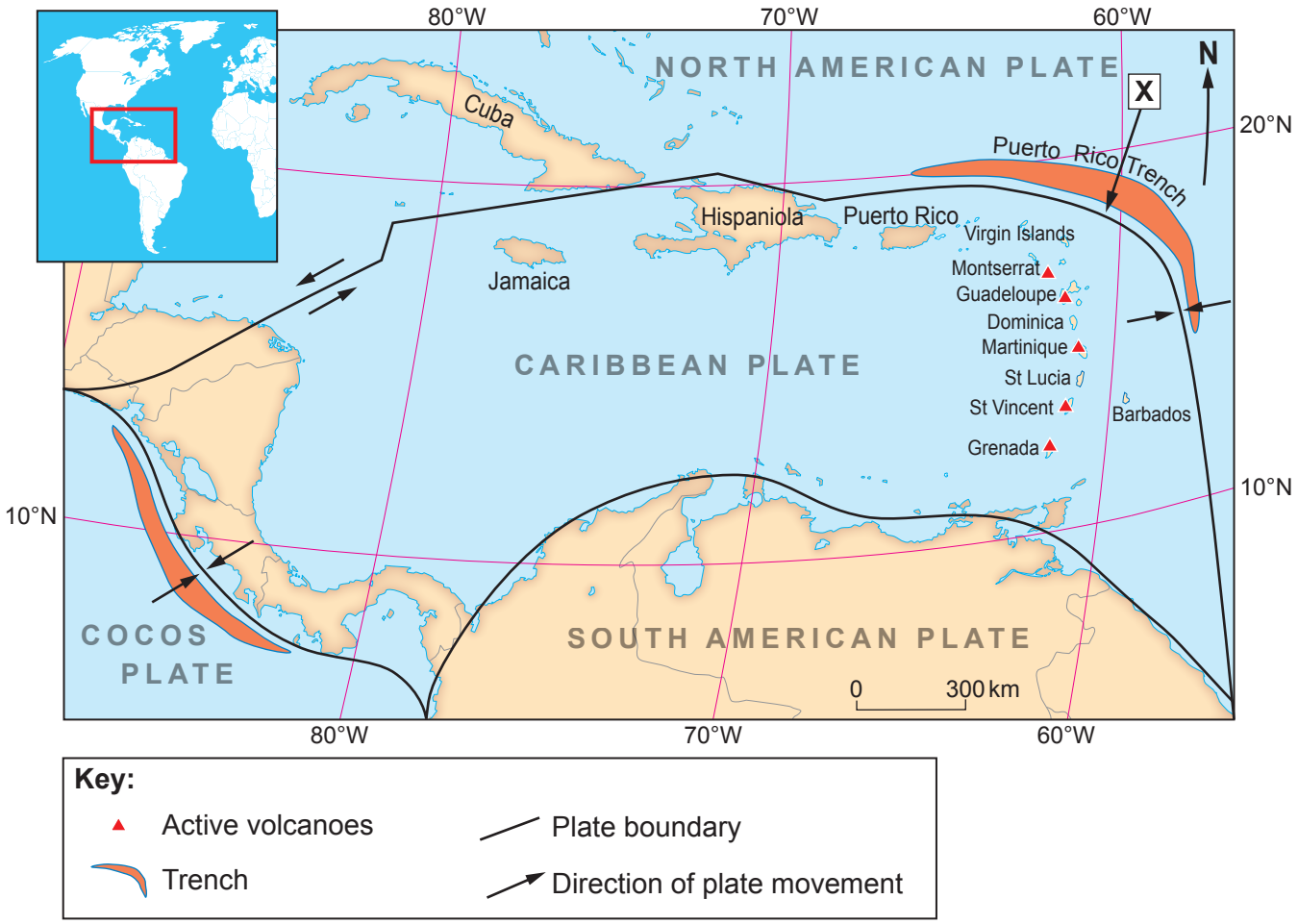
SECTION B – OPTIONS

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



(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

Examiner only

(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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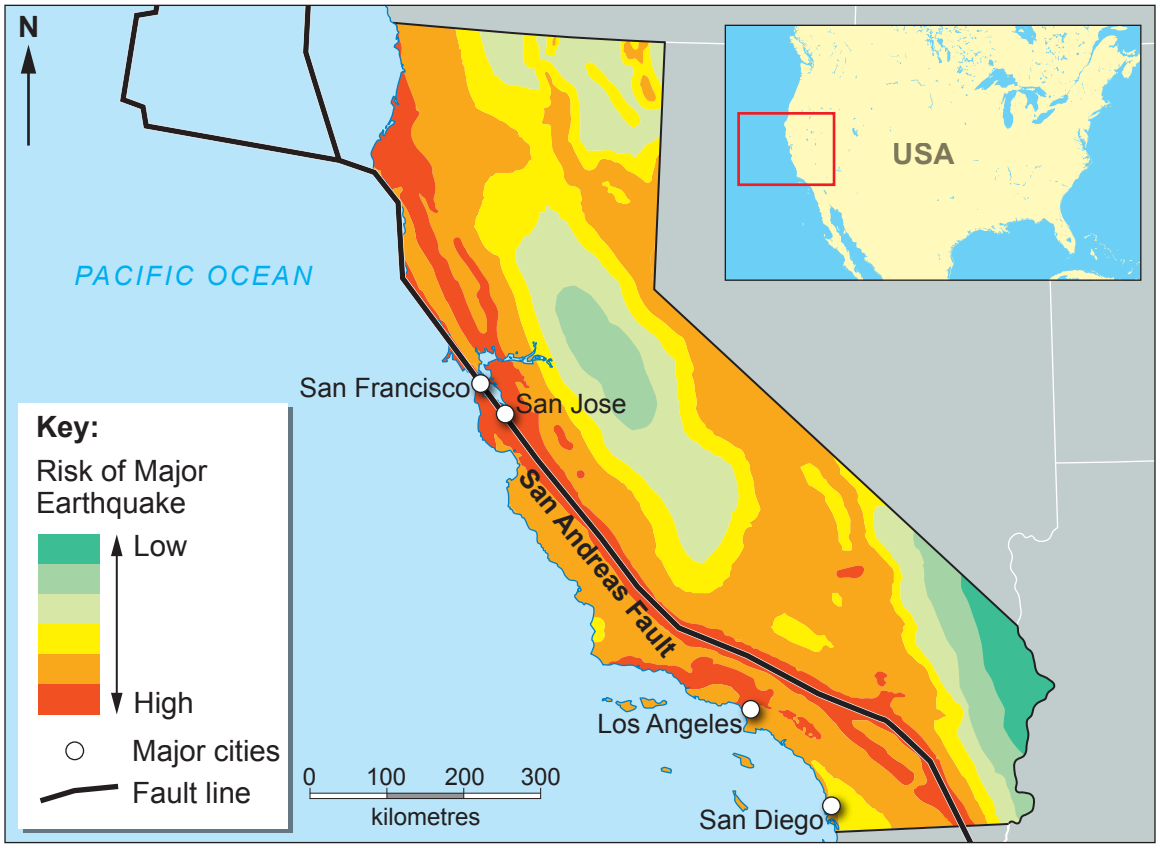
Examiner only

(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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Examiner only

(iii) Explain why earthquakes can affect infrastructure in large cities. [2]

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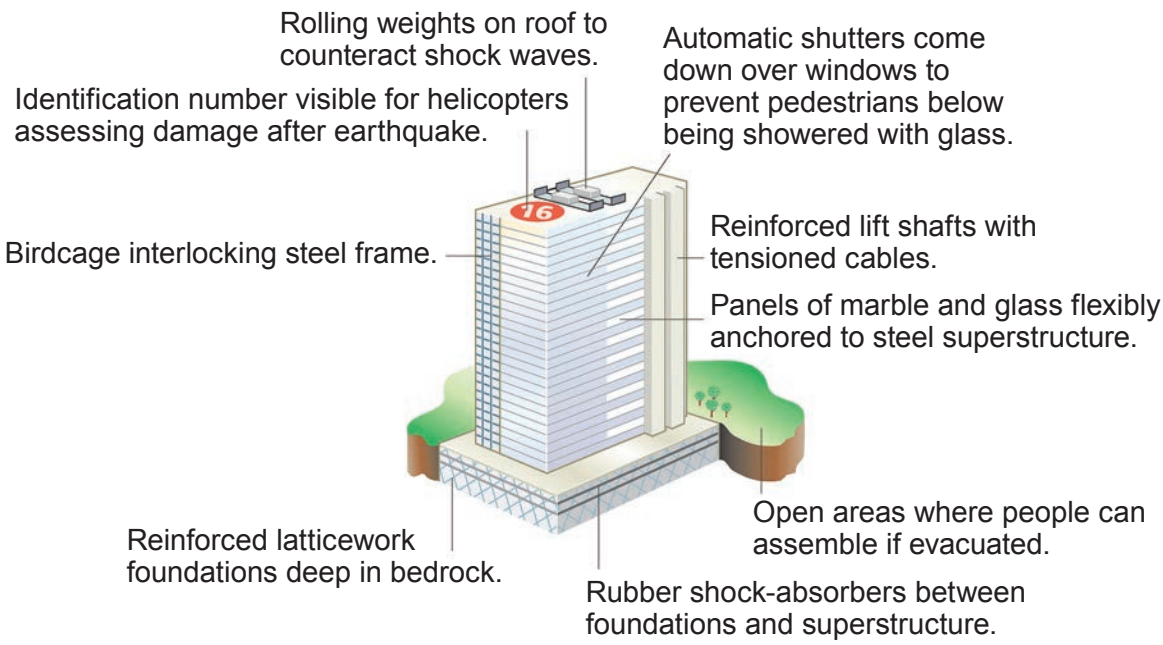
Examiner only

(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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Examiner only

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End of Question 3

Examiner only

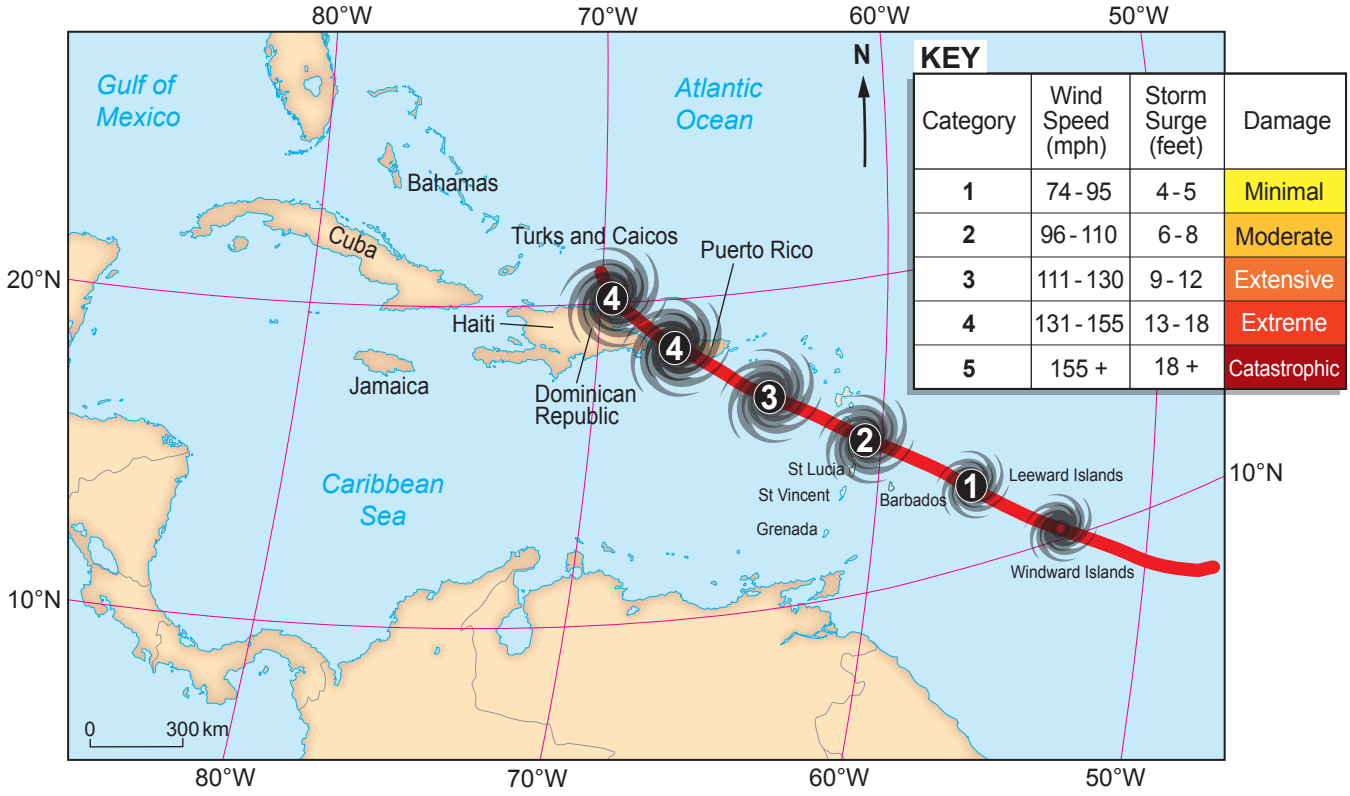
If you have answered Question 3 **do not** *answer Question 4.*

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]

.....

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

	Latitude	Longitude
Puerto Rico	18°	..... ° West

Examiner only

(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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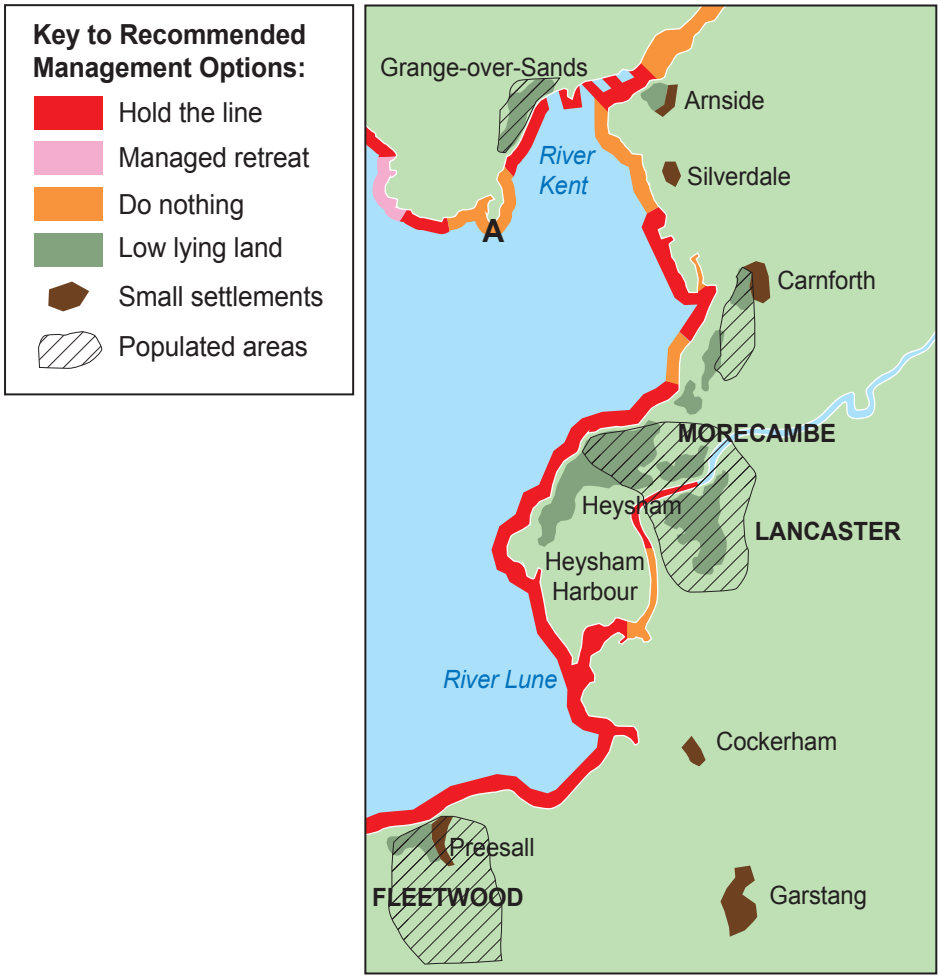
Examiner only

(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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Examiner only

(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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Examiner only

(c) Study the photographs below.

Soft Engineering, UK

Hard Engineering, UK

Evaluate different strategies that can be used to protect coastlines in the future. [6]

Examiner only

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End of Question 4

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Examiner only

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Explorer series (1:25 000 scale)

EXPLORER MAP SYMBOLS

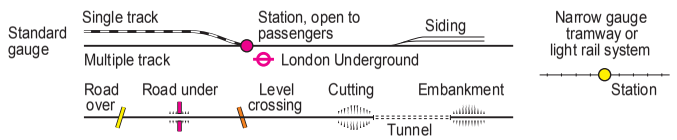
Ordnance Survey

ROADS AND PATHS — Not necessarily rights of way

M1 or A6(M) — Motorway
A 35 — Dual carriageway
A 30 — Main road
B 3074 — Secondary road
Narrow road with passing places
Road under construction
Road generally more than 4m wide
Road generally less than 4m wide
Other road, drive or track, fenced and unfenced
Gradient: steeper than 20% (1 in 5); 14% (1 in 7) to 20% (1 in 5)
Ferry — Ferry; Ferry P (passenger only)
Path

Service area
Service area
7 Junction number
T1 Toll road junction
London River Services

RAILWAYS



PUBLIC RIGHTS OF WAY — Not shown on maps of Scotland

Footpath
Bridleway
Byway open to all traffic
Road used as a public path

The representation on this map of any other road, track or path is no evidence of the existence of a right of way.

OTHER PUBLIC ACCESS

Other routes with public access (not normally shown in urban areas)
The exact nature of the rights on these routes and the existence of any restrictions may be checked with the local highway authority. Alignments are based on the best information available.
Recreational route (◇ alternative route)
National Trail
Traffic-free cycle route
National cycle network route number – traffic free; on road
Permissive footpath
Permissive bridleway
Footpaths and bridleways along which landowners have permitted public use but which are not rights of way. The agreement may be withdrawn.
DANGER AREA — Firing and test ranges in the area. Danger! Observe warning notices.
MANAGED ACCESS — Access permitted within managed controls, for example, local byelaws.

BOUNDARIES

National
County; England
Unitary Authority (UA), London Borough (LB), Metropolitan District (Met Dist) or District (Scotland & Wales are solely Unitary Authorities)
Civil Parish (CP); England or Community (C); Wales
National Park boundary

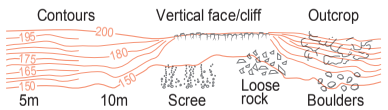
ARCHAEOLOGICAL AND HISTORICAL INFORMATION

Site of antiquity
1066 Site of battle (with date)
VILLA Roman
Castle Non-Roman
Visible earthwork

HEIGHTS AND NATURAL FEATURES

Water
Mud
Sand
Shingle
Survey height;
52· Ground
284· Air

The contour interval on Explorer maps are shown at 5m and/or 10m vertical interval, to provide the most detailed heighting available.



Surface heights are to the nearest metre above mean sea level. Where two heights are shown, the first is the height of the natural ground in the location of the triangulation pillar, and the second (in brackets) to a separate point which is the highest natural summit.

VEGETATION — Limits of vegetation are defined by positioning of symbols

Coniferous trees
Non-coniferous trees
Coppice
Orchard
Scrub
Bracken, heath or rough grassland
Marsh, reeds or saltings

ACCESS LAND (England and Wales)

Access information point
Access land
Access land in wooded area
within sand
Coastal margin

Access land portrayed on this map is intended as a guide to land normally available for access on foot, for example access land created under the Countryside and Rights of Way Act 2000, and land managed by National Trust, Forestry Commission, Woodland Trust and Natural Resources Wales. Some restrictions will apply; some land shown as access land may not have open access rights; always refer to local signage.

The depiction of rights of access does not imply or express any warranty as to its accuracy or completeness. Observe local signs and follow the Countryside Code. Visit: gov.uk/government/publications/the-countryside-code

GENERAL FEATURES

Gravel pit
Sand pit
Other pit or quarry
Landfill site or slag/spoil heap
pylon pole Electricity transmission line
Solar farm
Slopes
Place of worship
Current or former place of worship; with tower; with spire, minaret or dome
Triangulation pillar
Mast
Windmill with or without sails
Wind pump
Wind turbine
Building; important building
Glasshouse
Youth hostel
Bunkhouse, camping barn or other hostel
Bus or coach station
Lighthouse; disused lighthouse
Beacon

ABBREVIATIONS — See website for full list

BP	Boundary post	Liby	Library	Pol Sta	Police station
BS	Boundary stone	Mkt	Market	Resr	Reservoir
CH	Clubhouse	Meml	Memorial	Sch	School
F Sta	Fire Station	MP; MS	Milepost; Milestone	TH	Town hall
FB	Footbridge	Mon	Monument	NTL	Normal tidal limit
Ind Est	Industrial Estate	PO	Post office	W; Spr	Well; spring

TOURIST AND LEISURE INFORMATION

Art gallery (notable / important)
Boat hire
Boat trips
Building of historic interest
Cadw
Camp site
Camping and caravan site
Caravan site
Castle or fort
Cathedral or Abbey
Country park
Craft centre
Cycle hire
Cycle trail
English Heritage
Fishing
Forestry Commission visitor centre
Garden or arboretum
Golf course or links
Heritage centre
Historic Scotland
Horse riding
Information centre
Information centre, seasonal
Mountain bike trail
Museum
National Trust
Nature reserve
Other tourist feature
Parking
P&R Park and ride, all year
P&R Park and ride, seasonal
Phone; public, emergency, roadside assistance
Picnic site
Preserved railway
Public house(s)
PC Public toilets
Recreation, leisure or sports centre
Slipway
Theme or pleasure park
Viewpoint
Visitor centre
Walks or trails
Water activities
Water activities (board)
Water activities (paddle)
Water activities (powered)
Water activities (sailing)
Watersports centre (multi-activity)
World Heritage site / area

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GCSE

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S19-3110U10-1A

GEOGRAPHY

Unit 1 – Changing Physical and Human Landscapes

TUESDAY, 21 MAY 2019 – AFTERNOON

RESOURCE FOLDER

This folder is for use with questions in Unit 1.
This folder need not be handed in with your answer booklet.

Ordnance Survey Explorer sheet 254 (1:25 000), Lleyn Peninsula East

OS Map extract of an area of coastline around Pwllheli, North Wales