



**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 | <i>Either 3</i> | 16 | |
| | <i>Or 4</i> | 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

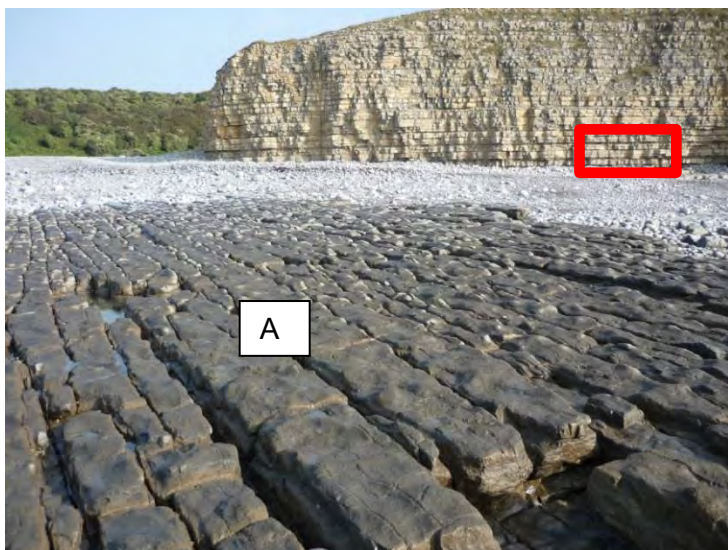
Answer **all** of the questions in this section.

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

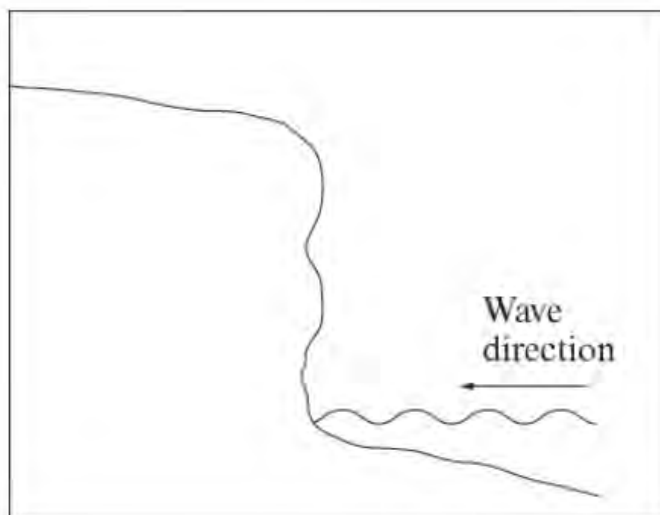


Diagram 1.4



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- (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]

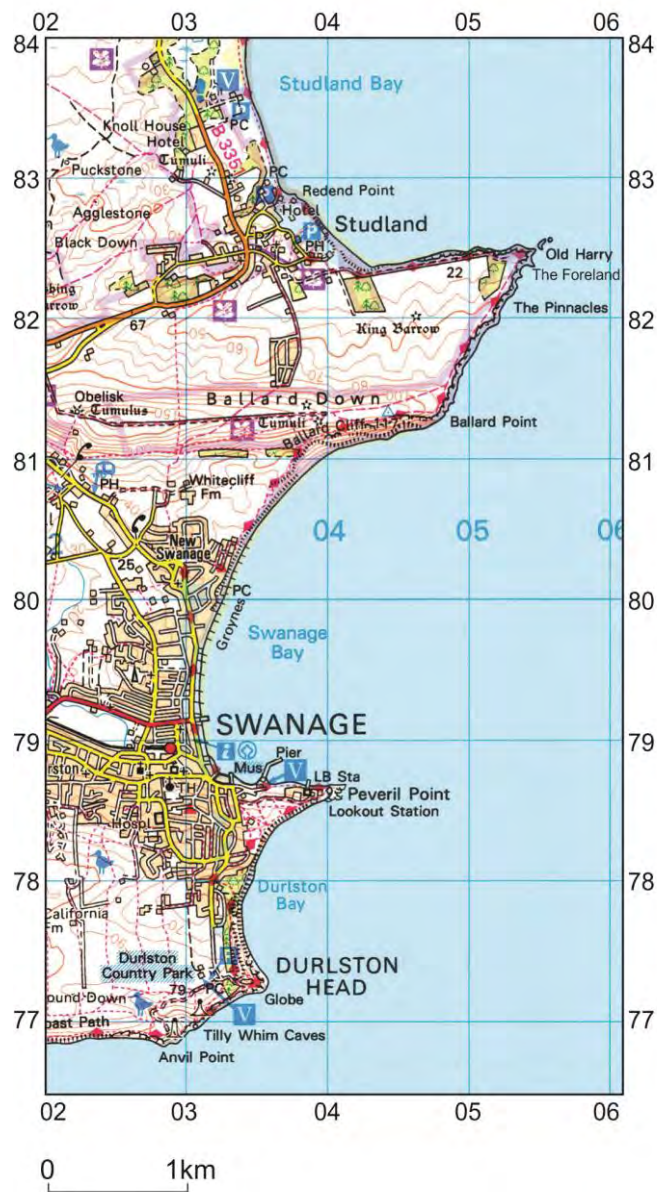
Frequency is months

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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



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- (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

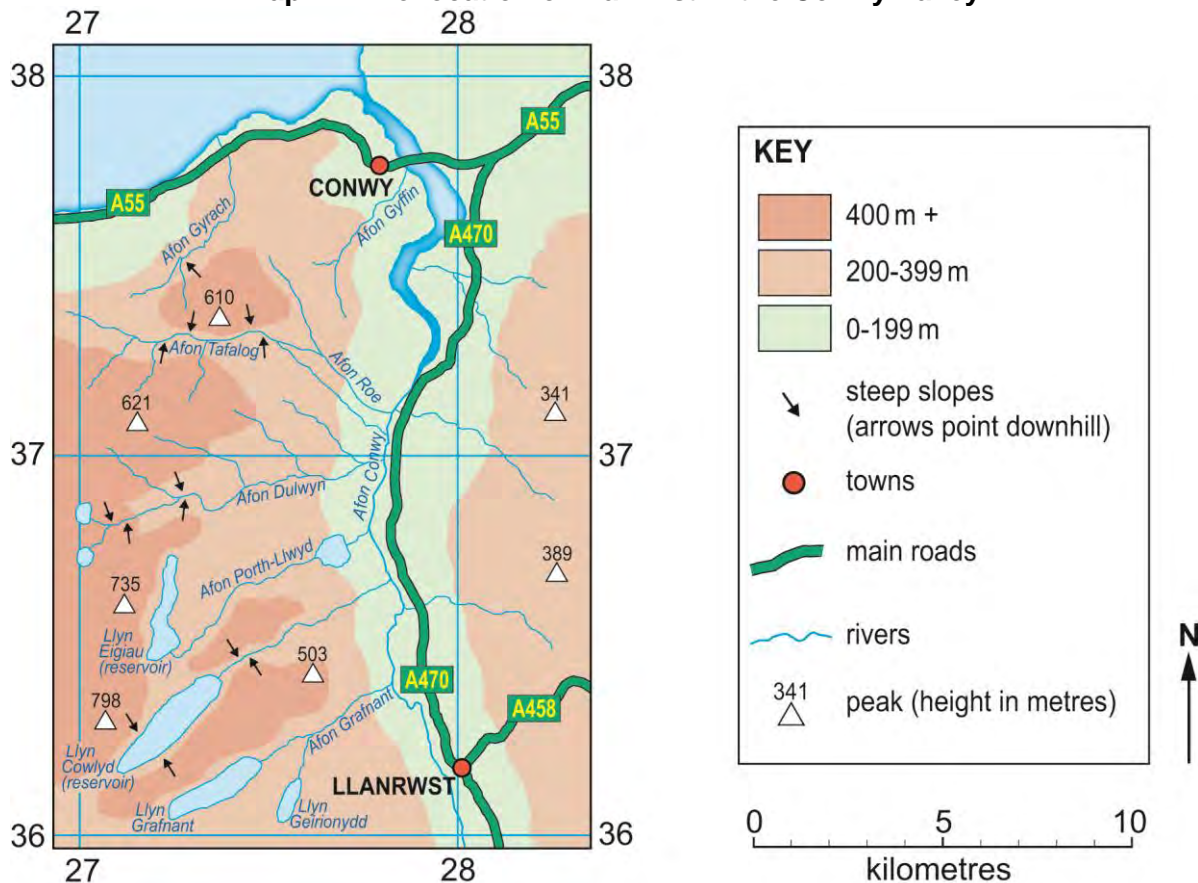
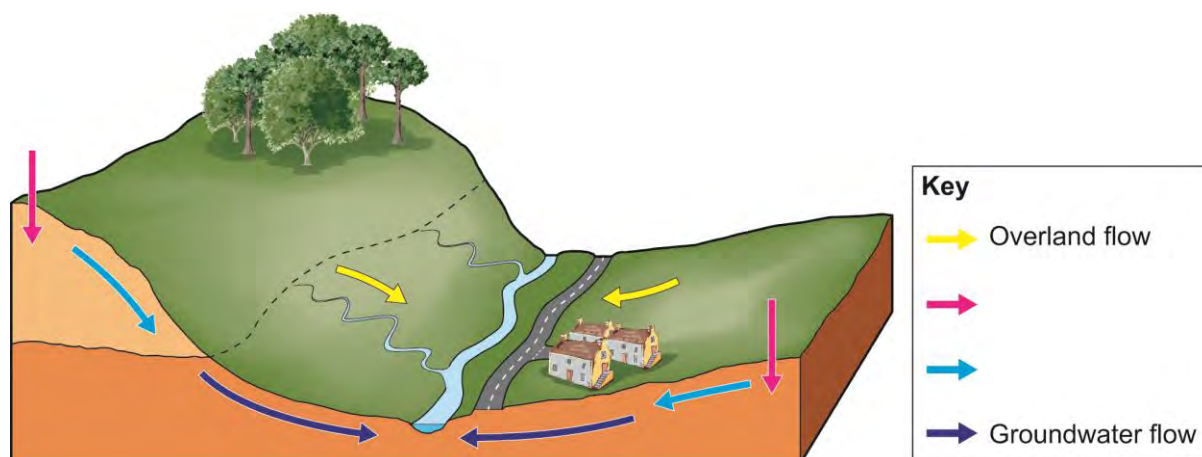


Diagram 1.8 Movement of water in the Conwy Valley



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 Llanrwst than human factors’.
Explain your reasons. [8]

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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]

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- (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]

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(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.

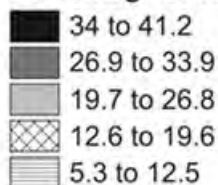
Screen shot 2.2
Population aged 65 and over (2000)



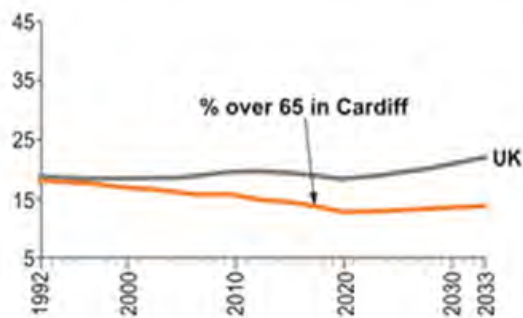
Screen shot 2.3
Population aged 65 and over (2030)



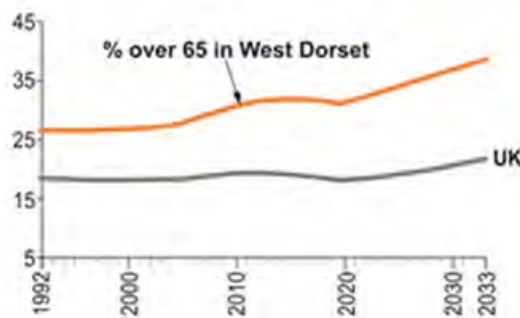
Percentage of total population



Screen shot 2.4
Population aged 65 and over, Cardiff (1992-2033)



Screen shot 2.5
Population aged 65 and over, West Dorset (1992-2033)



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