



**GCSE**  
**GEOGRAPHY B**  
**COMPONENT 2**  
**PROBLEM SOLVING GEOGRAPHY**  
**SAMPLE ASSESSMENT MATERIALS**  
**1 hour 30 minutes**



For examiner's use only			SPaG
Part A	32		0
Part B	28		0
Part C	12		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 will be assessed in your answer to Part C.

Bauchi state is located in Nigeria. The environment here suffers from desertification.

<b>Part A:</b>	provides background information about Bauchi state. Details about the climate and the causes of desertification are included.	32 marks
<b>Part B:</b>	considers three options for solving desertification in Bauchi state.	28 marks
<b>Part C:</b>	asks you to advise the national government of Nigeria on the order in which the three options should be carried out to reduce desertification in Bauchi state.	16 marks
<b>Total</b>		<b>76 marks</b>

### Part A

You are advised to spend **about 30 minutes** on this part.

*This part provides you with background information about Bauchi state. Details about the climate and the causes of desertification are included.*

- (a) Study the maps on **page 2** of the separate Resource Folder.  
They show the location of Bauchi state, which is a region of Nigeria.

- (i) Name the continent in which Nigeria is located. [1]

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- (ii) Circle the correct answer in the sentence below:  
Bauchi state is in the *north-east* / *south-west* / *north-west* of Nigeria. [1]

- (iii) Give **two** more statements about the location of Bauchi state. [2]

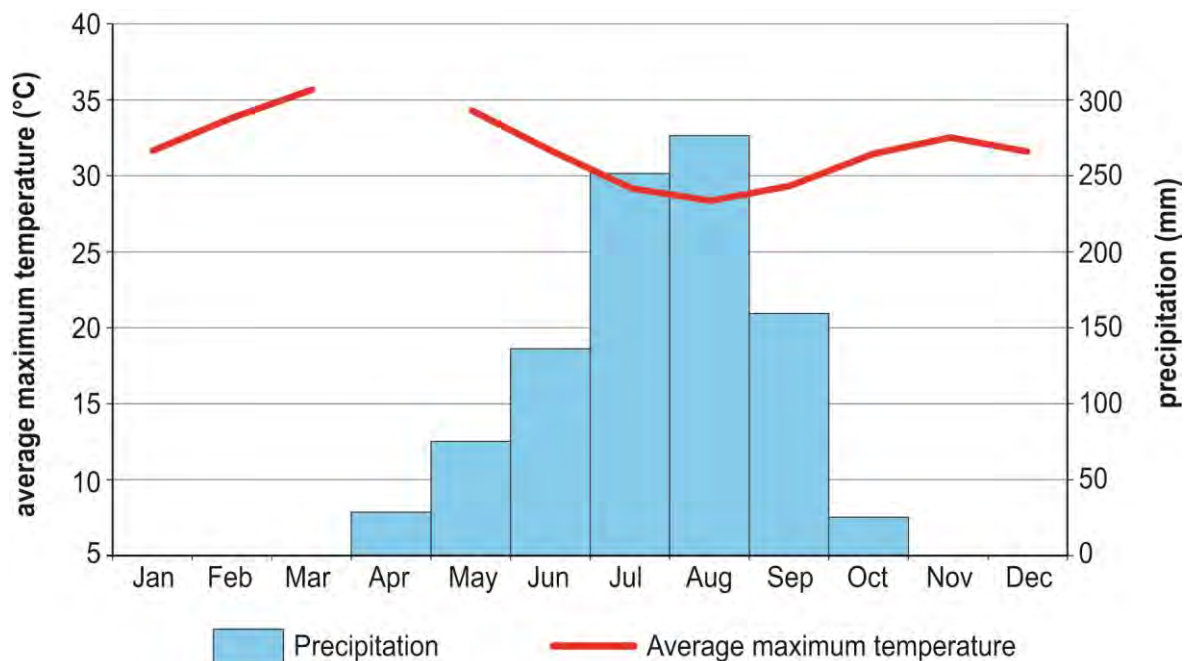
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- (b) Study Graph 1 below. It shows the hot semi-arid climate of Bauchi state.

**Graph 1 The hot semi-arid climate of Bauchi**



- (i) Complete graph 1 using the following information. [1]

The average maximum temperature in April	37° C
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- (ii) Use information from graph 1 to complete the statements below: [4]

The highest monthly precipitation is .....mm in August.

The lowest monthly temperature is 28°C in the month of.....

The temperature range is .....

There is a dry season from .....to.....

- (iii) Contrast this hot semi-arid climate with the climate of the UK. Identify **four** differences. [4]

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- (c) Desertification is a problem in Bauchi state. The main causes are climate change, deforestation and farming methods used by some farmers.

- (i) Tick (✓) the correct meaning of desertification in the table below: [1]

	✓
The process by which desert becomes fertile land	
The process by which fertile land becomes even more fertile	
The process by which fertile land turns into desert	

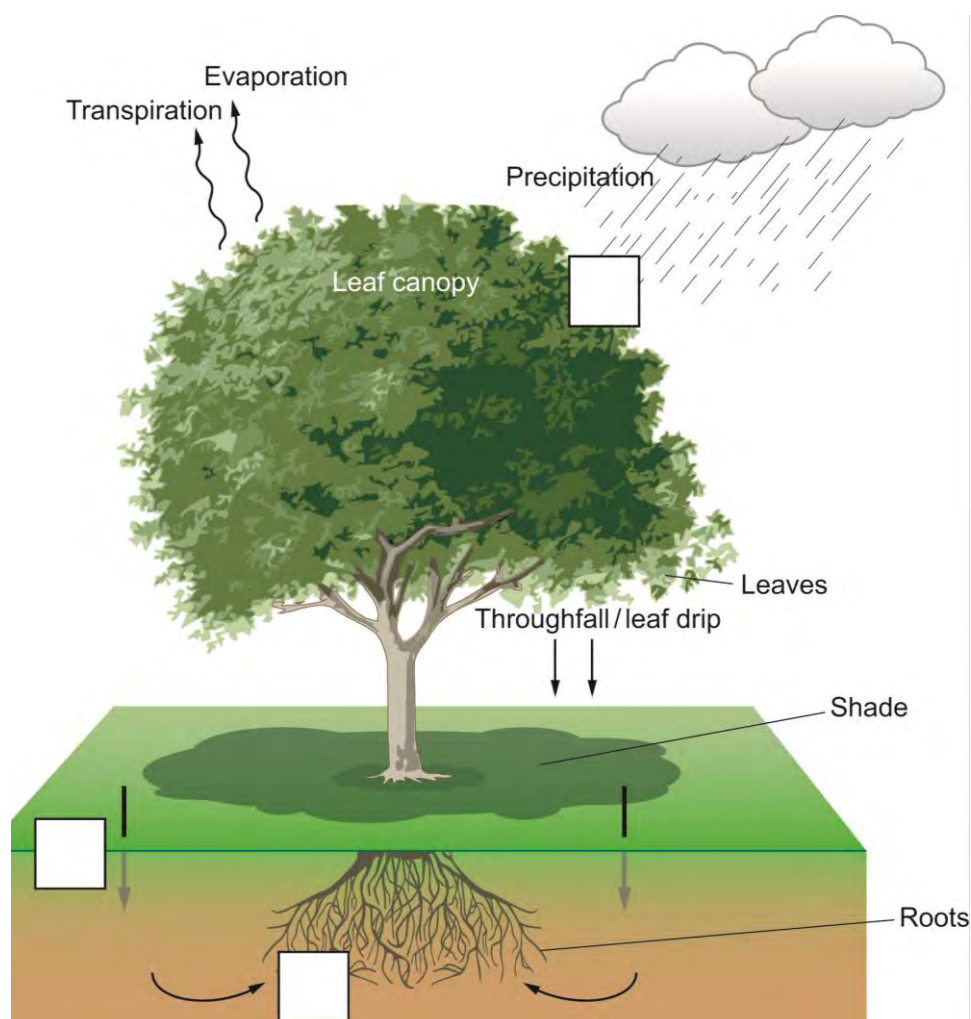
- (ii) Some scientists think that the burning of fossil fuels is making drought in Bauchi state worse. Use words from the box below to complete the sentences that follow. [4]

uranium	wetter	greenhouse gases	oil	ash	timber	radiation
greenhouse effect		nitrogen oxides	drier	global cooling		colder

Fossil fuels such as ..... are burnt in power stations in countries around the world. This adds ..... to the atmosphere which trap heat from the sun, a process known as the ..... This leads to climate change, which may increase drought in Bauchi state as the climate there becomes hotter and .....

- (d) Desertification can also occur when trees are removed (deforestation). Study Diagram 2 below.

**Diagram 2**



- (i) Place each letter for the following processes in its correct box on Diagram 2. One box will remain empty. [2]

(A) Interception (B) Infiltration

- (ii) Explain why deforestation damages soils. [3]

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- (e) Study the diagram on **page 3** of the separate Resource Folder. It shows some activities in Bauchi state that can lead to desertification.

Choose **two** of these activities. For each activity explain why it may lead to desertification. [4]

Activity 1 \_\_\_\_\_

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Activity 2 \_\_\_\_\_

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- (f) Bauchi is one of the poorest parts of Nigeria. Daily life for many people is always very challenging. Study the data in Table 3 below.

**Table 3 Selected development indicators**

Development indicators	Bauchi State	Nigeria
The % of adults unable to read or write (illiterate)	62	46
The % of people who use unsafe drinking water	65	51
The % of people who suffer from food poverty	54	41

- (i) Identify the patterns shown by the data in Table 3. [2]

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- (ii) Suggest how desertification may make the daily lives of people who live in Bauchi state even more challenging.  
Use information from Table 3. [3]

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**End of Part A**

**Part B**

You are advised to spend **about 35 minutes** on this part.

In this part you will consider three options for solving desertification in Bauchi state.

**Option 1: A solution at an international scale - the Great Green Wall**

- (a) Study the map and information on **page 4** of the separate Resource Folder.

- (i) Give the length (between X and Y) and the mean width of the Great Green Wall. [2]

Length between X and Y: .....

Mean width: .....

- (ii) Explain why planting trees and shrubs may help prevent desertification. [3]

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- (iii) Desertification is an international problem. Explain why it may be difficult for the Great Green Wall to solve the problem in this region of Africa. Use information in the Resource Folder. [2]

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**Option 2: A solution at a large scale - the proposal to build the Kafin Zaki Dam**

- (b) Study the diagram and photograph on **page 5** of the separate Resource Folder. If it is built, the Kafin Zaki Dam will create a large reservoir.

- (i) Explain why building a dam may help reduce the local effects of desertification. [4]

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- (ii) The dam would have different effects on villages A, B and C. Which village would benefit most from the dam and why? [4]

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- (iii) Give **one** reason why large scale water projects are controversial. [3]

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**Option 3: A solution at a small scale - a proposal to fund a number of self-help projects for farmers**

- (c) Study the photograph and information on **page 6** of the separate Resource Folder. It shows a drip irrigation system that has been funded by a Non-Governmental Organisation (NGO). A number of small schemes like this have been set up in Bauchi state.

- (i) Explain why drip irrigation is used in hot semi-arid climates. [3]

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- (ii) Make use of information on **page 6** of the separate Resource Folder to suggest the long term benefits for local farmers of **this** project. [3]

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- (iii) Explain why there are disadvantages to relying on a number of small scale self-help projects to solve the problem of desertification. [4]

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**End of Part B**

### Part C

*You are advised to spend about **25 minutes** on this part.*

*This part asks you to advise the national government of Nigeria on the order in which the three options should be carried out to reduce desertification in Bauchi state.*

The three options are:

Option 1: a proposal to extend the Great Green Wall

Option 2: a proposal to build the Kafin Zaki Dam

Option 3: a proposal to fund a number of self-help projects for farmers

Write a letter to the government of Nigeria in which you advise on the order in which the three options should be carried out to reduce desertification in Bauchi state.

In your letter you should:

- rank the options in the order that you consider they should be carried out
- justify your decision. You should take into account the social, economic and environmental sustainability of the options.

The Factfile on **page 7** of the separate Resource Folder gives further information about the three options.

Make use of the Factfile and information from other parts of this paper to help your answer.

You may plan your letter on the blank page that follows. You may use this space to organise your ideas.

**Blank page for your planning:**

To the government of Nigeria,

I am advising you to carry out the options in the following order:

In the box below, state the order in which you think they should be carried out.

Order	Option
	Extend the Great Green Wall
	Build the Kafin Zaki dam
	Fund a number of self-help projects for farmers

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

(4 marks)

I have decided on this order because

[12 + 4]

[illegible]



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**End of Part C**

**END OF PAPER**