

METHODIST GIRLS' SCHOOL

Founded in 1887



PRELIMINARY EXAMINATION 2025 Secondary 4

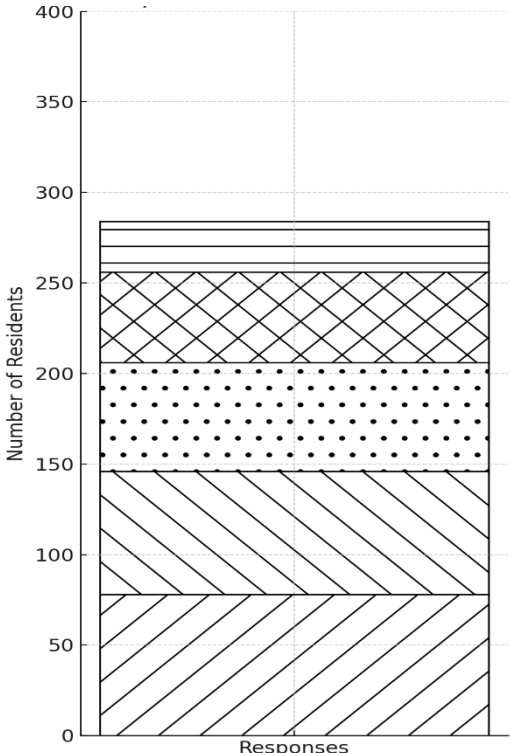
GEOGRAPHY Paper 1

Monday
18 August 2025

2279/01
1 hour 45 minutes

MARK SCHEME

Answer **all** questions.

1	Cluster 1: Geography in Everyday Life
	Bath is a UNESCO World Heritage Site located in southwest England, known for its Roman Baths, Georgian architecture, and historic city centre. The Roman Baths are a well-preserved ancient bathing complex in, built by the Romans over natural hot springs for bathing, worship, and socialising. The city of Bath attracts millions of tourists each year. Study Fig. 1.1 (Insert) which shows a map of the city of Bath. A group of students in UK were interested in the effects of tourism on the city of Bath. Their hypothesis was: <i>The advantages of tourism are greater than the disadvantages.</i>
(a)	The students used a questionnaire to investigate the hypothesis which is shown in Fig. 1.2 (Insert). Study Fig. 1.3 (Insert), which shows the responses to Question 1 'What do you think are the main advantages of tourism in Bath?' and Question 2 'What do you think are the main disadvantages of tourism in Bath?'.
(i)	Using Fig 1.3, complete the bar graph below. [4] <i>Award 1m for each reason correctly plotted.</i>  AO2
(ii)	Using Figs. 1.3 and 1.4, what conclusions can you make about the hypothesis '<i>The advantages of tourism are greater than the disadvantages.</i>' [4] <i>Award 1 mark for each conclusion, to a maximum of 4 marks.</i> <i>Award a maximum of 1 additional mark for further development of each conclusion where applicable.</i>

		• The hypothesis valid/accepted/supported (compulsory 1m) • The most frequently mentioned advantages include job creation (125 responses) and income opportunities for businesses (115), which are higher than any of the disadvantages • In contrast, the most common disadvantage (litter) was mentioned by only 78 residents, which is significantly lower. • Other negative impacts like noise (68), traffic (60), and high prices (50) were mentioned less frequently than the top advantages. • Additionally, cultural and economic benefits such as building preservation and market opportunities also highlight positive long-term impacts. AO2
	(iii)	Study Fig. 1.5 (Insert) which shows the three locations – A, B and C – where the students administered the questionnaire. With reference to Figs. 1.1 and 1.5, evaluate the appropriateness of the three locations chosen to administer the questionnaire. [6] <i>Award 1 mark for each evaluation of the suitability of locations, to a maximum of 6 marks.</i> <i>Award 1 maximum of 1 additional mark for further development of each evaluation, where applicable.</i> Possible responses include: <u>Appropriate:</u> • A - The Circus is close to Royal Crescent, a major tourist attraction, hence there is a high volume of tourist traffic. It is a scenic area where tourists often stop to take photos or rest, making it convenient for students to approach them for surveys. • B - Bath Abbey/Roman Baths is the historic and commercial heart of the city, with constant pedestrian traffic throughout the day. As it is the most popular tourist site in Bath, students are likely to encounter a high number of tourists and local workers in the tourism industry. • These 2 locations are accessible and safe. Being in pedestrian-friendly zones with open spaces, The Circus and the area near the Abbey allow students to conduct surveys without obstructing traffic or putting themselves at risk. • Because of their central location, students can approach a diverse pool of respondents —tourists, shopkeepers, street performers, and residents—which strengthens the validity of the results and helps avoid sampling bias. <u>Not appropriate:</u> • C- Pulteney Road is away from the central tourist circuit and is likely to have more vehicles than pedestrian traffic. It may be difficult to find respondents willing to stop and answer a questionnaire here, reducing the effectiveness and safety of data collection. • Pulteney Road may present safety issues as it lacks adequate pedestrian space and resting areas, making it challenging for students to approach people without causing disruptions or putting themselves in potentially dangerous situations. AO3

		(iv) Outline one sampling method that may be used to select 130 respondents for the questionnaire.[2] Award 1 mark for method and 1 mark for description • Simple Random: Every member of the population is assigned a number. A random number generator is then used to generate random numbers. • Stratified Random: Identify different sub-group such as age and gender. random number generator is then used to generate random numbers for each sub-group. • Convenience: Selecting samples that are convenient and accessible to the researcher. • Quota: Identify different categories such as age and gender. Samples are selected based on convenience and easy access. AO2
	(b)	Traffic congestion was identified as a disadvantage of tourism. The students then investigated how the amount of traffic was greater in summer than in winter because of tourism. The students did a traffic survey at two locations where there was high foot and vehicular traffic. Data in summer was by the students, and used data collected by another group of geography students the previous winter for comparison.
	(i)	Identify the type of data used by these students but not collected by them. [1] • Secondary data AO2
	(ii)	Suggest how the students could make sure that the traffic survey data which they collected was reliable. [3] <i>Award 1 mark for each suggestion, to a maximum of 3 marks.</i> <i>Award a maximum of 1 additional mark for further development of each suggestion where applicable.</i> • Collect data over a longer period of time, including different days of the week and both peak and off-peak hours, to improve accuracy and account for daily variation • Use digital tools like traffic counting apps or video recordings to reduce human error and improve the reliability of their observations. • Conduct more surveys in additional locations around Bath to ensure the results are representative of the whole city centre, not just one or two areas. AO2

[Total: 20]

2	Cluster 2: Tourism		
	(a)	Study Fig. 2.1 (Insert), which shows reasons for the growth in tourism.	
		(i)	With reference to Fig. 2.1, explain why global tourism has grown rapidly in recent decades. [4] <i>Award 1 mark for each explanation, to a maximum of 4 marks.</i> <i>Award a maximum of 1 additional mark for further development of each explanation where applicable.</i> <u>Motivation to Travel</u> • The image shows a relaxed beach environment - suggests people travel for relaxation and self-fulfillment. • Tourists exploring a landmark site, indicating the desire for unique experiences and cultural exploration. <u>Ability to Travel</u> • Presence of an airport scene implies that air travel is accessible, probably due to lower transport and accommodation costs. • International connectivity shows that higher disposable incomes and more leisure time enable people to take flights abroad. <u>Mobility in Travel</u> • Airplane and airport infrastructure visible - indicates improvements in public and private transport, allowing mass tourism and travel to previously less reachable destinations. AO1
		(ii)	Suggest how trends in tourism have influenced the supply of new types of tourist destinations and experiences. [3] <i>Award 1 mark for each suggestion, to a maximum of 3 marks.</i> <i>Award a maximum of 1 additional mark for further development of each suggestion where applicable.</i> The growth in tourism has encouraged small specialist operators to offer niche experiences (e.g., adventure, eco-tours) alongside mass market packages, increasing the variety of destinations and experiences available [1 mark]. Small specialist operators offer services, activities and experiences that can be purchased independently. Tourists can customise their trips that suit different group sizes, instead of sticking to a pre-planned programme [1 additional mark]. Tourism marketing has shifted to online platforms (e.g., social media, travel blogs), making it easier to promote unique destinations and reach global audiences more effectively than traditional print or broadcast media [1 mark]. AO1

	(b) Study Fig. 2.2 (Insert), which shows a night market in Taipei, a popular location for tourists. Night markets are an important part of Taipei's identity and culture, known for their local street food and vibrant atmosphere. With reference to Fig. 2.2, describe how tourism affects the surrounding environment or local population. [4] <i>Award 1 mark for each description, to a maximum of 4 marks.</i> <i>Award a maximum of 1 additional mark for further development of each description where applicable.</i> • Tourism increases crowds and congestion in the night market, making the area busy and noisy. • Local businesses benefit from higher sales and income as tourists buy food and souvenirs. • Cultural exchange occurs as tourists experience local foods and traditions, promoting cultural awareness. • The area may face littering and waste management issues due to large numbers of visitors eating and discarding packaging. AO1
	(c) Study Fig. 2.3 (Insert), which shows an approach to sustainable tourism development. With reference to Fig. 2.3, identify the type of sustainable tourism development shown and explain the benefits it brings to locals in a country. [4] <i>Award 1 mark for each explanation, to a maximum of 4 marks.</i> <i>Award a maximum of 1 additional mark for further development of each explanation where applicable.</i> • Community-based tourism. (compulsory 1 mark) • It provides employment opportunities for local people (e.g., performing, tour guides), improving their income. • It helps preserve cultural traditions by showcasing local dance, crafts, and customs to visitors. • The income generated can be reinvested in community services like schools or infrastructure, benefitting the wider population. AO1

[Total: 15]

3	Cluster 3: Climate	
	(a)	Study Fig. 3.1 (Insert), which shows coastal cities vulnerable to climate-related hazards.
		(i) Describe the global distribution of coastal cities vulnerable to climate-related hazards. [3] <i>Award 1 mark for each description, to a maximum of 3 marks.</i> • High-risk cities are concentrated in South and Southeast Asia (e.g., Bangladesh and Philippines). • Moderate-risk cities are found along coasts of Africa and South America (e.g., Mozambique or Brazil). • Low-risk cities occur in developed regions such as Europe and North America (e.g., Venice, Italy and Miami, USA). AO2
		(ii) Suggest why coastal cities are likely to be more exposed to climate-related hazards and describe the hazards associated with this exposure. [3] <i>Award 1 mark for each suggestion, to a maximum of 3 marks.</i> <i>Award a maximum of 1 additional mark for further development of each suggestion where applicable.</i> • They are located directly on or near coastlines / close proximity to the sea, making them exposed to climate-related hazards. • Coastal cities are built close to sea level, making them directly exposed to rising sea levels from climate change. • Their location along coasts makes them vulnerable to storm surges generated by tropical cyclones and strong winds. • Low-lying areas are prone to flooding when heavy rainfall combines with high tides and surges. AO2
	(b)	Study Fig 3.2 (Insert), which shows the estimated potential reduction in carbon dioxide emissions by 2050. ‘Prioritising renewable energy is the most impactful strategy for mitigating climate change.’ With reference to Fig. 3.2, to what extent do you consider this statement to be true? Explain your answer. [9] <u>Relevant Content</u> Renewable energy • Figure 3.2 shows renewable energy has one of the largest potentials (~15 GtCO₂) for reducing emissions by 2050. • It directly replaces fossil fuels in electricity generation and transport (e.g., electric vehicles powered by solar/wind). • Other renewable energy: geothermal, hydroelectric, nuclear

- Limitations: renewable energy technologies is expensive. It depends heavily on government policies and financial support. Some of these energy sources may lead to negative environmental impact

Carbon Capture, Utilisation and Storage (CCUS)

- Process of separating and capturing carbon dioxide from power plants and other industrial sources of emissions.
- Direct dissolution of captured carbon dioxide into the ocean or injecting captured carbon dioxide into deep water.
- Use of carbon dioxide as a raw material to produce useful materials, e.g. cement can be made from stored carbon dioxide
- Limitations: expensive and requires public funding. Stored carbon may leak out over time.

International agreements

- Foster global cooperation (e.g., Paris Agreement 2015 aiming to limit warming below 2°C).
- Encourage nations to commit to net-zero targets and share technology/funding.
- Limitations: Non-binding nature and varied commitment levels between countries. Lack of enforcement mechanisms; success depends on national implementation.

Behavioural change

- Shifting to plant-based diets, buy local produce, reduce food waste
- Reduce plastic waste
- Reduce fashion waste
- Limitations: It takes a long time to change people's mindsets and consumption patterns. Commitment of companies to change the resources used in the production of goods.

A possible approach:

The answer makes clear a judgement on whether prioritising renewable energy will mitigate climate change more effectively than other strategies such as carbon capture and storage, international agreements, or behaviour change. For example, renewable energy can cut around 15 GtCO₂ by 2050 (Figure 3.2), offering significant reductions by replacing fossil fuel use in power generation. However, behaviour change measures show even higher potential (~20 GtCO₂) and may deliver quicker results at lower cost. International agreements, such as the Paris Agreement (2015), provide a global framework but rely on countries implementing pledges effectively; their impact is often limited by enforcement issues. CCUS can complement renewables by addressing industrial emissions, but high costs and technological barriers limit its scale. A balanced evaluation may conclude that while renewable energy is critical, a combination of strategies, supported by international cooperation and societal behaviour change, is likely to be the most effective path to mitigate climate change. The evaluation could weigh the arguments discussed, arriving at a reasoned conclusion.

Sample conclusion:

While multiple strategies contribute to mitigating climate change, prioritising **renewable energy** is likely the most impactful in the long term. Figure 3.2 shows it provides one of the highest potential reductions (~15 GtCO₂ by 2050), and unlike carbon capture or behaviour change, it permanently replaces fossil fuels in electricity and transport systems. Renewable energy also complements international agreements, enabling countries to meet emission targets more sustainably. Although behaviour change offers quick reductions, its effectiveness relies on public compliance, whereas renewable energy creates structural, lasting decarbonisation. Therefore, investing in and expanding renewable energy should be the central pathway for mitigation, supported by other measures for maximum impact.

(DL Competency: Critical Thinking: Evaluation information and arguments)

Level	Marks	Generic Level Descriptors for 9-Mark AO3 Question
4 (Accelerating)	7 - 9	Develops arguments that supports both sides of the discussion clearly using a range of points with good elaboration. Examples used demonstrate a comprehensive understanding of the issue or phenomenon. Evaluation is derived from a well-reasoned consideration of the arguments.
3 (Developing)	4 - 6	Develops arguments that support one side of the discussion well using one or two points with some elaboration. Example(s) used demonstrate a good understanding of the issue or phenomenon. Evaluation is well supported by arguments.
2 (Emerging)	1 - 3	Arguments are unclear with limited description or may be listed. No examples provided or examples are generic, demonstrating a basic understanding of the issue or phenomenon. Evaluation is simple, missing or unclear.
1 (Limited Evidence)	0	No creditworthy response

AO3

[Total: 15]

Table of Specifications

Question	AO1	AO2	AO3
1(a)(i)		4	
1(a)(ii)		4	
1(a)(iii)			6
1(a)(iv)		2	
1(b)(i)		1	
1(b)(ii)		3	
2(a)(i)	4		
2(a)(ii)	3		
2(b)	4		
2(c)	4		
3(a)(i)		3	
3(a)(ii)		3	
3(b)			9
TOTAL	15	20	15