

Please write clearly in block capitals.

Centre number

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Candidate number

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Surname

Forename(s)

Candidate signature

I declare this is my own work.

INTERNATIONAL GCSE GEOGRAPHY

Paper 3 Geographical and Fieldwork Skills

Friday 11 November 2022 07:00 GMT Time allowed: 1 hour 15 minutes

Materials

For this paper you must have:

- a ruler with millimetre measurements
- a calculator, which you are expected to use where appropriate.

Instructions

- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided.
Do not write outside the box around each page or on blank pages.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- All working must be shown.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The maximum mark for this paper is 60.
- The marks for questions are shown in brackets.
- You may use a bilingual dictionary for this exam.
- You may **not** use an English dictionary.

For Examiner's Use	
Section	Mark
A	
B	
C	
TOTAL	



N 0 V 2 2 9 2 3 0 3 0 1

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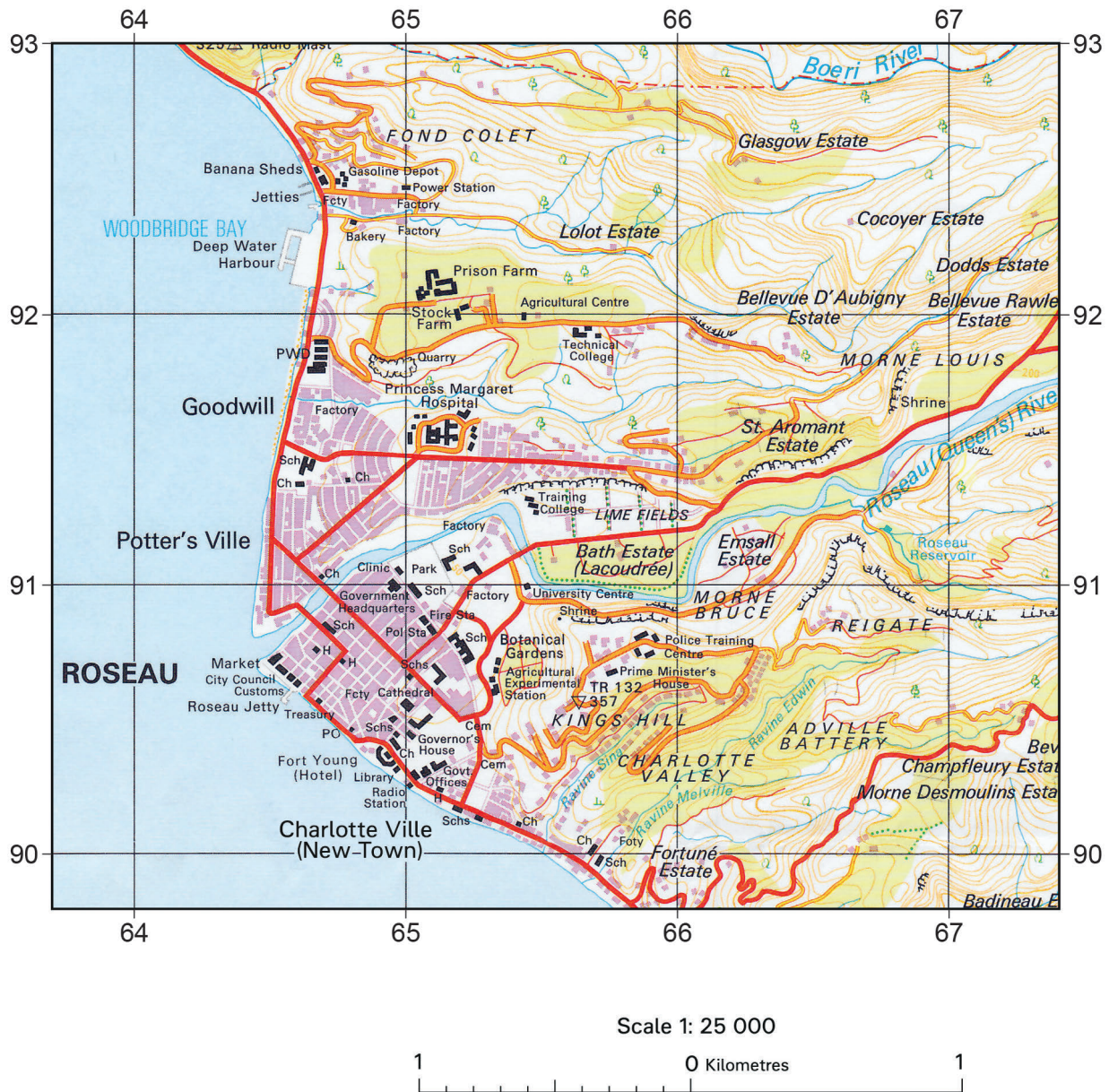
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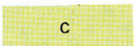
Section A – Geographical skills

Answer **all** questions in the spaces provided.

Study **Figure 1**, a 1:25 000 scale map of part of the Caribbean island of Dominica, near the capital city Roseau.

Figure 1



Surfaced Road.....		Forest.....	
Unsurfaced Road.....		Court House, Hotel.....	■ Ct H ■ H
Track and four wheel drive trail.....		Hospital, Cemetery.....	■ Hosp Cem
Named Building.....		Police Station.....	■ Pol Sta
Other Building.....		Post Office.....	PO
Church, Chapel.....	■ Ch ■ Cha	Watercourse, River.....	
School.....	■ Sch	Cultivation and Plantation (C-Coconut).....	
Contours V.I. 50ft.....		Sand or Mud.....	

0 1 . 1 How many colleges are there in grid square **6591**?

[1 mark]

0 1 . 2 Calculate the distance in km along the length of the Roseau (Queen's) River from the edge of the map extract at **674917** to where the river enters the sea at **645907**.

[2 marks]

_____ km

0 1 . 3 Compare the land use activities shown in grid square **6492** with the land use activities found in grid square **6490**.

[4 marks]

Turn over ►



Figure 2 shows satellite images of an area of Dominica before and after tropical storm Maria had hit the island in 2017.

Figure 2

Before



After



0 2 . 1

Using **Figure 2**, identify **two** effects of tropical storm Maria on the island of Dominica.

[2 marks]

1 _____

2 _____



0	2	.	2
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Explain **one** way that the effects of tropical storms can be reduced.

[2 marks]

Turn over for the next question

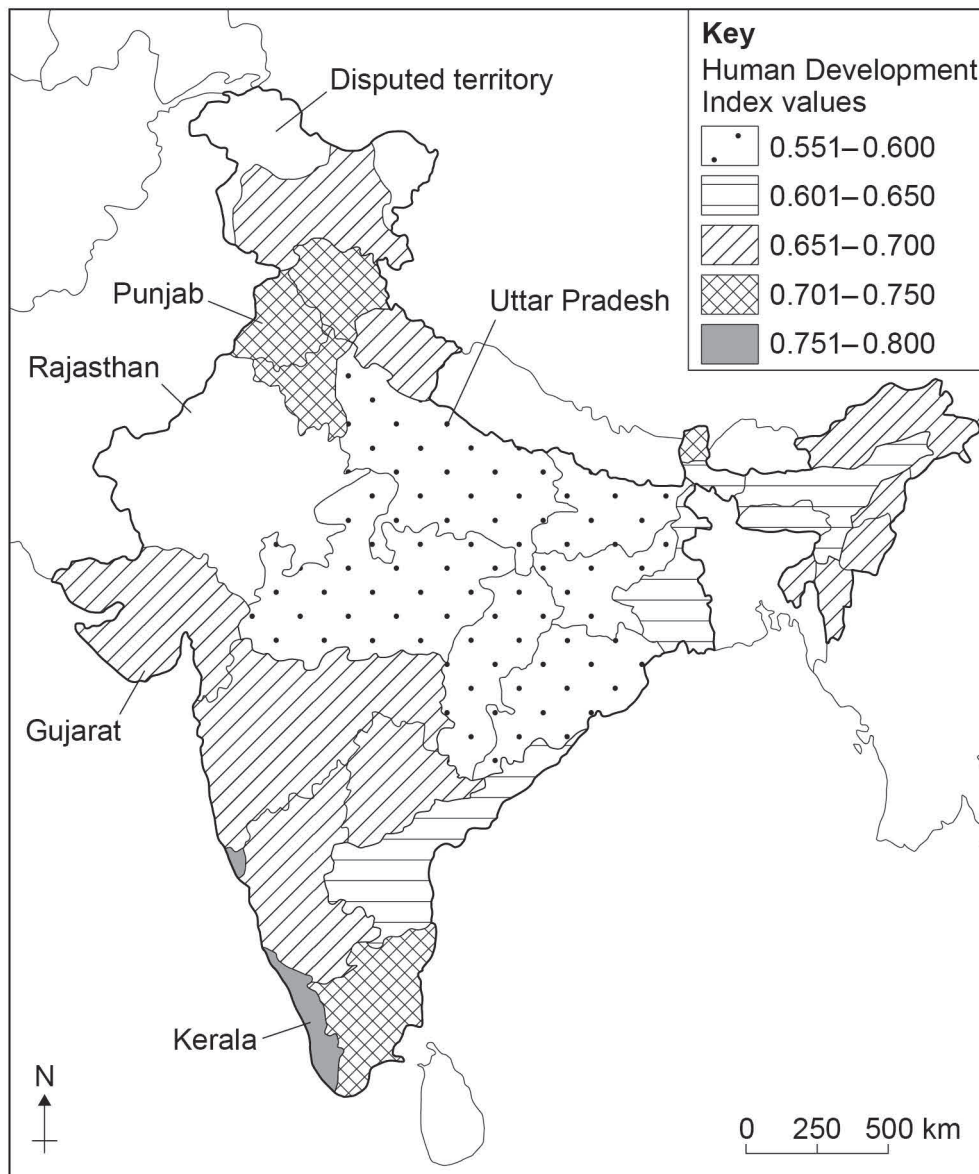
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Study **Figure 3**, a map showing Human Development Index (HDI) values for Indian states in 2019.

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box

Figure 3



0 3 . 1 Complete **Figure 3** by adding the correct shading for the state of Rajasthan.

Use the information in the table below.

[1 mark]

State	HDI Value
Rajasthan	0.628



03.2

Suggest **one** advantage and **one** disadvantage of using this type of map to present this information on HDI values in India.

[2 marks]

Advantage _____

Disadvantage _____

Question 3 continues on the next page

Turn over ►



Study **Table 1**, showing HDI values, infant mortality rates and average income per person for selected Indian states in 2019 shown on **Figure 3** on **Page 6**.

Table 1

State	HDI value	Infant mortality rate (per 1000 live births)		Average income per person (\$US)
		Rural	Urban	
Gujarat	0.672	33	20	10 789
Kerala	0.782	9	5	11 153
Punjab	0.724	21	19	8 470
Rajasthan	0.628	41	26	6 044
Uttar Pradesh	0.596	46	35	3 635
India average	0.645	33	21	7 333

0 3 . 3 Calculate the range in HDI values between the states shown in **Table 1**.

[1 mark]

0 3 . 4 State the relationship between HDI values and infant mortality rates shown in **Table 1**.
[1 mark]



0	3	.	5
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Using evidence from **Table 1**, suggest reasons for the variation in infant mortality rates.

[4 marks]

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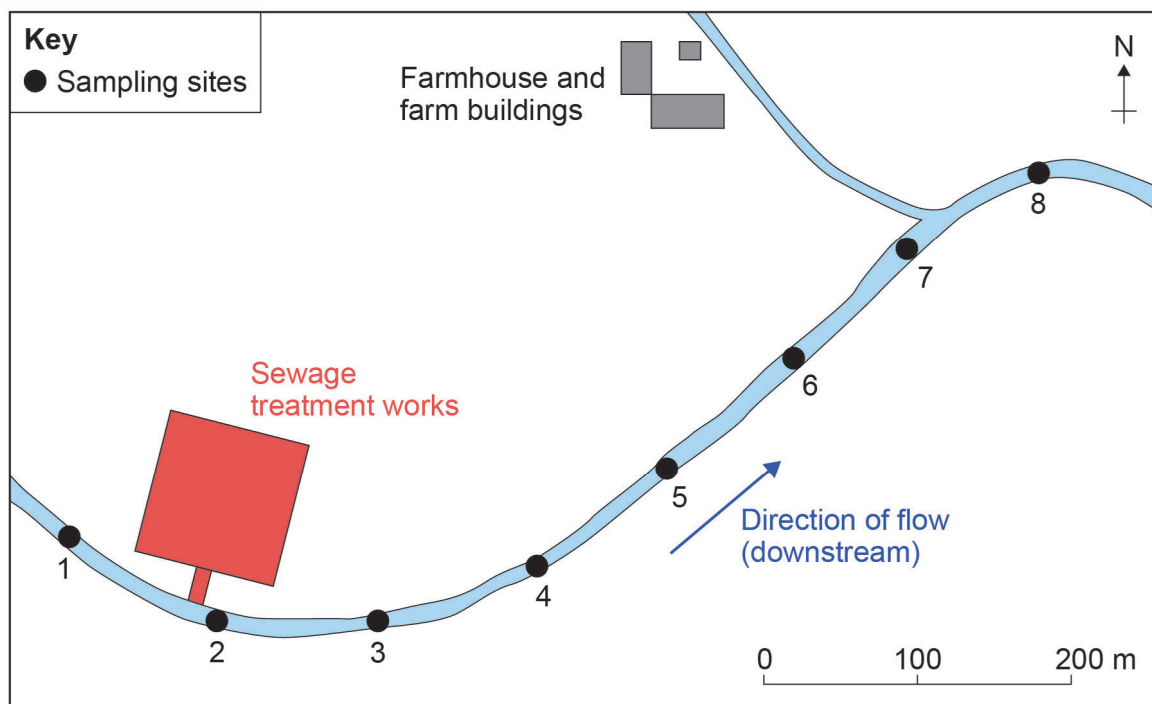
Section B – Fieldwork skills (unfamiliar contexts)

Answer **all** questions in the spaces provided.

Students investigated the potential effects of organic pollution on a stream ecosystem.

Figure 4 shows a sketch map of the stream, the source of pollution (sewage outflow) and the sampling sites used by the students to collect their data.

Figure 4



0 4 . 1

Outline the difference between the biotic and abiotic components in a small-scale ecosystem such as the stream in **Figure 4**.

[2 marks]



At each site, students measured oxygen and nitrate levels in the water (in milligrams/litre). They also collected different species from the stream to calculate a biodiversity index value for each site.

Table 2 shows the data collected for these variables at each sampling site.

Table 2

	Sampling site > downstream							
	1	2	3	4	5	6	7	8
Oxygen (mg/l)	8.4	7.1	7.2	7.5	8.1	8.3	8.4	7.4
Nitrates (mg/l)	20	34	51	40	40	38	32	45
Biodiversity Index*	0.63	0.10	0.12	0.13	0.15	0.35	0.46	0.32

*Biodiversity index values range from 0 to 1. The greater value = greater biodiversity.
Higher **oxygen** levels allow a greater range of species to survive.
Higher **nitrate** levels increase pollution which reduces biodiversity.

0 4 . 2 Calculate the **mean** value of nitrates for the 8 sites on this stretch of the stream.

[1 mark]

Mean nitrate level = _____ mg/l

Question 4 continues on the next page

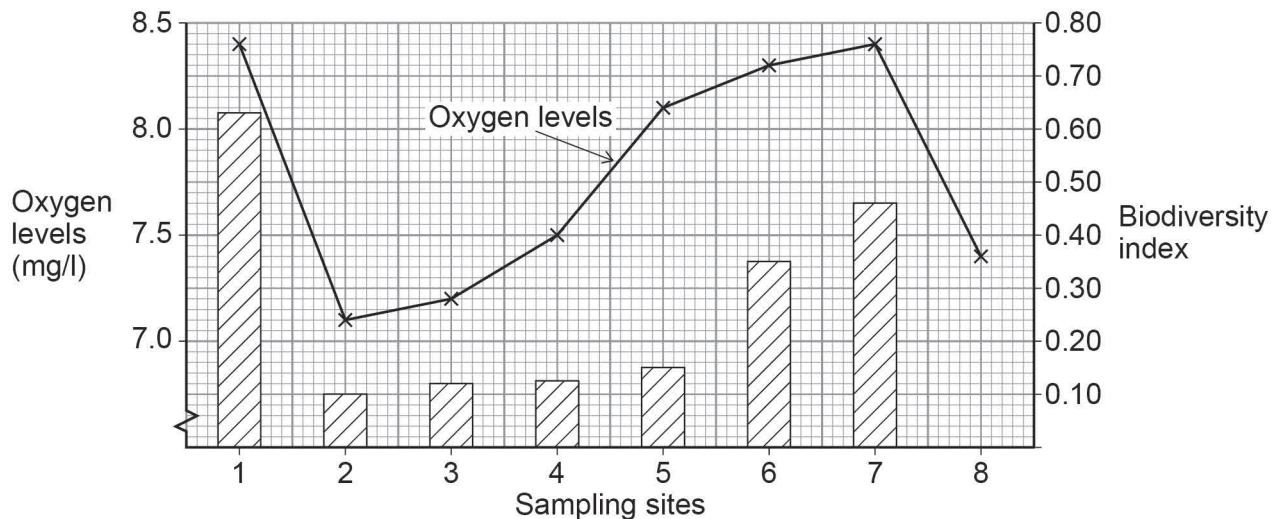
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Study **Figure 5**, a graph showing the oxygen levels in the stream and the biodiversity at each site.

The data was taken from **Table 2**.

Figure 5



0 4 . 3 Complete **Figure 5** by plotting the biodiversity index value for site 8 as shown in bold in **Table 2**.

[1 mark]

0 4 . 4 Describe the relationship between oxygen levels and biodiversity shown in **Figure 5**.

[2 marks]



0	4	.	5
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The aim of the students' enquiry was 'to investigate the impact of the sewage treatment works on the stream ecosystem'.

Assess how effective their fieldwork enquiry has been in achieving this aim.

Use evidence from **Figure 4** on **Page 10**, **Figure 5** on **Page 12** and **Table 2** on **Page 11** to support your answer.

[4 marks]

Turn over for the next question

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Students investigating the importance of tourism in Brunei surveyed **80** tourists at Brunei International Airport in August 2019.

Study **Table 3**, showing some of the information collected from the students' survey.

Table 3

Country of origin of tourist		Reason for deciding to visit Brunei	
		Internet – websites, blogs etc	36
Malaysia*	22	Media – TV/Advertising, press releases etc	12
China	20	Travel agents	12
Indonesia*	9	Social media/word of mouth	8
Philippines*	6	Royal Brunei Airlines flights	7
Singapore*	5	International hotel/resort chains	5
South Korea	5	Main activities planned during visit	
Japan	4	Theme Parks	30
United Kingdom	4	Historic – museums, architecture	19
Australia	3	Ecotourism – National Parks, rainforest	13
India	2	Cultural – food, music, shopping etc	10
Total	80	Beaches and water-based sports/activities	8

*Countries in bold are full members of the ASEAN regional economic forum. (Brunei is also a **full** member of ASEAN).

0 5 . 1 Calculate the percentage of tourists arriving from ASEAN full member countries in **Table 3**.

[1 mark]

_____ %



0 5 . 2

Outline **one** problem that students might have experienced when collecting this data.**[1 mark]**

0 5 . 3

Suggest **one** additional question that could be included in the visitor survey.**[1 mark]**

0 5 . 4

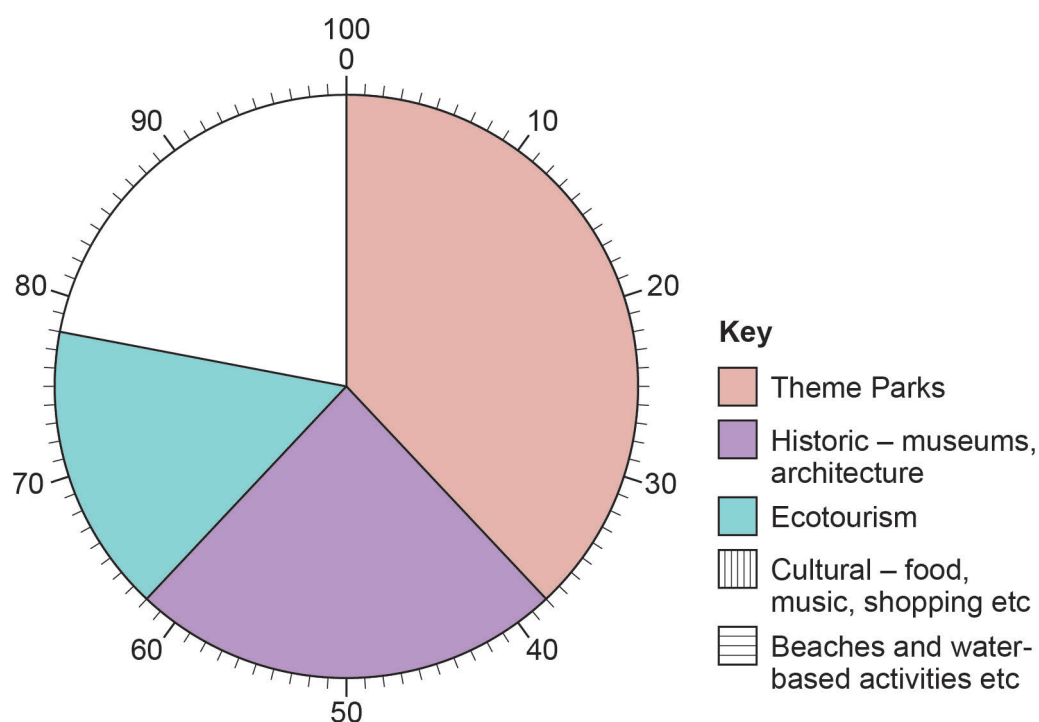
Suggest why your chosen question would provide useful information for the enquiry.

[1 mark]

Question 5 continues on the next page**Turn over ►**

The figures for 'main activities planned during visit' were converted into percentages and presented in the pie chart shown in **Figure 6**.

Figure 6



0 5 . 5 Complete **Figure 6** using the percentage data given below.

[2 marks]

Cultural – food, music, shopping etc	13%
Beaches and water-based sports/activities	9%



Students also collected secondary data for **2019** from the Tourism Development Department.

This data is summarised in **Figure 7**.

Figure 7

- Brunei's economy is highly dependent on the oil and gas industry (**62% of national income**) and tourism is seen as a means to diversify and develop the economy.
- Tourism contributed **6.6% of national income**.
- There were **333 000 tourist** arrivals by air.
- The average length of stay is **2.34 days**.
- Visitor numbers are **evenly spread** throughout the year.
- Cruise-based tourism is growing; there were **15 000 visitors by cruise ship**.
- **Approximately 85% of tourists stayed in hotels or resort complexes**; other accommodation is limited.

0 5 . 6

Discuss the strengths and limitations of the **primary and secondary** data collected by the students investigating the importance of tourism in Brunei.

[4 marks]

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Turn over for the next section

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Section C – Individual fieldwork enquiry

Answer **all** questions in the spaces provided.

State the title of your geography fieldwork enquiry below.

Fieldwork enquiry title:

Answer the following questions related to your geography fieldwork enquiry.

0 6 . 1

Outline **one** potential health and safety risk involved in collecting data for your enquiry.

[2 marks]

0 6 . 2

Explain how **one** health and safety risk might be reduced.

[2 marks]



0 6 . 3

Assess how useful **one** method of data collection was in supporting the aims of your enquiry.

[4 marks]

0 6 . 4

Justify the method(s) that were used to analyse the data from your enquiry.

[6 marks]

Question 6 continues on the next page

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To what extent were your conclusions different from what you expected?

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[illegible]

[illegible]

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