Cambridge O Level

Cambridge International Examinations
Cambridge Ordinary Level

CANDIDATE NAME	

CENTRE NUMBER						CANDIDATE NUMBER				

* 7 4 7 7 7 8 9 1 8 5 *

GEOGRAPHY **2217/23**

Paper 2 **May/June 2017**

2 hours 15 minutes

Candidates answer on the Question Paper.

Additional Materials: Ruler
Calculator
Protractor
Plain paper

1:50 000 Survey Map Extract is enclosed with this Question Paper.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces provided.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

Section A
Answer **all** questions.
Section B
Answer **one** question.

The Insert contains Photographs A, B and C for Question 3, Figs. 8 and 10, Photographs D and E and Table 2 for Question 7, and Fig. 12, Photograph F and Tables 5 and 6 for Question 8.
The Survey Map Extract and the Insert are **not** required by the Examiner.
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **30** printed pages, **2** blank pages and **1** Insert.

DC (ST/FC) 131700/4
© UCLES 2017

CAMBRIDGE International Examinations

Section A

Answer **all** questions in this section.

1 The 1:50 000 map is of Douglas, Isle of Man.

(a) **(i)** Give the six-figure grid reference of the triangulation pillar on the hill at Howstrake, near the coast to the north east of Douglas.

.....[1]

(ii) How is the land on the hill at Howstrake being used?

.....[1]

(b) Suggest how the settlement of Douglas obtains a water supply. Use map evidence to support your answer.

.....

.....

.....

.....[2]

© UCLES 2017

(c) **(i)** Measure the distance along the Isle of Man Steam Railway, from the station at Santon (312722) to the next station at Port Soderick (342730). Give your answer to the nearest kilometre.

.....[1]

(ii) Describe the route and features of the railway between these points.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....[6]

(d) Compare the type and pattern of roads in grid square A (3878) and grid square B (3776) shown on Fig. 1.

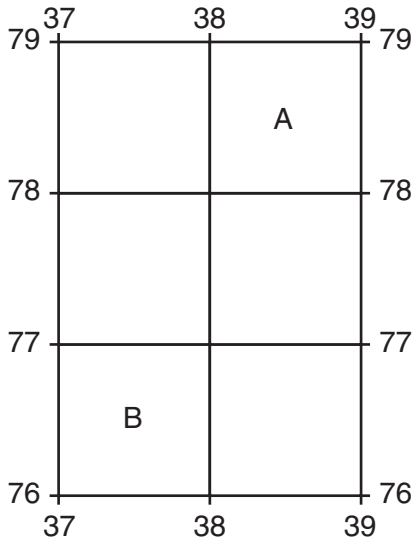


Fig. 1

.....

.....

.....

.....

.....

.....[3]

(e) Describe the relief and drainage of the area shown in Fig. 2.

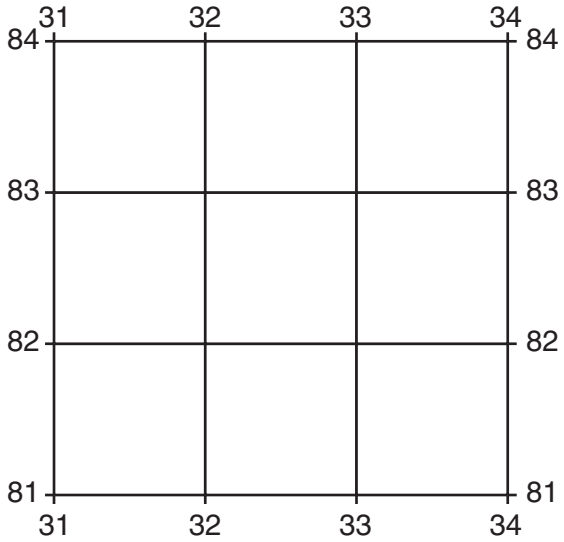


Fig. 2

.....

.....

.....

.....

.....

.....

.....

.....

.....

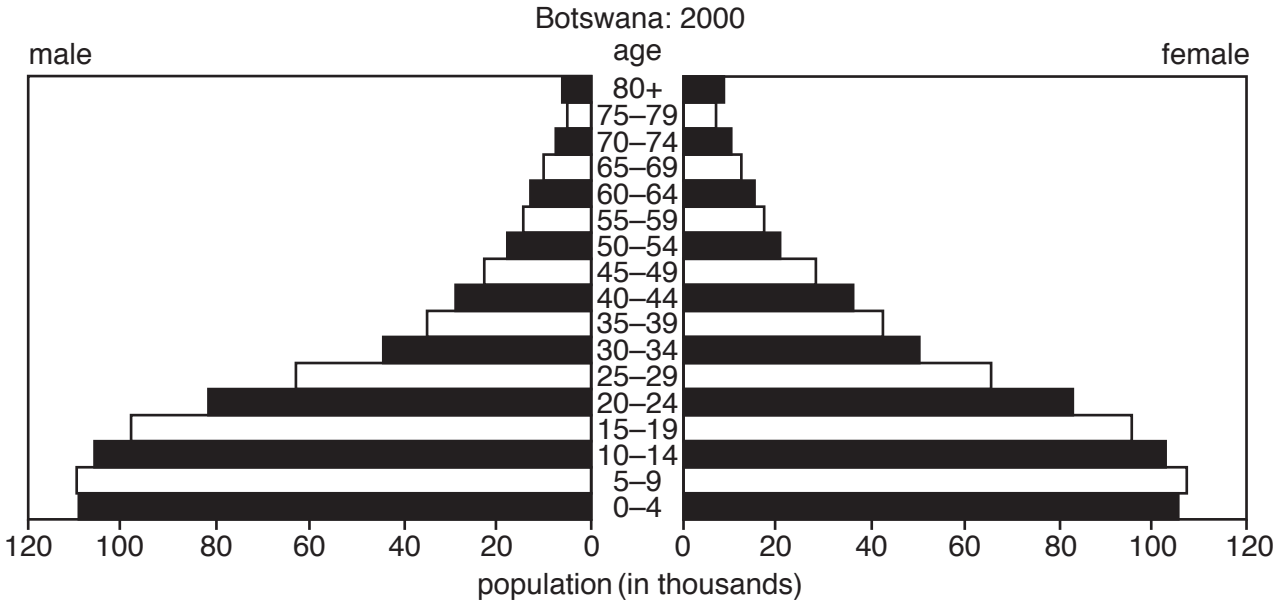
.....

.....

.....[6]

[Total: 20 marks]

2 Study Fig. 3, which shows population pyramids for Botswana in 2000 and 2010.



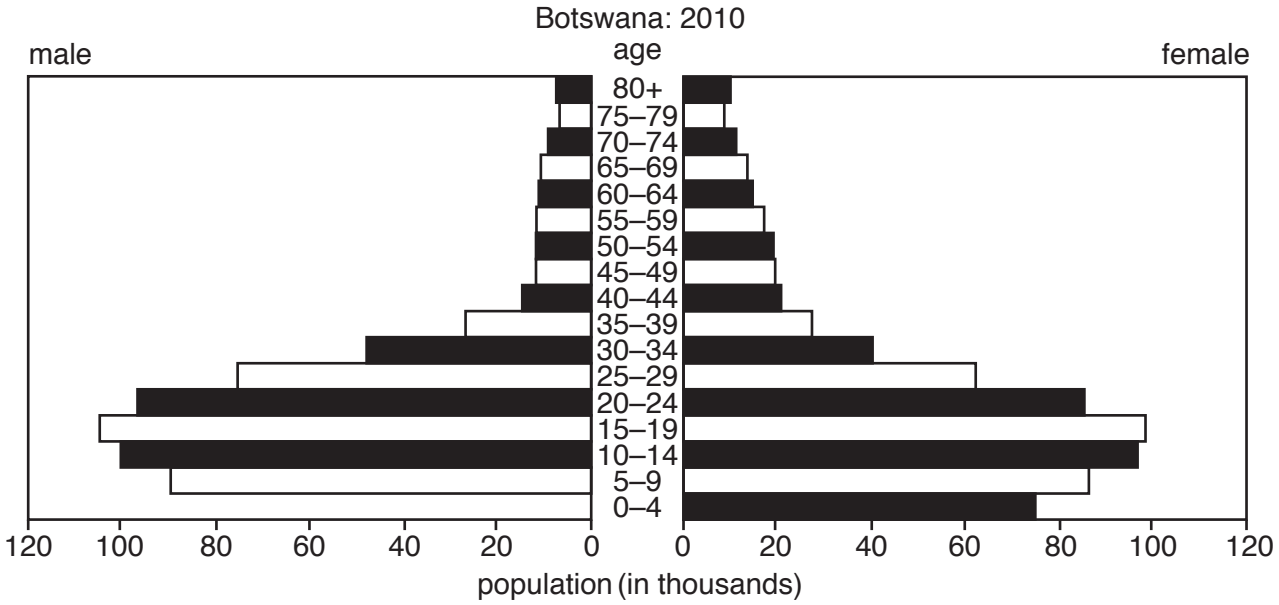


Fig. 3

(a) Complete Fig. 3 to show 80 000 males in the 0 – 4 age group, in Botswana, in 2010. [1]

(b) **(i)** How many males were aged 10 – 14 in 2010?

.....[1]

(ii) Which age group has approximately 40 000 females in 2010?

.....[1]

(c) **(i)** Using Fig. 3 give evidence for a decreasing birth rate.

.....

.....[1]

(ii) Suggest **two** reasons for the change in the 35–39 age group between 2000 and 2010.

.....

.....[2]

(iii) Compare the data for males and females and circle the correct answer.

more males live longer than females	**more females live longer than males**	**males and females have equal life expectancy**

Give evidence to support your answer.

.....

.....[2]

[Total: 8 marks]

3 Study Photographs A, B and C (Insert), taken in different parts of a city.

(a) **(i)** Which Photograph is most likely to contain the CBD?

.....[1]

(ii) Which Photograph is most likely to contain the highest density residential area?

.....[1]

(iii) Which Photograph is most likely to contain the area with highest employment density?

.....[1]

(b) **(i)** Describe the housing in Photograph B.

.....

.....

.....

.....[2]

(ii) Using evidence from Photograph C suggest **three** advantages of living in this area.

.....

.....

.....

.....

.....

.....

.....

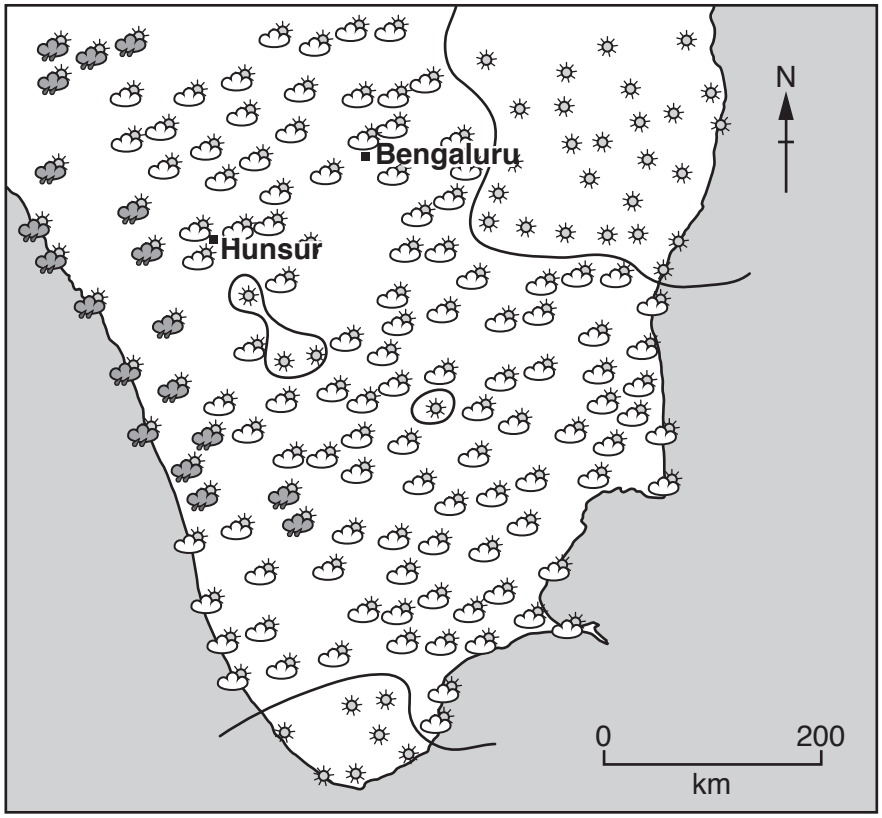
.....[3]

[Total: 8 marks]

© UCLES 2017

BLANK PAGE

4 Study Fig. 4, which shows the weather for southern India, for a day in July 2015.



Key

- Sunny (clear sky)
- Sunny intervals (partly cloudy)
- Rain showers
- Line separates areas of different weather

Fig. 4

(a) Draw a line on Fig. 4 to separate the area of rain showers from the area of sunny intervals. [1]

(b) **(i)** Describe the locations of the areas of clear sky.

.....

.....

.....

.....[2]

(ii) Which instrument would be used to measure the number of hours of sunny weather at a weather station?

.....[1]

(c) The weather is moving from west to east. Describe the weather at Hunsur shown on Fig. 4, and how it will change in the next few hours.

.....

.....

.....

.....[2]

(d) Fig. 5 shows the average monthly sunshine hours for Bengaluru.

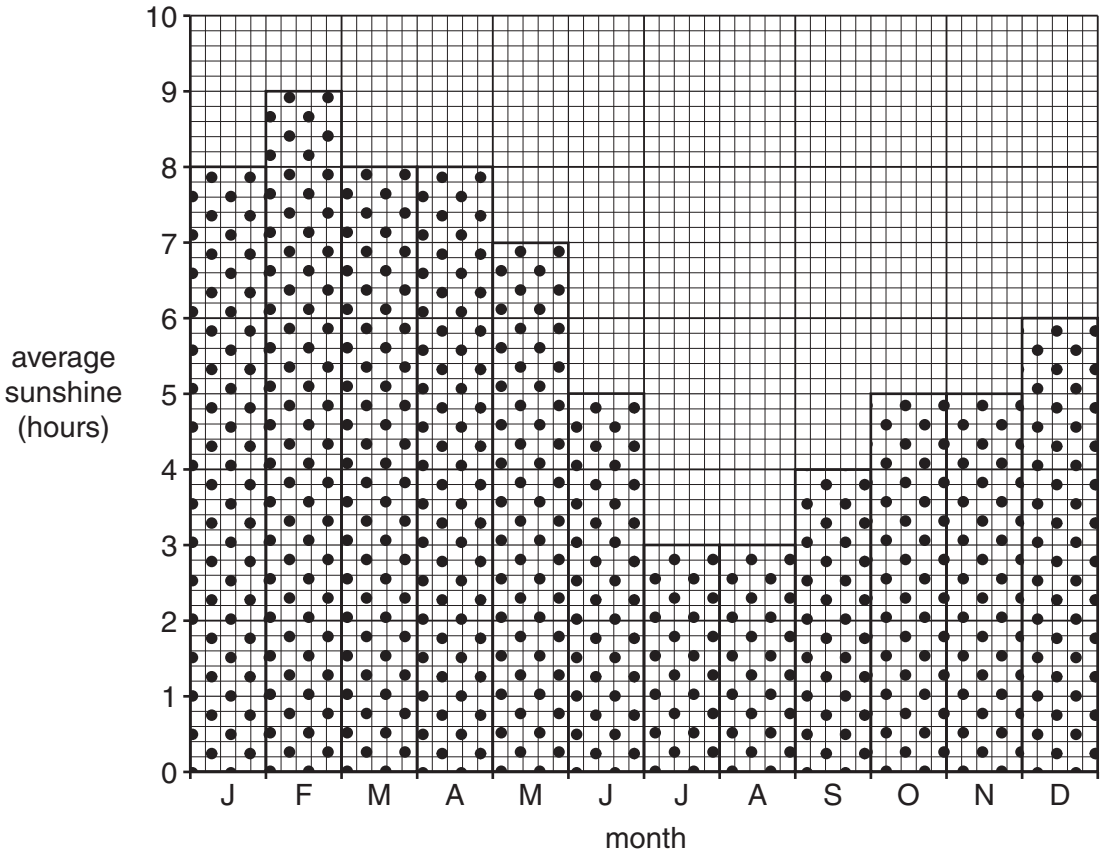


Fig. 5

(i) What is the average number of sunshine hours for July?

.....[1]

(ii) Compare the average sunshine hours for July and August with the rest of the year.

.....

.....[1]

[Total: 8 marks]

5 Study Fig. 6, which shows the vegetation in a tropical rainforest.

Fig. 6

(a) **(i)** On Fig. 6, what is the maximum height of the trees?

.....[1]

(ii) Why do emergent trees:

- grow so tall?

.....

.....

- have buttress roots?

.....

.....[2]

(iii) Give **two** differences between the canopy and the under canopy.

.....

.....

.....

.....[2]

(iv) Give a reason why the forest floor receives very little sunlight.

.....

.....[1]

(b) A subsistence farmer wants to plant some crops in the rainforest and can either use an area that has previously been cleared of trees or create a new clearing. Suggest an advantage for each of these options.

Advantage of using previously cleared area .....

.....

.....

Advantage of creating a new clearing .....

.....

.....[2]

[Total: 8 marks]

6 **(a)** Crude oil is an important energy resource. Which **two** phrases describe crude oil as an energy resource? Circle **two** correct answers.

Biofuel Fossil fuel Non-renewable Renewable Tertiary fuel

[2]

(b) 85% of world crude oil reserves are found in just 10 countries. These countries are shown on Fig. 7.

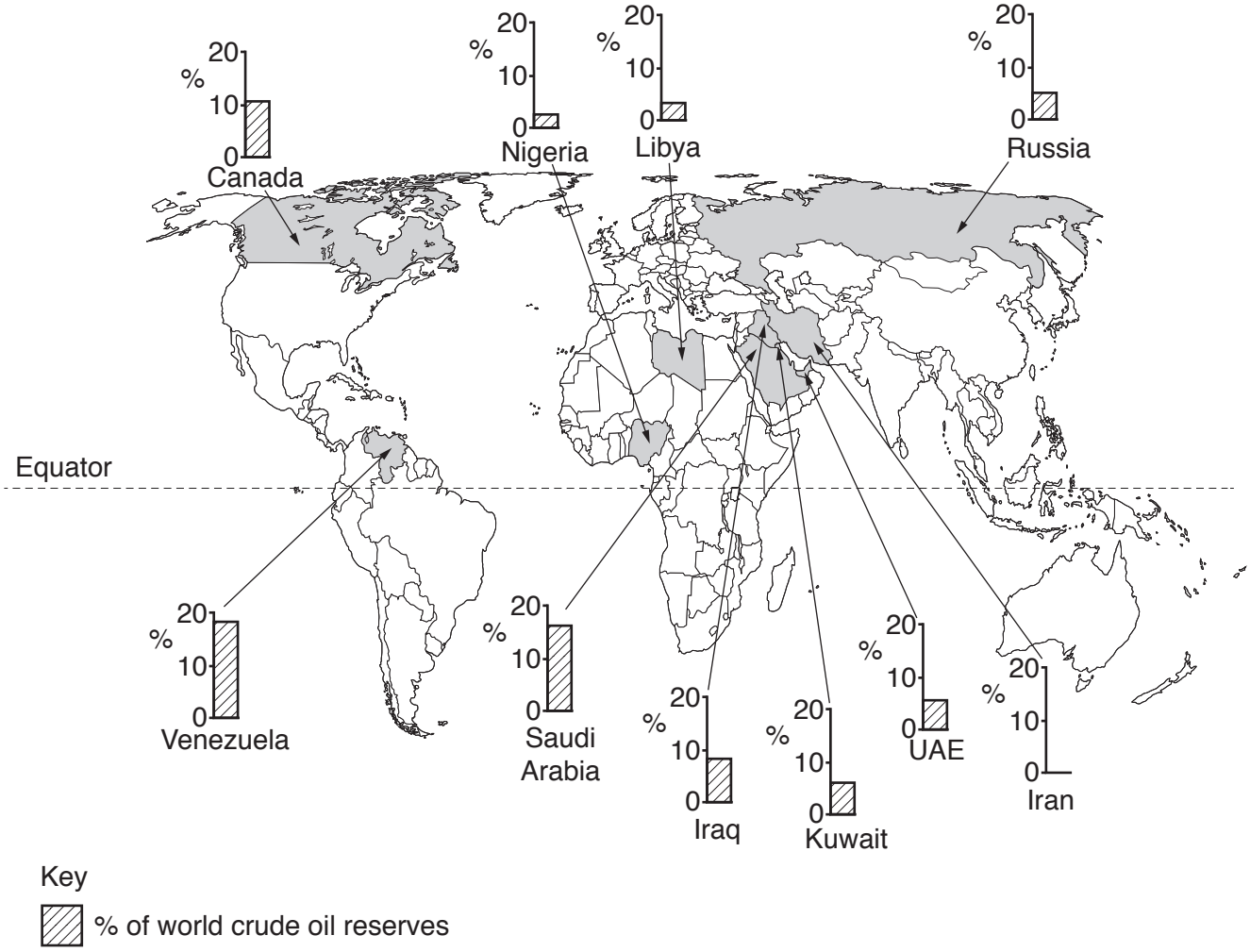


Fig. 7

(i) Complete Fig. 7 to show 9% of world crude oil reserves in Iran. [1]

(ii) Which country has the most crude oil reserves?

.....[1]

(iii) Kuwait is a very small country, yet it has the 6th largest crude oil reserves. Which other small country has a similar level of reserves?

.....[1]

(c) Describe the location of the countries shaded on Fig. 7.

.....

.....

.....

.....

.....

.....[3]

[Total: 8 marks]

BLANK PAGE

Section B

Answer **one** question from this section.

7 Students at a school in south west England did fieldwork on a river which flows from Dartmoor (an upland area). The river and the five fieldwork sites are shown on Fig. 8 (Insert).

(a) Which **two** river features are labelled **A** and **B** on Fig. 8?

Choose from the following:

confluence delta flood plain source tributary

Feature **A** .....

Feature **B** ..... [2]

The students agreed to investigate the following hypotheses:

Hypothesis 1: *The river becomes wider and deeper downstream.*

Hypothesis 2: *The bedload becomes more rounded downstream.*

(b) Before they went to do their fieldwork the students did a pilot study at a site on a local stream. Suggest **two** advantages of doing a pilot study.

1 .....

.....

2 .....

.....[2]

(c) To investigate **Hypothesis 1**, the students measured the width of the river channel and the depth of the river at points across the channel. Photographs D and E (Insert) show the students doing their fieldwork.

Describe how the students made their measurements.

width of river channel

.....

.....

.....

.....

depth of river

.....

.....

.....

.....[4]

(d) The results of the students' fieldwork at site 3 are shown in Table 1 below.

Table 1

Students' measurements at site 3

Distance across channel / width (metres)	Depth (m)
0.4	0.15
1.7	0.40
2.9	**0.50**
4.2	**0.35**
5.4	0.10

(i) Use these results to **complete and shade in the cross section** of the river channel at site 3 on Fig. 9 opposite. [2]

(ii) Which site on Fig. 9 shows a meander?

Site ..... [1]

(iii) What conclusion would the students make about **Hypothesis 1**: *The river becomes wider and deeper downstream*? Support your answer with data from Fig. 9.

.....

.....

.....

.....

.....

.....[3]

© UCLES 2017

Cross sections of the river channel

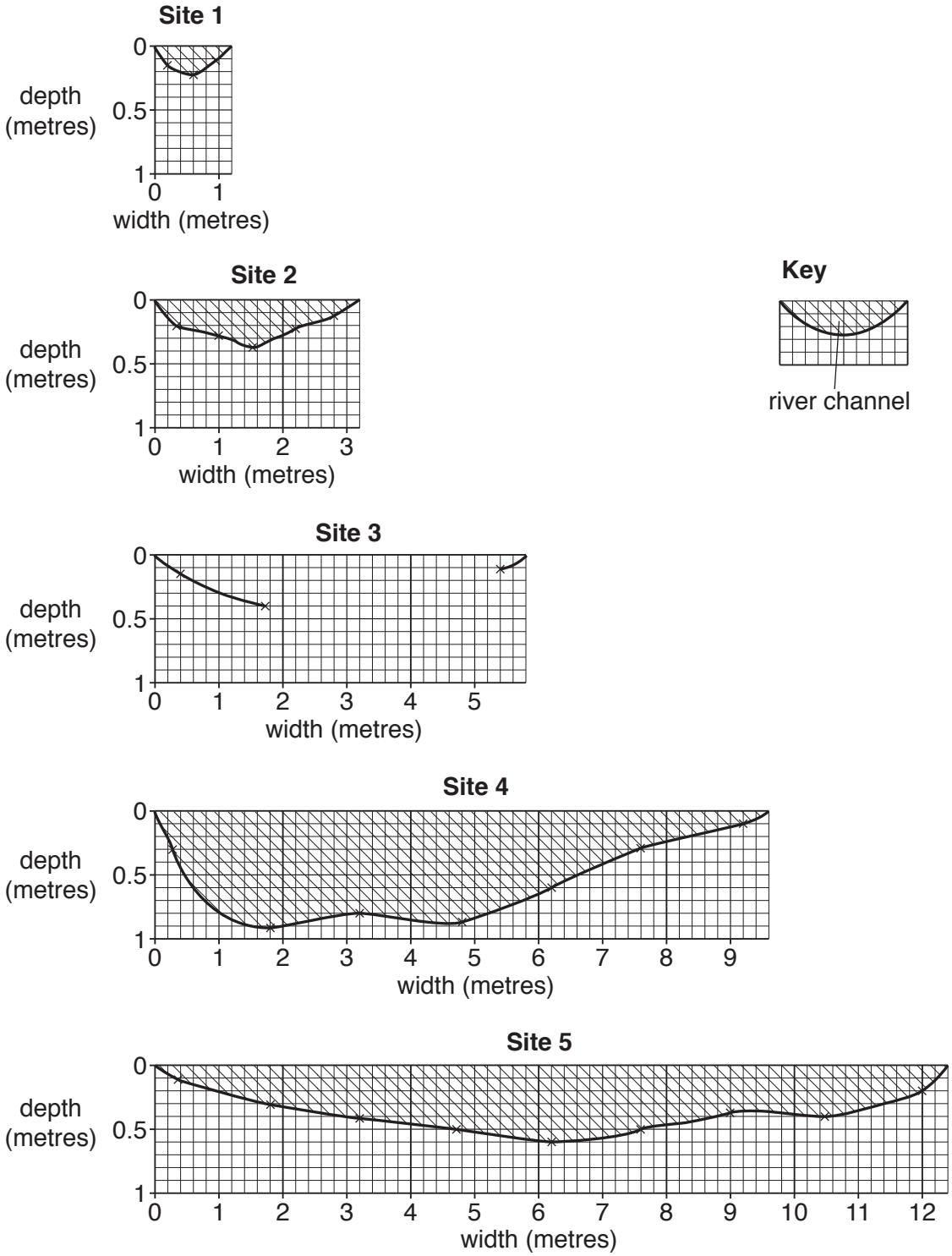


Fig. 9

(e) To investigate **Hypothesis 2**: *The bedload becomes more rounded downstream*, the students selected 20 pebbles at random from the bed of the river at each site. They then measured the roundness of the pebbles by comparing them with the Power's Scale of Roundness which is shown in Fig. 10 (Insert).

(i) Suggest **one** problem of using the Power's scale to measure roundness.

.....

.....[1]

(ii) Suggest **two** weaknesses of selecting pebbles at random.

1 .....

.....

2 .....

.....[2]

(iii) The students' results are shown in Table 2 (Insert). Use these results to **complete the divided bar graph** for site 2 in Fig. 11 below. [3]

Students' results of measuring pebble roundness

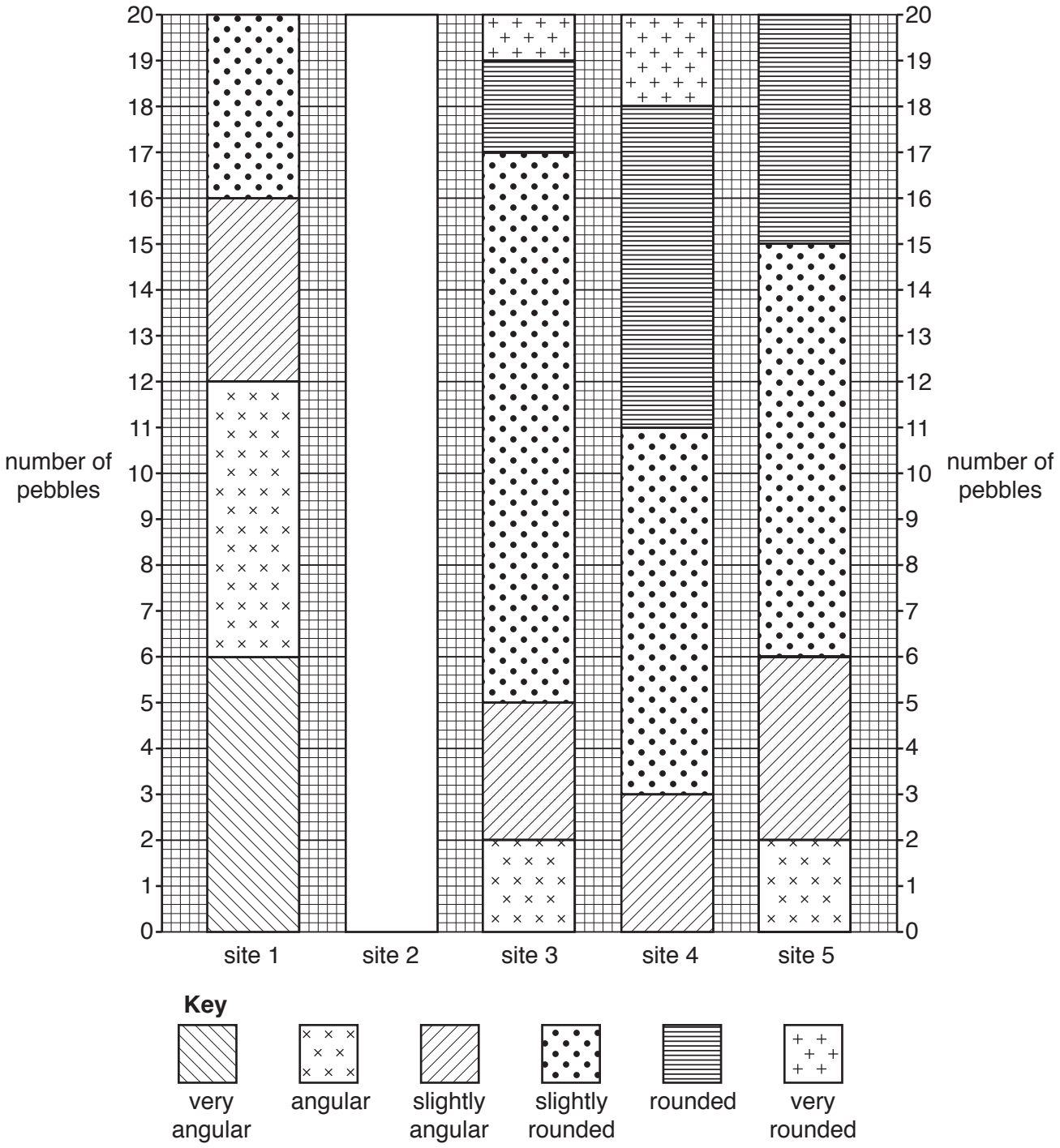


Fig. 11

(iv) One student gave a score to each category in the Power's Scale. He then multiplied this score by the number of pebbles in the category (shown in Table 2, Insert). The results of his work are shown in Table 3 below.

Calculate the results for site 4 to **complete the table**. [1]

Table 3

Site	Score given to each description						
	very angular (score = 6)	angular (score = 5)	slightly angular (score = 4)	slightly rounded (score = 3)	rounded (score = 2)	very rounded (score = 1)	Total score
1	36	30	16	12	0	0	94
2	54	20	24	3	0	0	101
3	0	10	12	36	4	1	63
4							52
5	0	10	16	27	10	0	63

(v) The students decided that **Hypothesis 2**: *The bedload becomes more rounded downstream* was partly true. Use evidence from Fig. 11 and Tables 2 and 3 to explain why they reached this conclusion.

.....

.....

.....

.....

.....

.....[3]

(vi) Explain why pebbles (bedload) generally become more rounded downstream.

.....

.....

.....

.....[2]

(f) To extend their study some students decided to measure the **size** of pebbles in the bedload to see if they varied downstream.

(i) Which **one** of the following pieces of equipment in the table below could the students use to measure the size of each pebble?

Tick (✓) your choice. [1]

Equipment	Tick (✓)
callipers	
clinometer	
flowmeter	
quadrat	
stopwatch	

(ii) Explain how the students would carry out fieldwork to investigate if the size of pebbles varied downstream. Include reference to how the students could make their method reliable.

.....

.....

.....

.....

.....

.....

.....

.....[3]

[Total: 30 marks]

8 A group of students carried out fieldwork about tourism in Bagan, a city which is a major tourist destination in Myanmar. Photograph F (Insert) shows a view of part of the city.

They decided to test the following hypotheses:

Hypothesis 1: *More tourists come to Bagan from Asia than from other parts of the world.*

Hypothesis 2: *People in different age groups come to visit Bagan for different reasons.*

(a) To test their hypotheses the students produced a questionnaire which they used to obtain 100 responses. The questionnaire is shown in Fig. 12 (Insert).

(i) Why did the students first ask 'Are you a tourist in Bagan?'

.....

.....

.....

.....[2]

(ii) The students used a sampling method of asking every tenth person they met to complete the questionnaire. What is this method of sampling called?

..... [1]

(iii) Give **two** advantages of this method of sampling.

1 .....

.....

2 .....

.....[2]

(b) Students showed the results of Question 2 (*Which country do you come from?*) on the map, Fig. 13, below.

(i) **Plot** the information in Table 4 below onto Fig. 13. [2]

Table 4

Which country do you come from?

Country	Number of tourists
China	16
USA	10

Countries which tourists to Bagan come from

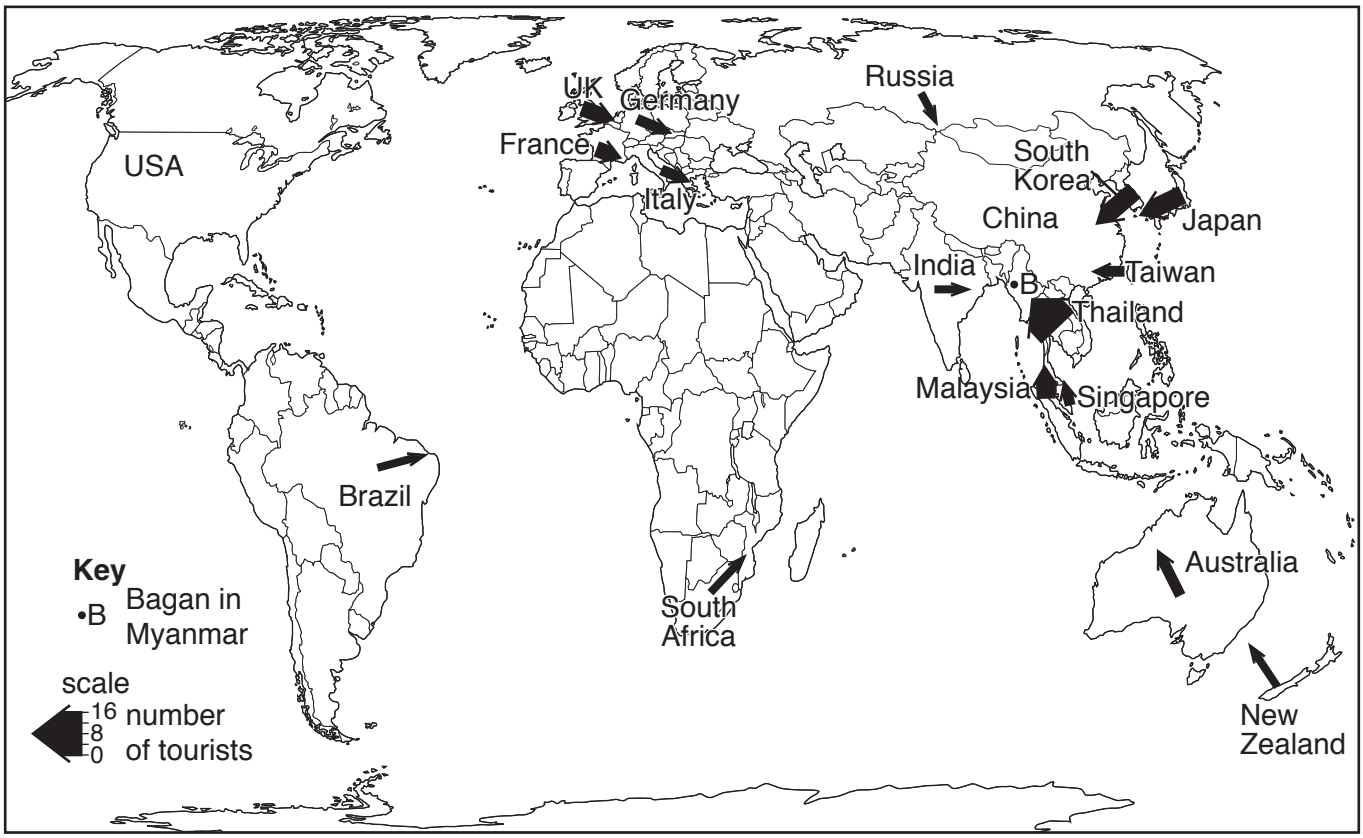


Fig. 13

(ii) One student showed the results of Question 2 as two bar graphs which are shown in Fig. 14 below.

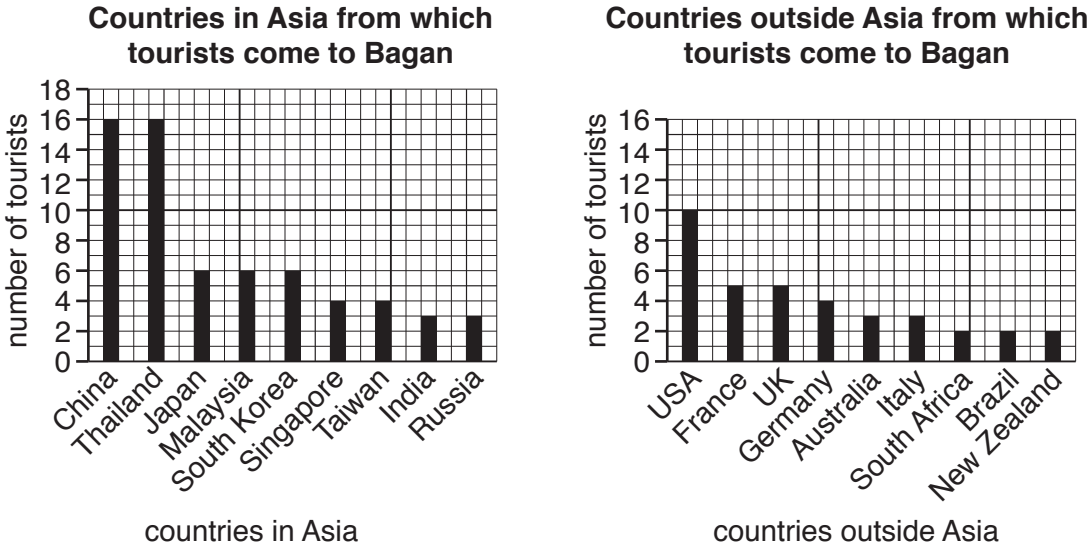


Fig. 14

Give **one** advantage of each method for showing this data.

Map (Fig. 13)

.....

.....

Bar graphs (Fig. 14)

.....

.....[2]

(iii) What conclusion would the students make to **Hypothesis 1**: *More tourists come to Bagan from Asia than from other parts of the world*? Support your decision with evidence from Figs. 13 and 14.

.....

.....

.....

.....

.....

.....[3]

(c) The results of Question 3 (*Which one of the following most attracted you to visit Bagan?*) and Question 4 (*Which age group are you in?*) are shown in Table 5 (Insert).

(i) Use the results to **plot the bar graph** for the age group over 60 on Fig. 15, below. [2]

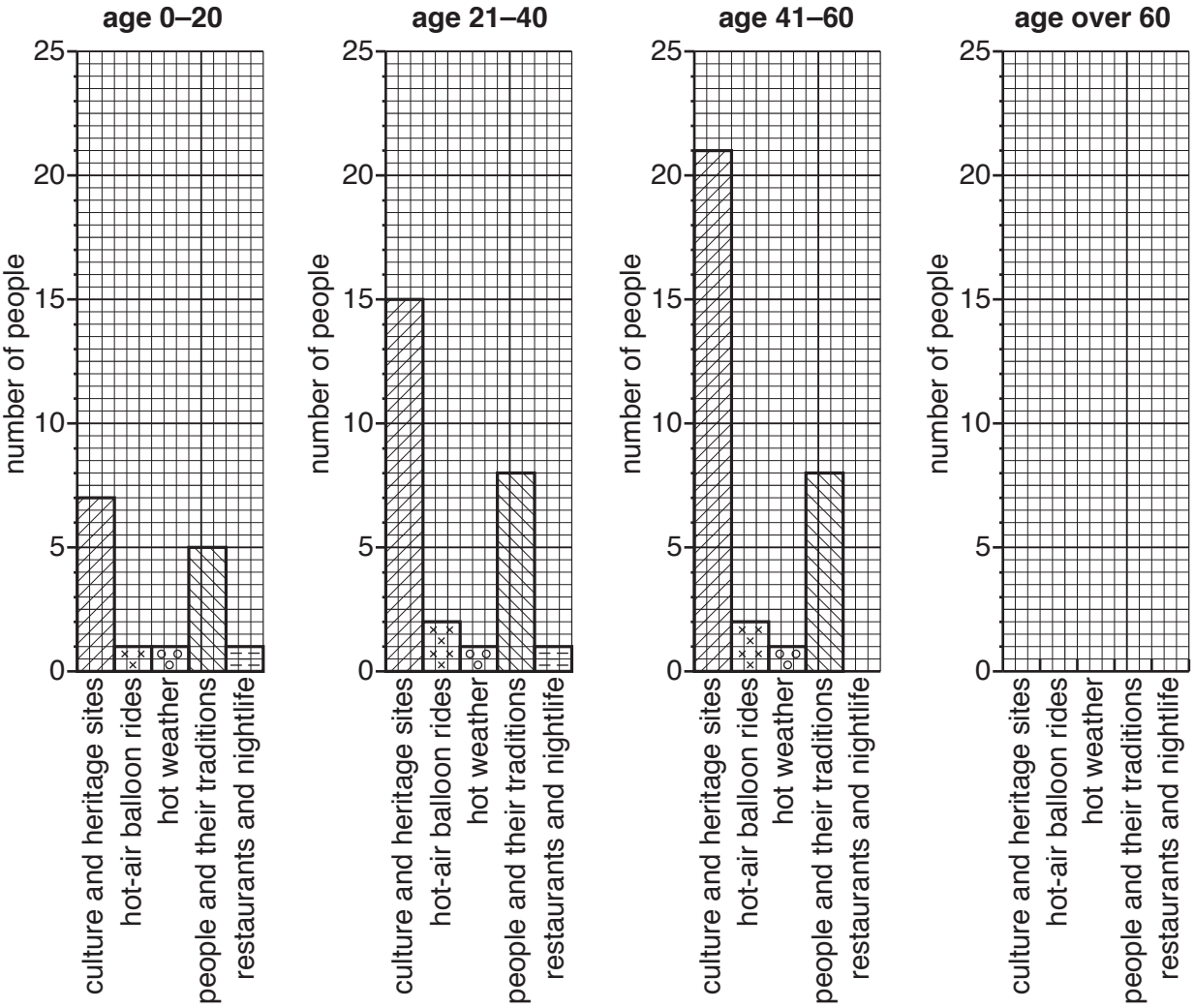


Fig. 15

(ii) Do these results support **Hypothesis 2**: *People in different age groups come to visit Bagan for different reasons*? Support your conclusion with evidence from Table 5 and Fig. 15.

.....

.....

.....

.....

.....

.....

.....

.....[4]

(d) Students who were studying travel and tourism wanted to find out if tourists from different countries used different methods to research their holidays. They used the results of Question 5 (*Which one of the following methods did you mainly use to research your holiday?*) to produce Table 6 (Insert) which shows the results for four countries.

(i) Use the results in Table 6 to **complete the pie graph** for Thailand in Fig. 16 opposite. [2]

(ii) Identify **two** major differences between the research methods tourists used in China and Japan.

1 .....

.....

2 .....

.....[2]

Holiday research methods in four countries

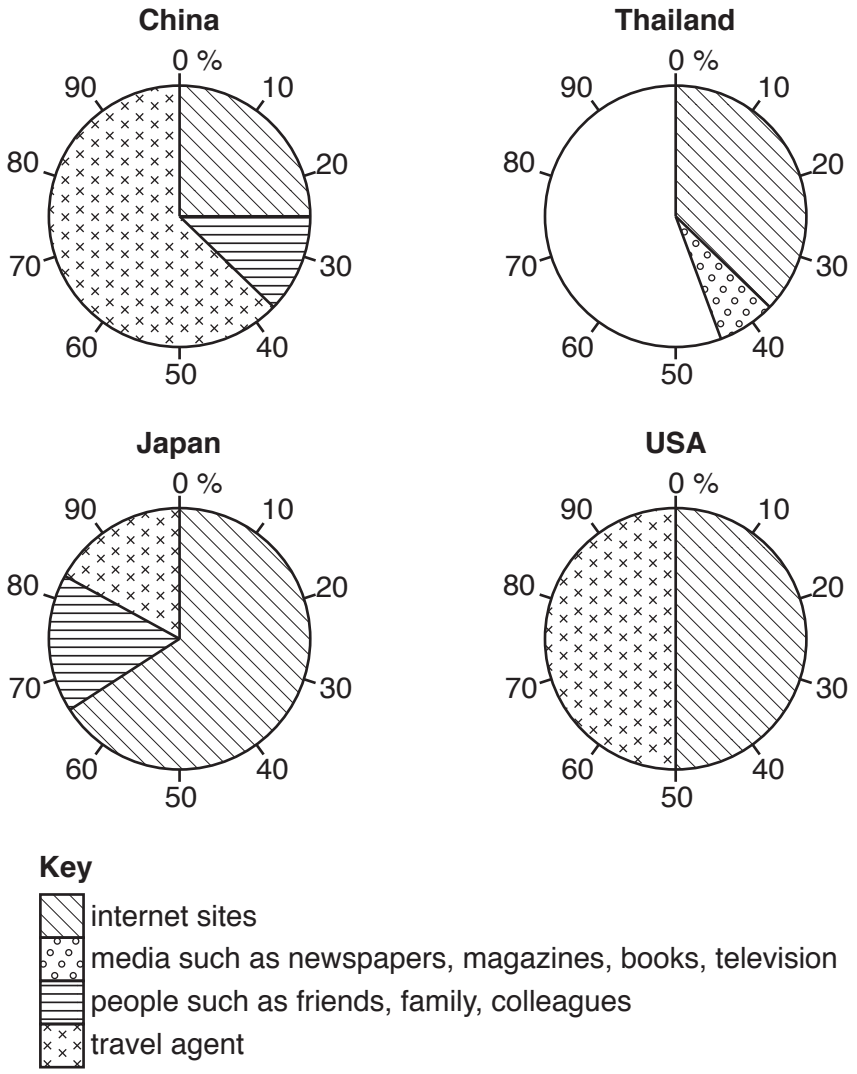


Fig. 16

(e) **(i)** Describe advantages and disadvantages of tourism for local people in an area such as Bagan.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....[5]

(ii) To extend their fieldwork the geography students wanted to investigate if tourism in Bagan had a negative impact on the natural environment.

Describe a suitable task to carry out this investigation. Do **not** refer to a questionnaire in your answer.

.....

.....

.....

.....

.....

.....

.....

.....[3]

[Total: 30 marks]

© UCLES 2017

Additional Pages

If you use the following lined pages to complete the answer(s) to any question(s), the question number(s) must be clearly shown.

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cie.org.uk after the live examination series.

Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.

© UCLES 2017