Centre Number		Candidate Number	Name	

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

GEOGRAPHY   **0460/02**

Paper 2

October/November 2006

1 hour 30 minutes

Additional Materials: Ruler
                         Protractor
                         Set square

1:50 000 Survey Map Extract is enclosed with this question paper

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.
The Insert contains Photographs A and B for Question 3.
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.

For Examiner's Use	
Question 1	
Question 2	
Question 3	
Question 4	
Question 5	
Question 6	

This document consists of **15** printed pages, **1** blank page and **1** Insert.

UNIVERSITY *of* CAMBRIDGE
International Examinations

[Turn over

1 Study the map extract of an area in Zimbabwe. The scale is 1:50 000.

(a) Fig. 1 shows the area of the Buhwa mine.

Fig. 1

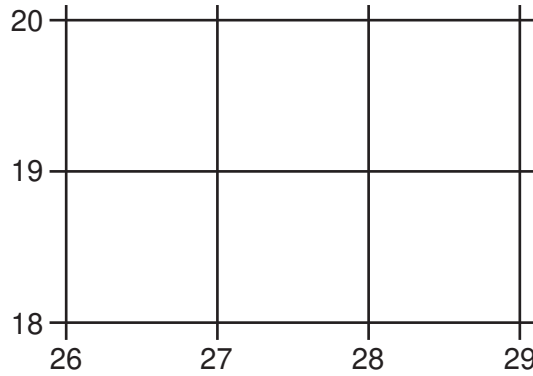State the map evidence for mining in this area.

....

....

....

....[4]

(b) Study the Ngezi River from the western edge of the map at 200225 to the railway bridge at 297217.

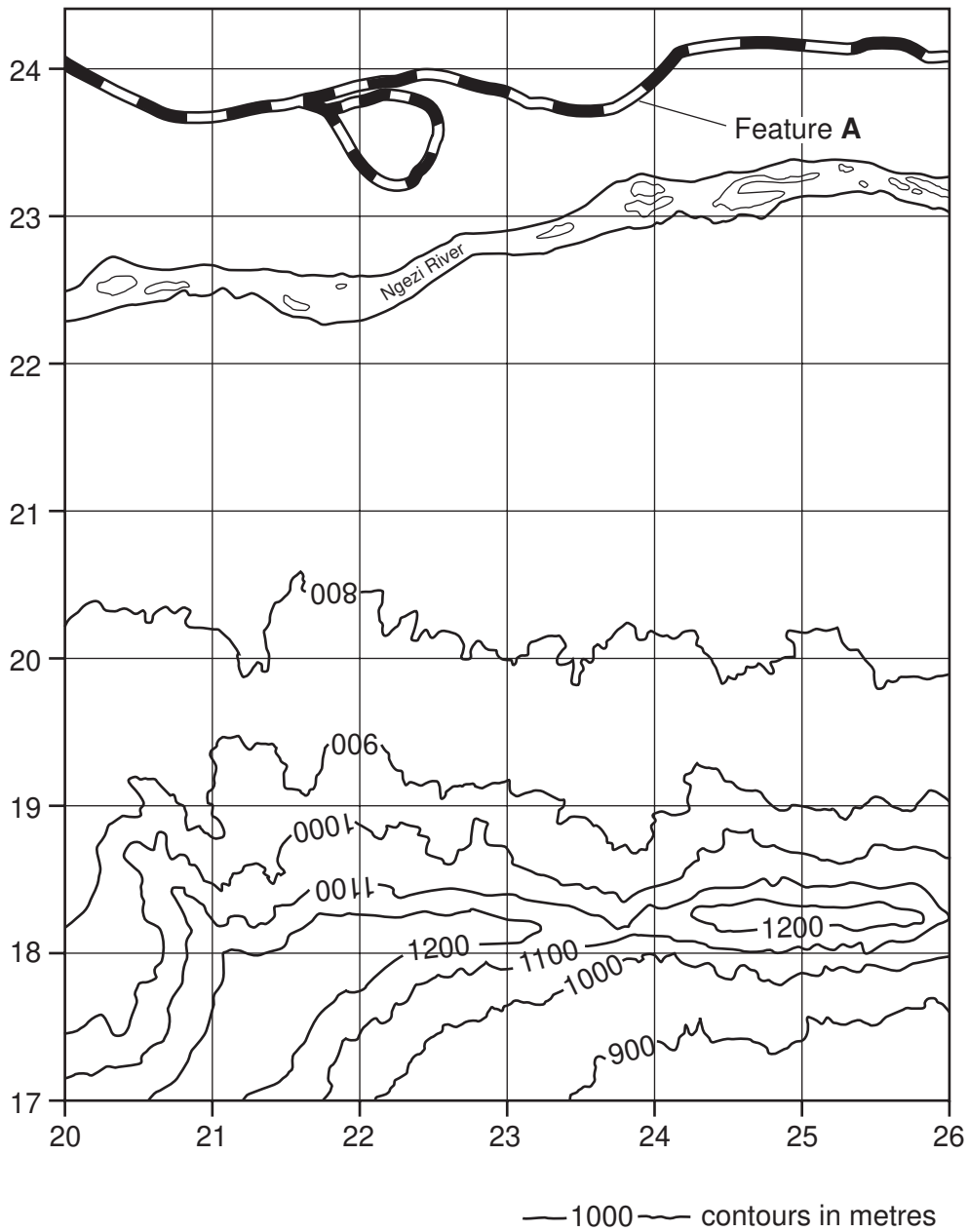**(i)** State the direction of flow of the river.

....[1]

(ii) Describe the features of the river and its channel.

....

....

....

....

....

....

....[4]

(c) Fig. 2 shows the south-western part of the map extract.

Fig. 2

 (i) Name feature **A** shown on Fig. 2.

 ....[1]

 (ii) On Fig. 2, use the correct letter to label the position of

  an area of gentle slopes (G),
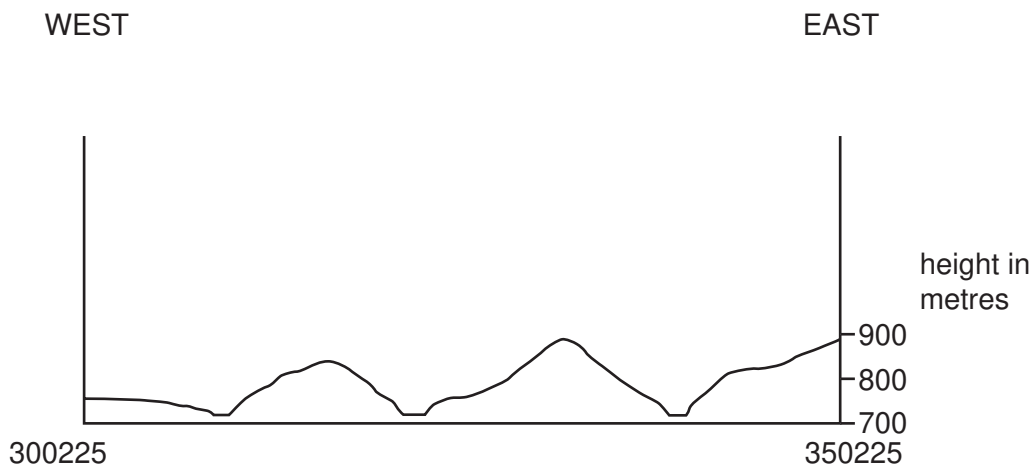 an area of steep slopes (S),
  a ridge (R). [3]

(d) Study the linear pattern of huts in the north-east of the extract, east and south of Gundekunde B.C. (320260).

Give **two** reasons for this settlement pattern.

1 ....

....

2..

....[2]

(e) Fig. 3 shows a cross section from west to east from 300225 to 350225.

WEST   EAST

height in metres
900
800
700

300225   350225

Fig. 3

On Fig. 3, use labelled arrows to show the positions of

    (i) the Ngezi River,

    (ii) Gundekunde Hill.   [2]

(f) A conveyor, marked on the map, is used to transport minerals from near the quarry at 216178 to Mukwakwe Siding at 225234.

(i) Measure the length of the conveyor. Give your answer in metres.

……………. …………….metres [1]

(ii) The conveyor starts at 1300 m above sea level and falls to 760 m above sea level. Calculate the average gradient of the conveyor.

Horizontal distance = ...

Difference in height = ...

Gradient = 1 in .... [1]

(iii) Measure the bearing from grid north of the conveyor from its high point at the quarry to its low point at the siding.

…………………………………degrees [1]

2   Fig. 4 shows the GNP per head (a measure of wealth production) and the percentage of the population living in urban areas for some countries in South America.
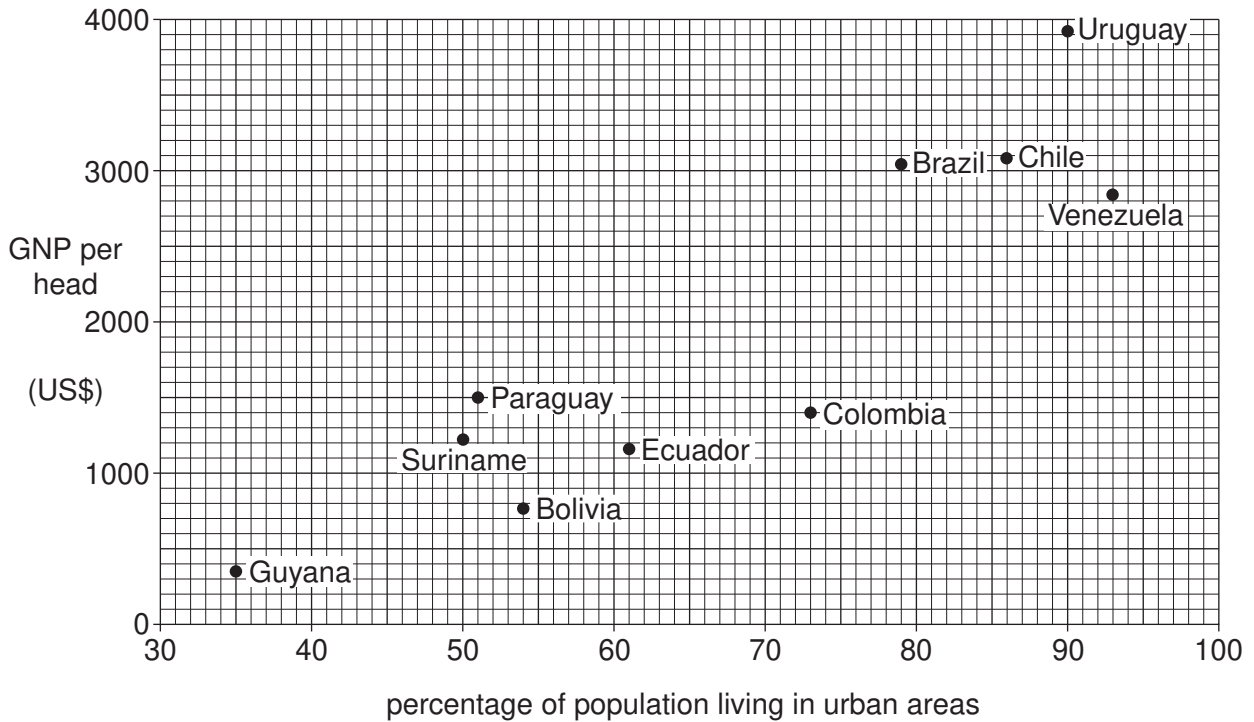
Fig. 4

   (a) (i) Which country shown on Fig. 4 is most urbanised?

   .... [1]

   (ii) Trinidad had a GNP per head of US$3 750 and an urban population of 67%. On Fig. 4, mark with a dot and label the position of Trinidad.   [1]

   (b) (i) Describe the relationship between GNP and urban population shown on Fig. 4.

   ....[1]

   (ii) Suggest **one** reason for this relationship.

   ....

   ....

   .... [1]

(c) Fig. 5 shows the population pyramids for Peru and Argentina.
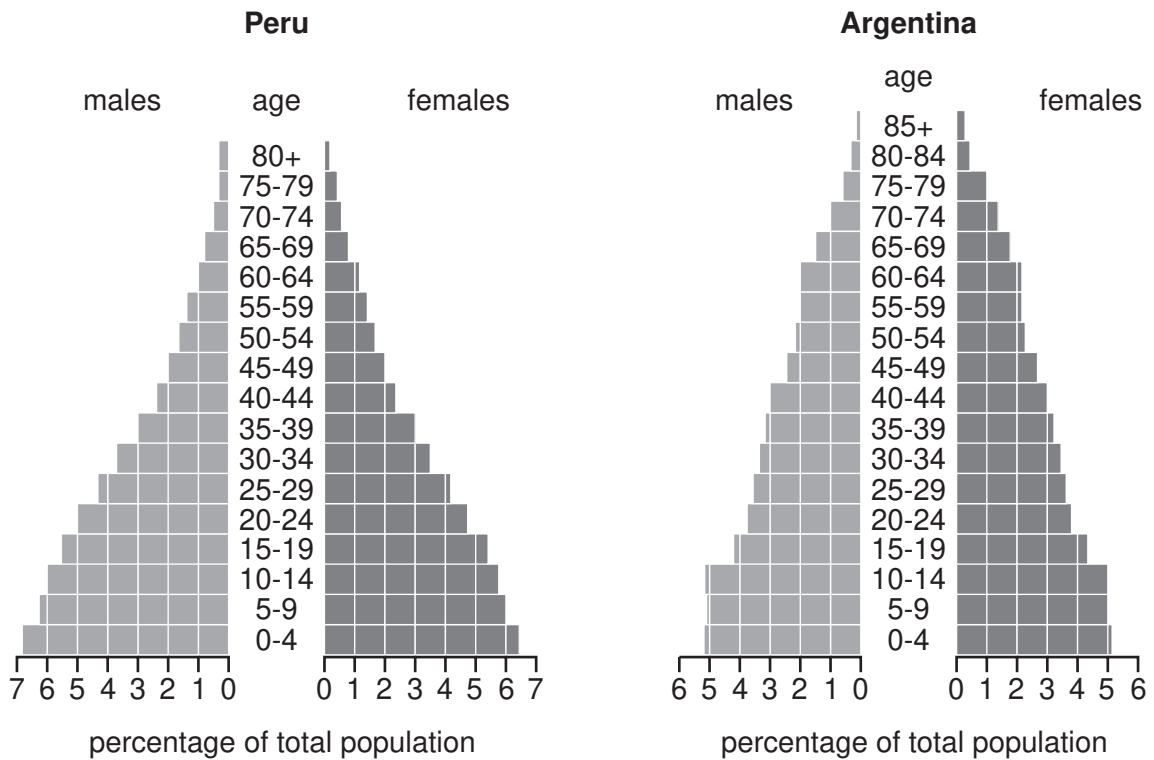
Fig. 5

Describe the differences in population structure between the two countries in

    (i) the percentage of 0-14 year olds, ...

        ....[1]

   (ii) the percentage of 15-34 year olds, ...

        ....[1]

  (iii) the percentage of 35+ year olds, ...

        ....[1]

  (iv) life expectancy. ....

        ....[1]

3 Fig. 6 shows major roads and passenger railways in southern Namibia. Photograph A (Insert) shows part of the B1 road and Photograph B (Insert) shows part of the C13 road.
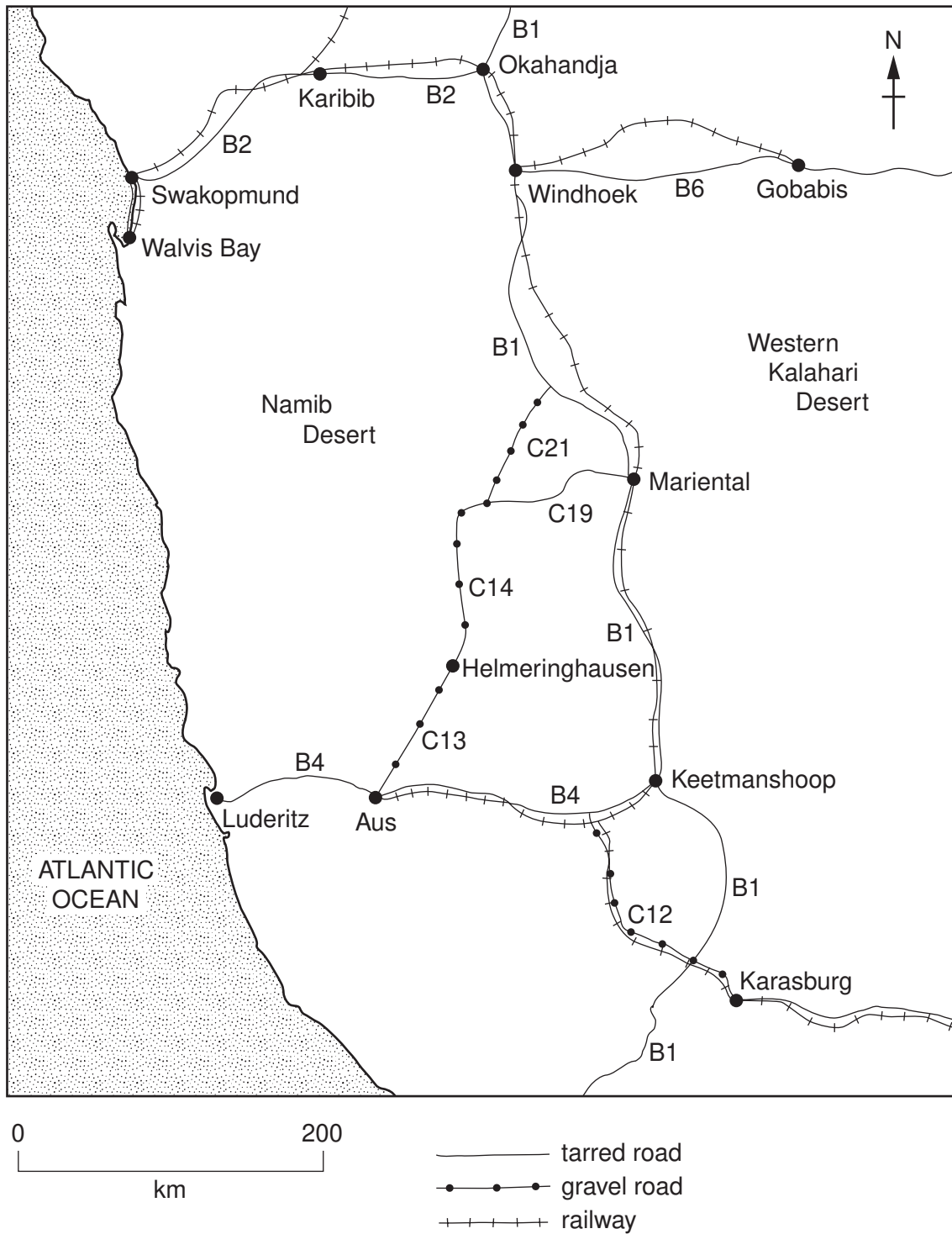
Fig. 6

(a) (i) State the letter and number of the road which links Karibib and Swakopmund.

....[1]

(ii) Which **two** towns, shown on the map, do not have a railway link?

....[1]

(iii) Which town is furthest by tarred road from Walvis Bay?

....[1]

(b) A person wishes to travel by road between Windhoek and Luderitz. Two routes are possible. These are

Route A   Via Keetmanshoop (B1, B4),
Route B   Via Helmeringhausen (B1, C21, C14, C13, B4).

Using evidence from Fig. 6 and Photographs A and B only, suggest reasons for choosing each route.

Reasons for choosing Route A and rejecting Route B

....

....

....

....

....

....

....

Reasons for choosing Route B and rejecting Route A

....

....

....

....

....

....

....[5]

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4   Fig. 7 shows river flows for the Salmon River in Idaho, USA. The data are for May, June and July 2001 and 2003.
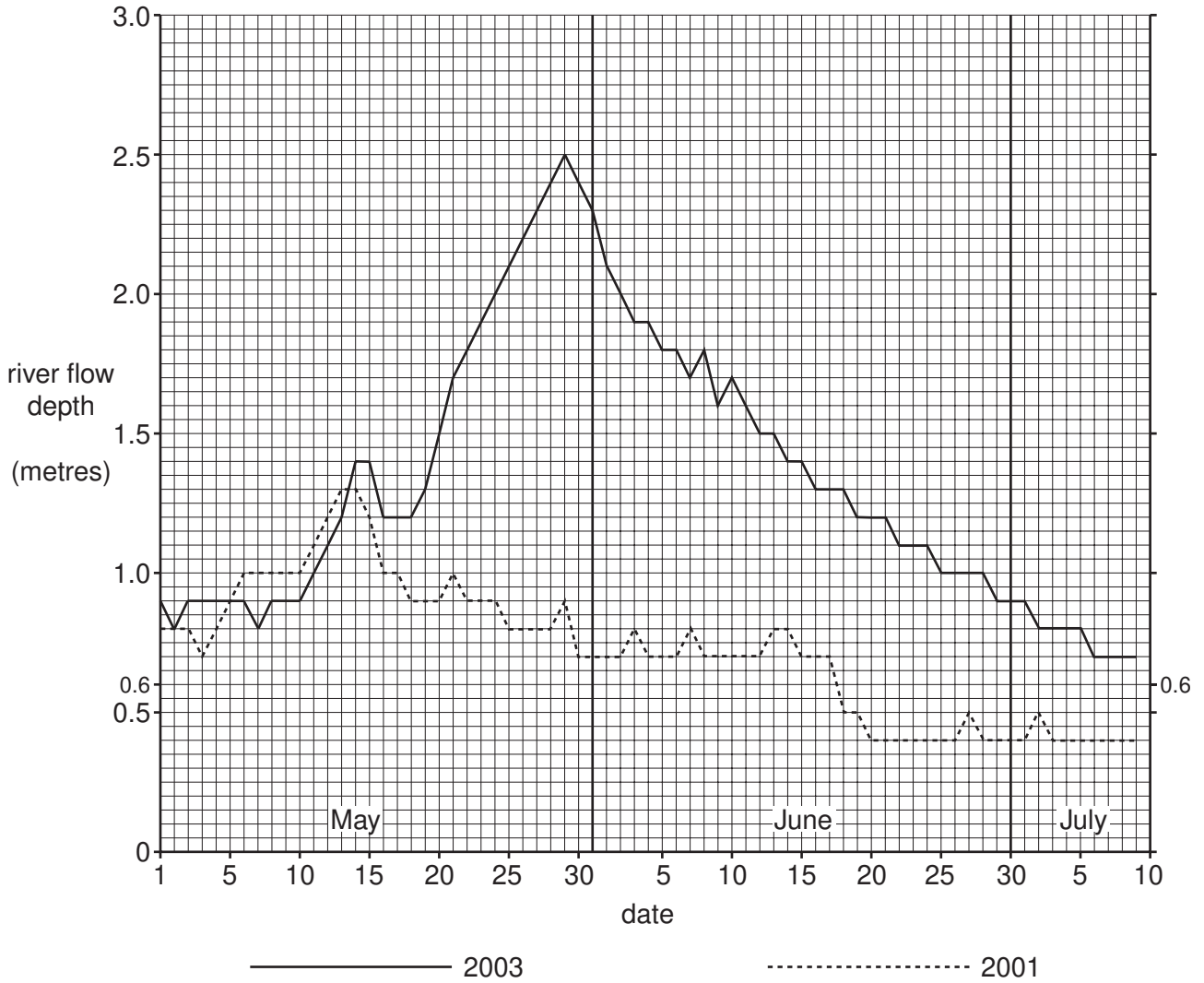

Fig. 7

(a) Look at the highest flow in 2003. State the water depth and the date.

Depth of highest flow ……………………… metres

Date of highest flow …………………………   [2]

(b) Suggest reasons for the variation in river flows shown in Fig. 7.

....

....

....

....

....

....

....

....

....[3]

(c) The Salmon River is used in summer for water sports such as rafting and canoeing. Table 1 shows the hazard rating for different river flow depths.

River flow depths (metres)	Rating
More than 1.8	Extremely Hazardous
1.5 – 1.8	Hazardous
0.6 – 1.4	Normal
Less than 0.6	Low water hazards

Table 1

(i) Estimate the number of days with low water hazards between May 1st and July 10th 2001.

....[1]

(ii) Estimate the number of days which were hazardous or extremely hazardous due to high flows between May 1st and July 10th 2003.

....[1]

(d) Flows are measured continuously on rivers around the world. Name **one** other use for this information.

....

....[1]

5 Fig. 7 shows the changes in life expectancy between 1970 and 2002 in some countries in west Africa and south Asia.
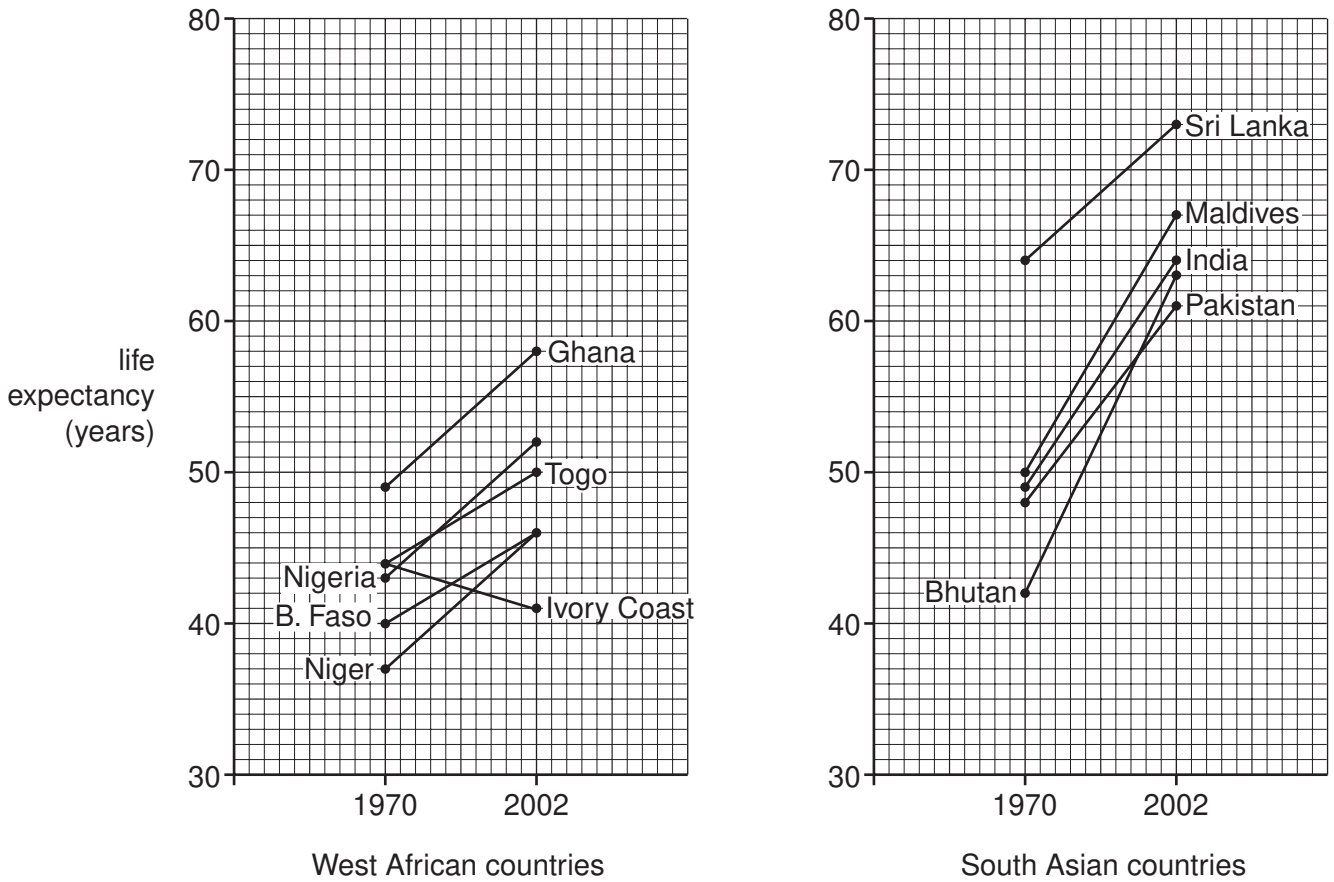
B. Faso = Burkina Faso

Fig. 8

(a) (i) Which country had the highest life expectancy in 2002?

....[1]

(ii) Which country showed a decrease in life expectancy between 1970 and 2002?

....[1]

(iii) Life expectancy in Afghanistan in south Asia increased from 38 in 1970 to 43 in 2002. Plot this information on Fig. 8.   [1]

(iv) Which country showed the greatest increase in life expectancy?

....[1]

(b) Fig. 9 shows life expectancy and gross national income per head for the same countries.

× south Asian country
● west African country

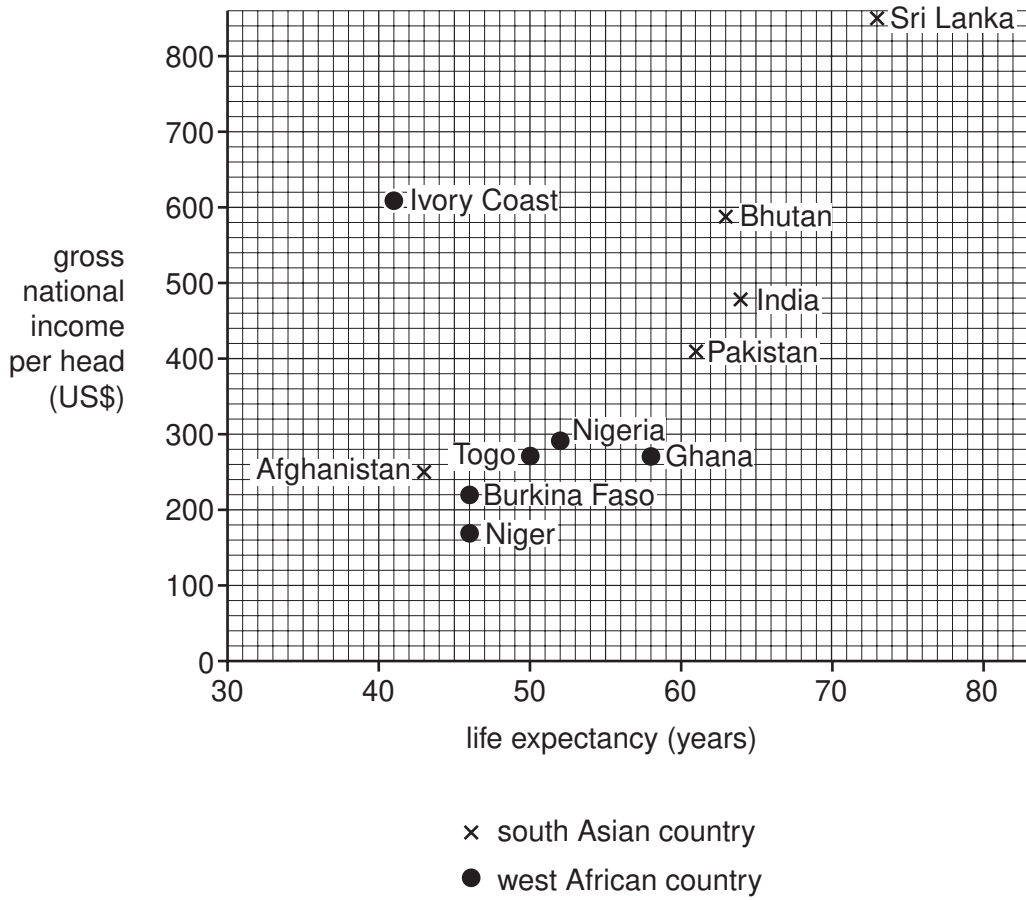**Fig. 8**

  (i) Describe the general relationship between life expectancy and gross national income per head.

  ....

  ....[1]

  (ii) Describe the differences in gross national income per head and life expectancy between the west African countries and the south Asian countries.

  ....

  ....

  ....

  ....

  ....

  ....[3]

6   Fig. 10 shows an area where four settlements have been affected by a major earthquake. Table 2 describes the effects of the earthquake on the four settlements.
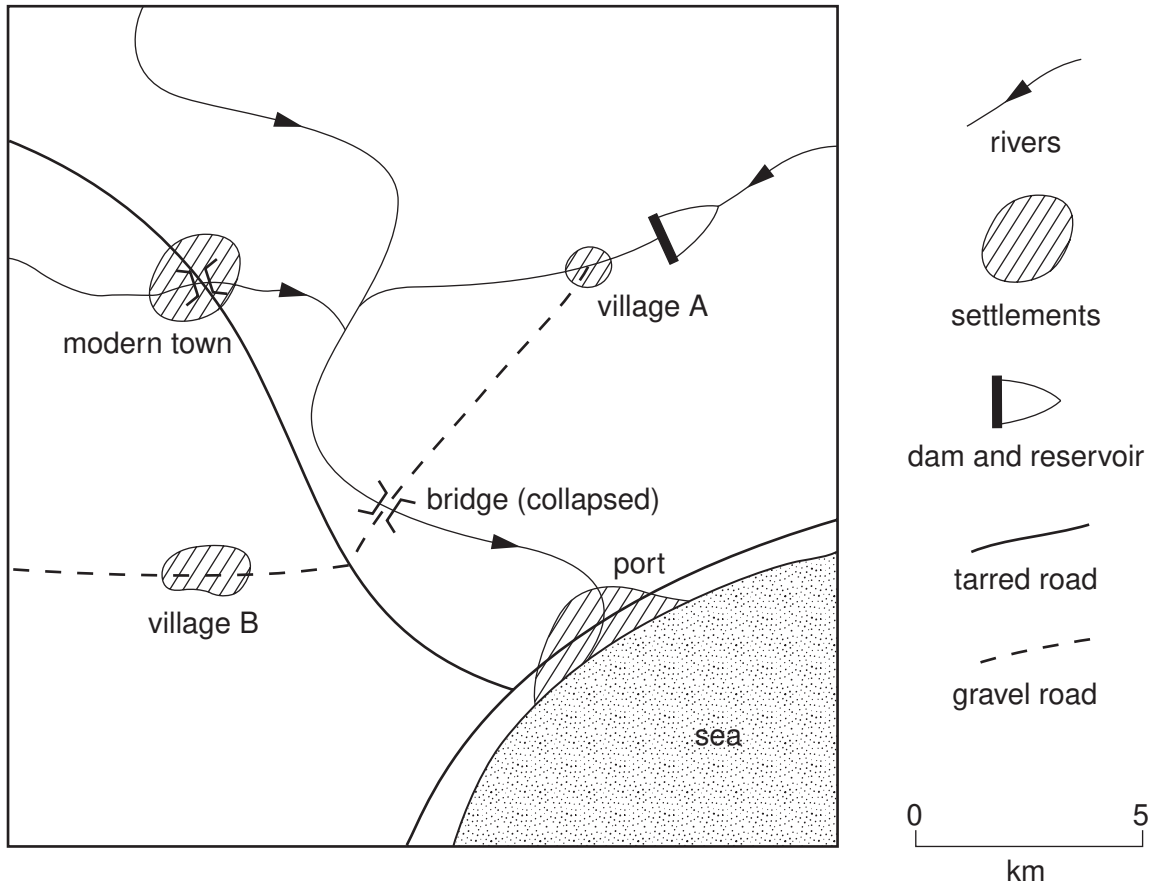

Fig. 10

Settlement	Earthquake effects
village A	landslides and mudflows, collapse of dam, buildings sink and collapse, gravel road washed away, flooding
	minor building damage, broken windows, tsunami
	minor building damage, damage to road bridge, broken windows
	collapse of old, traditionally-built housing, fire, gravel road washed away

Table 2
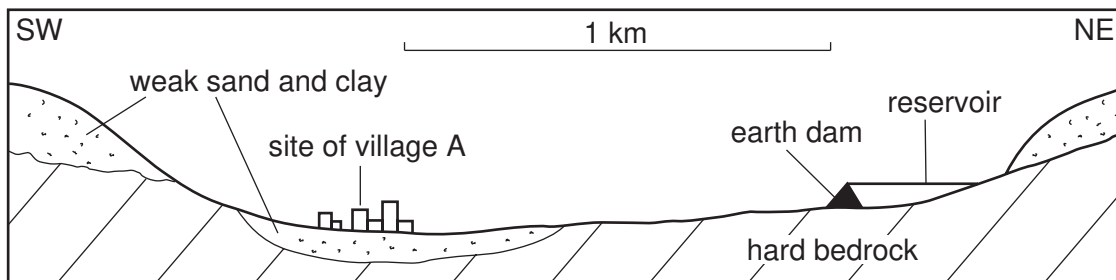
(a) Complete Table 2 by adding the correct settlements.   [2]

(b) Give **two** reasons why it was difficult to get relief aid to village A after the earthquake.

1...

....

2...

....[2]

(c) Fig. 11 shows the site of village A.

SW   1 km   NE

weak sand and clay   reservoir

site of village A   earth dam

hard bedrock

Fig. 11

Use the information on Fig. 11 to explain the causes of the following earthquake effects on the village.

Flooding ....

....

....[1]

Landslides and mudflows ....

....

....[1]

Sinking and collapse of buildings ....

....

....[1]

(d) Name **one** area of the world where earthquakes occur.

....[1]

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