



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
International General Certificate of Secondary Education

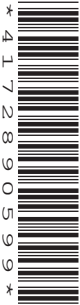
CANDIDATE  
NAME

CENTRE  
NUMBER

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**GEOGRAPHY**

**0460/23**

Paper 2

**May/June 2010**

**1 hour 30 minutes**

Candidates answer on the Question Paper.

Additional Materials:     Ruler  
                                  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 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.  
**DO NOT WRITE ON ANY BARCODES.**

Answer **all** questions.  
The Insert contains Photograph A for Question 4.  
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

The Survey Map Extract and the Insert are **not** required by the Examiner.

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	
<b>Q1</b>	
<b>Q2</b>	
<b>Q3</b>	
<b>Q4</b>	
<b>Q5</b>	
<b>Q6</b>	
<b>Total</b>	

This document consists of **14** printed pages, **2** blank pages and **1** Insert.



1 The map extract is for Mandama, Zimbabwe. The scale is 1:50 000.

(a) Fig. 1 shows the position of some features in the south east part of the map extract. Study the map extract and Fig. 1 and answer the questions below.

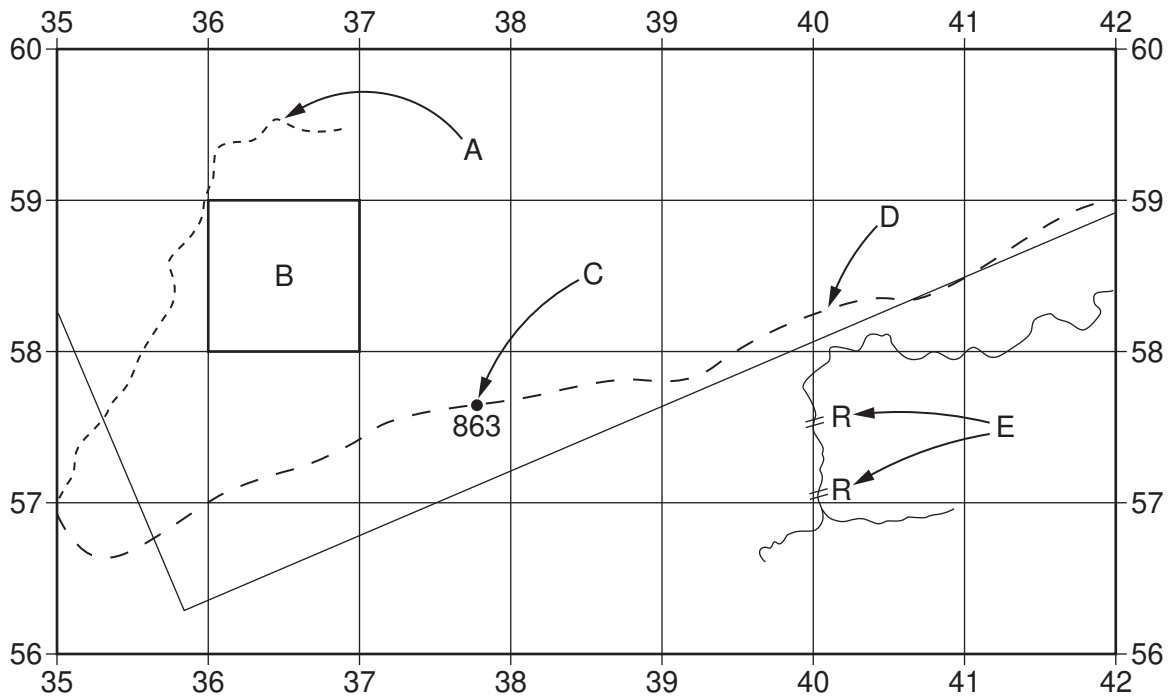


Fig. 1

Using the map extract, identify the following features shown on Fig. 1:

- (i) feature A (3557, 3558, 3659);  
..... [1]
- (ii) the vegetation at B (3658);  
..... [1]
- (iii) the feature at C (378576);  
..... [1]
- (iv) feature D (4058);  
..... [1]
- (v) feature E (4057);  
..... [1]

(b) Fig. 2 shows the coal mining area in the north east of the map extract.

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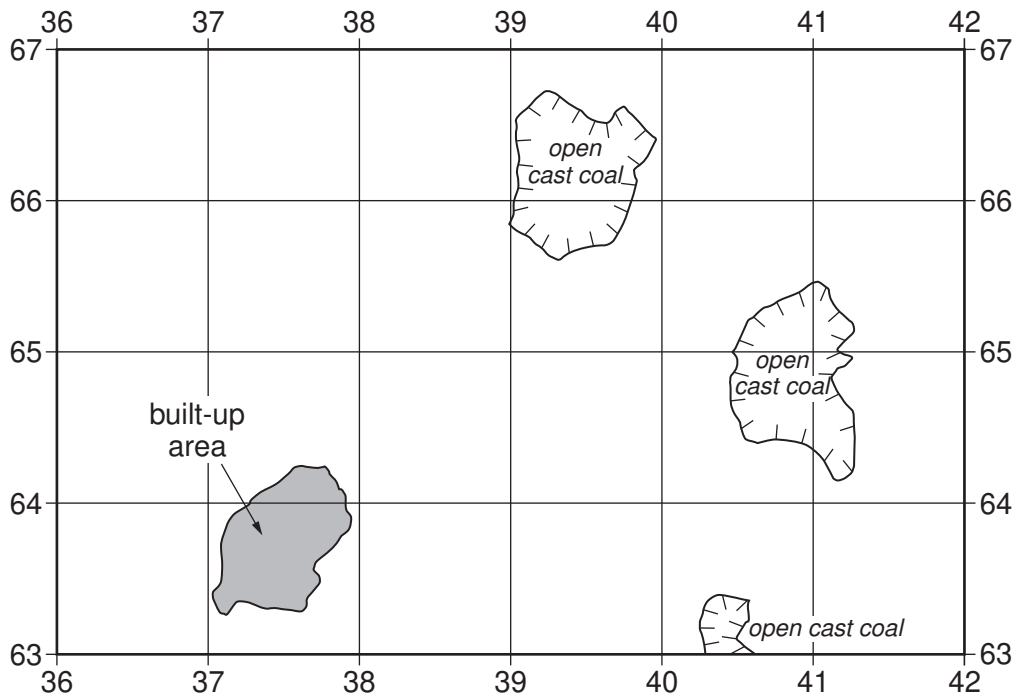


Fig. 2

(i) How is the mining area supplied with power, water and transport? State the map evidence.

power..... [1]

water..... [1]

transport.....

..... [2]

(ii) Look at the built up area shown on Fig. 2. Describe the types of road and the road network in this area.

.....

.....

.....

.....

..... [3]

(c) Look at the large rivers in the western part of the map extract.

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(i) Find the major river confluence (junction) one kilometre south of Gobo Sulphur Springs. Give the six figure grid reference of the confluence.

..... [1]

(ii) State the general direction of flow of the Kwizizi river. Give **one** reason for your answer.

Direction of flow.....

Reason.....

.....

..... [2]

(d) Fig. 3 shows an area in the central part of the map extract. Describe the relief and drainage of this area.

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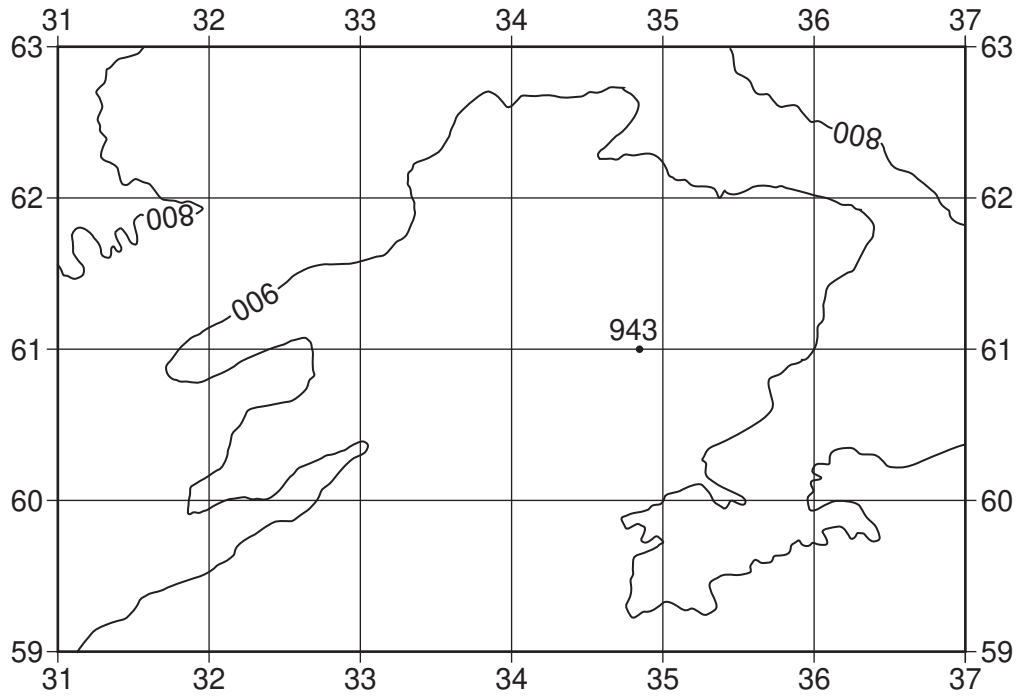


Fig. 3

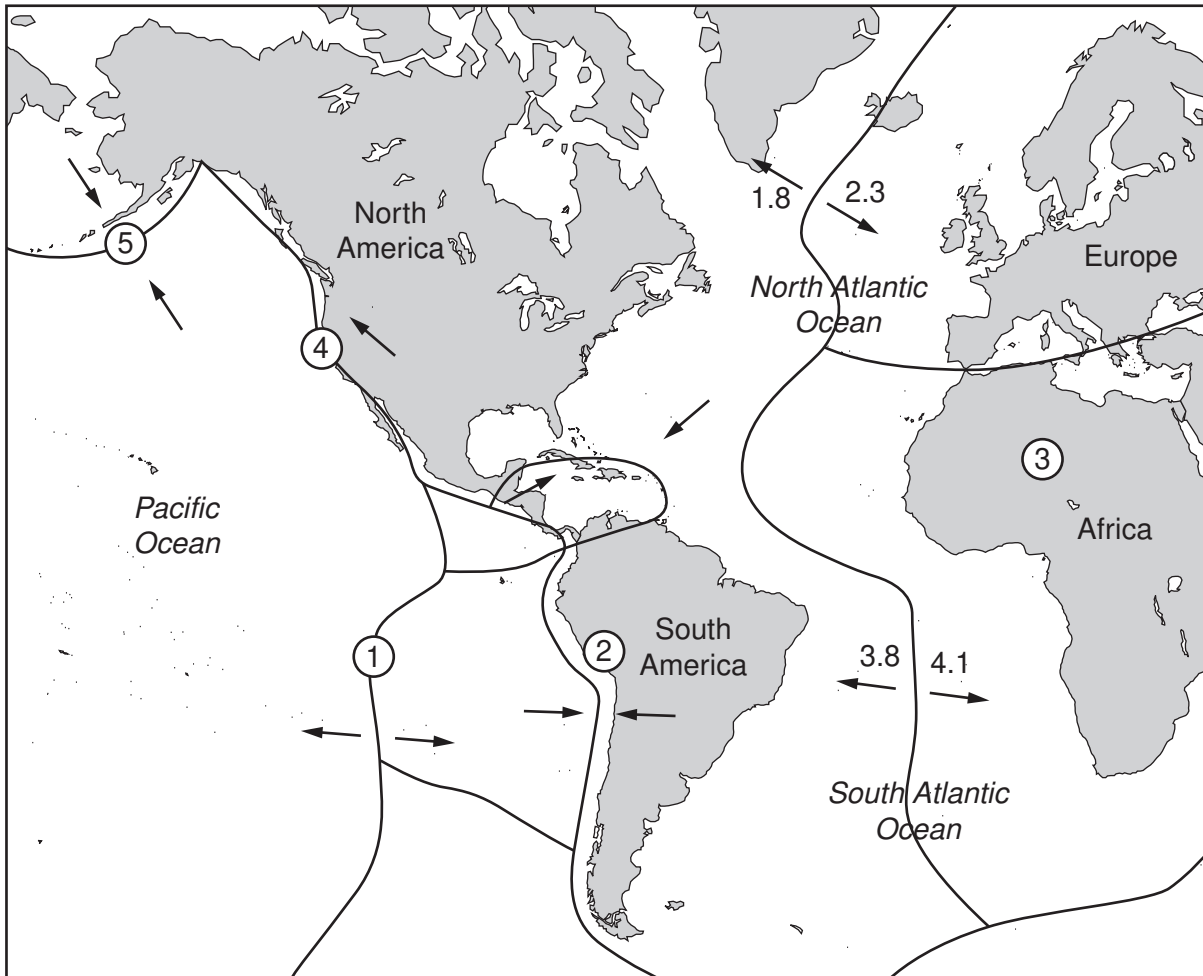
Relief.....  
.....  
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.....

Drainage.....  
.....  
.....  
..... [5]

[Total: 20 marks]

- 2 Fig. 4 is a map showing plates, plate margins, and the directions and speeds of plate movement.

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**Key**

— plate margin

→ plate movement

2.3 speed of plate movement in centimetres per year.

**Fig. 4**

- (a) Five places, 1 – 5, are marked on Fig. 4. For each question write **one** number in each box. You may use any of the numbers 1 – 5 once, more than once or not at all.

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Which number on the map shows a:

- |   |                          |     |
|---|--------------------------|-----|
| (i) place where earthquakes occur;                      | <input type="checkbox"/> | [1] |
| (ii) place where no major earthquakes occur;            | <input type="checkbox"/> | [1] |
| (iii) place where plates are moving towards each other; | <input type="checkbox"/> | [1] |
| (iv) fold mountain chain;                               | <input type="checkbox"/> | [1] |
| (v) place where plates are sliding past each other;     | <input type="checkbox"/> | [1] |
| (vi) subduction zone;                                   | <input type="checkbox"/> | [1] |
| (vii) place where sea floor spreading is happening?     | <input type="checkbox"/> | [1] |

- (b) The South Atlantic Ocean is getting wider. Using information from Fig. 4, calculate how much wider the ocean is getting each year. State the correct units in your answer.

.....  
..... [1]

[Total: 8 marks]

3 Industries are classified as primary, secondary or tertiary.

(a) Complete the following table by giving an example of an industry in each sector.

Sector	Example of an industry
primary industry	.....
secondary industry	.....
tertiary industry	.....

[3]

(b) Fig. 5 is a graph used to show the percentages of people employed in the different sectors. The numbers for United Kingdom in three years are shown.

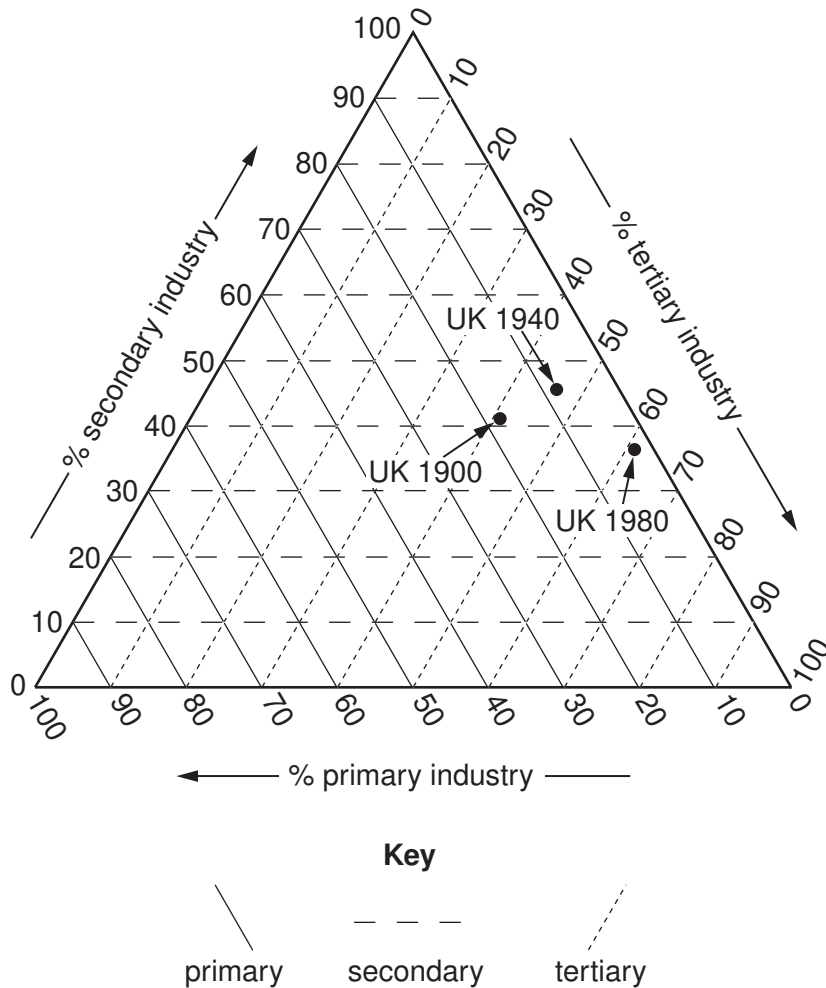


Fig. 5



- (i) In Bangladesh, 58% are employed in primary industry, 17% in secondary industry and 25% in tertiary industry. Plot this information on Fig. 5 using a labelled dot. [2]
  
- (ii) The percentages employed in the different sectors change as a country becomes more developed. Fig. 5 shows information for the United Kingdom in 1900, 1940 and 1980.

Use this information to describe how the United Kingdom's employment structure changed between 1900 and 1980. You do not need to quote figures in your answer.

.....

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..... [3]

[Total: 8 marks]

4 Photograph A (Insert) shows a waterfall and the surrounding area.

(a) Describe the physical features of the area shown in the photograph.

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..... [5]

(b) Explain how river processes may cause the position of the waterfall to change in the future.

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..... [3]

[Total: 8 marks]



5 Fig. 6 shows the distribution of areas that have experienced food shortages in recent years.

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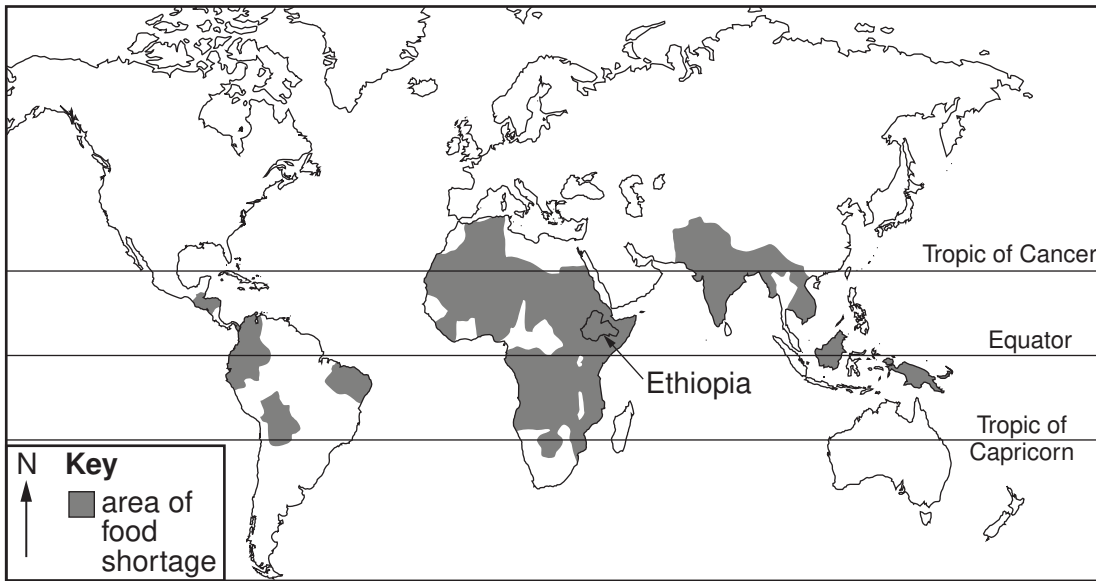


Fig. 6

(a) Describe the distribution of the areas that have experienced food shortages.

.....

.....

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..... [3]

(b) Fig. 7 provides information about Ethiopia, a country whose location is shown on Fig. 6.

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**Ethiopia**

Ethiopia, an LEDC in East Africa, has suffered from long term food supply problems. However in 2006, cereal and pulse (peas and beans) production was estimated to be about 46% above the average of the previous four years. The increase was partly due to well-distributed rainfall at the right time in the main crop producing areas, and to an increased area under cultivation.

Attempts have also been made to increase cereal production. Increased use of improved seeds and rapid control of pests have been successful. Cereal prices throughout 2006 were higher but more stable than in previous years. Attempts have also been made to make cereal prices stable by local purchases of food aid and a gradual release of crops to the market by farmers and cooperatives.

Despite the good harvest in 2006, many people required emergency food assistance. Of urgent concern was the food situation of 1.5 million people, mainly pastoral farmers, in south-eastern Ethiopia, due to failed seasonal rains. Pre-famine conditions were reported, including widespread human and livestock migrations, poor livestock condition and cases of livestock deaths.

**Fig. 7**

- (i) What was the cause of the pre-famine conditions in south eastern Ethiopia?  
..... [1]
- (ii) Using Fig. 7 only, give **three** causes of the increase in cereal production.
  - 1 .....
  - 2 .....
  - 3 ..... [3]
- (iii) Suggest why stable food prices might help prevent famine.  
.....  
.....  
..... [1]

[Total: 8 marks]

6 Table 1 gives information about the population of India. The figures shaded are estimates of future trends.

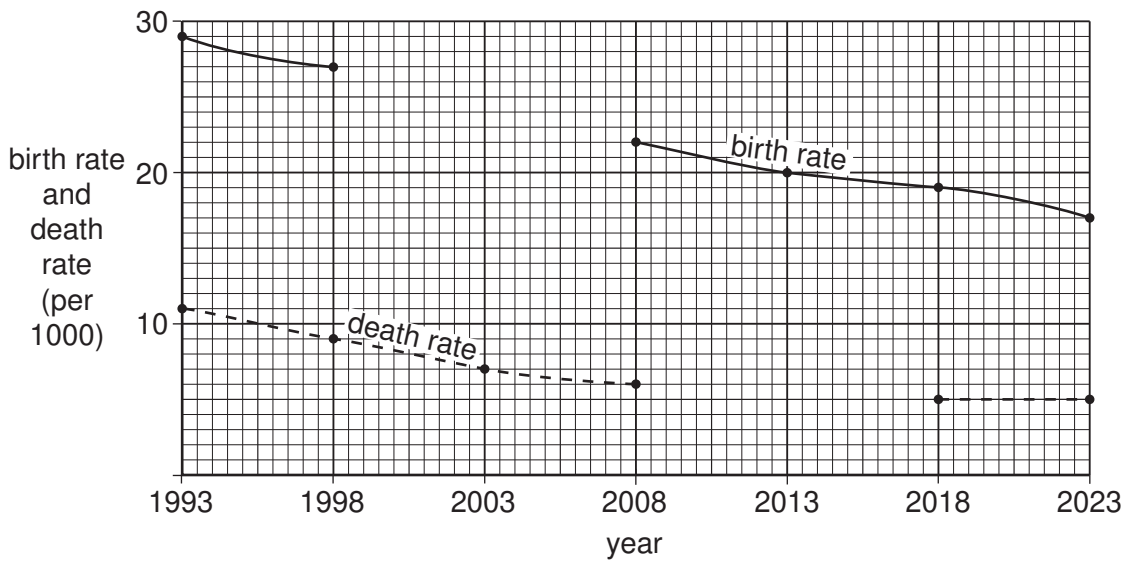
**Table 1**

Year	Births per 1000	Deaths per 1000	Natural increase (%)	Migration (%)	Growth rate (%)
1993	29	11	1.821	-0.008	1.813
1998	27	9	1.793	-0.007	1.786
2003	24	7	1.698	-0.005	1.693
2008	22	6	1.582	-0.005	1.577
2013	20	6	1.451	-0.005	1.446
2018	19	5	1.336	-0.004	1.332
2023	17	5	1.229	-0.004	

**Key**

- = outward migration

- (a) (i) Complete Table 1 by adding the growth rate projected for 2023. (Population growth rate = natural increase ± migration). [1]
- (ii) Describe how population migration from India has changed over time. [1]
- (iii) What effect is migration having on India's total population? [1]
- (b) Fig. 8 (below) shows India's changing birth and death rates. Use the information in Table 1 to complete Fig. 8. [2]



**Fig. 8**

(c) Fig. 9 shows the demographic transition model. Use Figs 8 and 9 to suggest which stage of the model applies to India. Give reasons for your answer:

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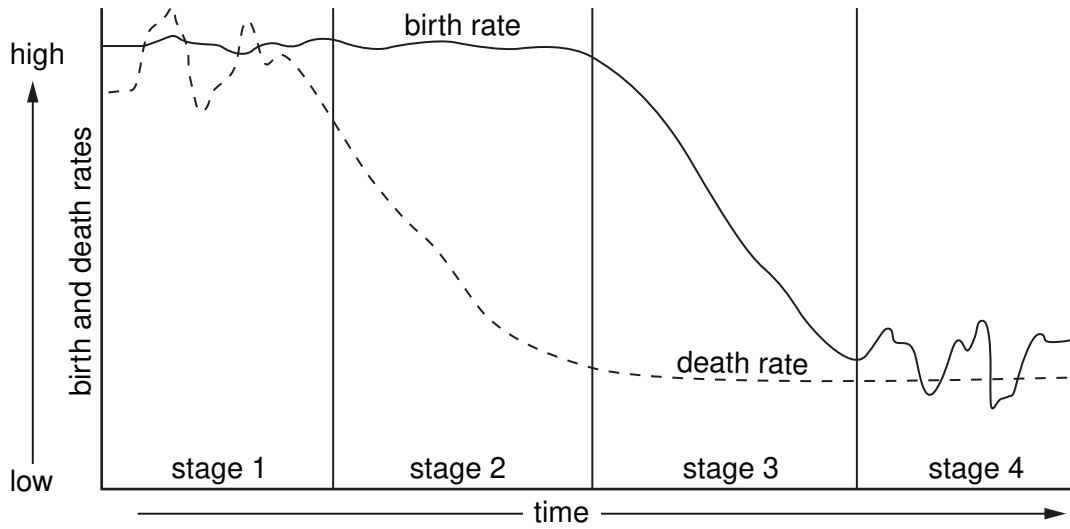


Fig. 9

Stage .....

Reasons for your answer .....

.....  
.....  
.....  
.....  
..... [3]

[Total: 8 marks]

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