



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

CANDIDATE
NAME

CENTRE
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BANGLADESH STUDIES

0449/02

Paper 2 Environment and Development of Bangladesh

May/June 2013

1 hour 30 minutes

Additional Materials: Insert

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the boxes above.
Write in dark blue or black pen.
You may use a pencil for any sketch maps, diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.
DO NOT WRITE ON ANY BARCODES.

Write your answer to each question in the space provided.
If additional space is required, you should use the lined page at the end of this booklet. The question number(s) must be clearly shown.

Answer **three** questions.
You are advised to spend about 30 minutes on each question.
The number of marks is given in brackets [] at the end of each question or part question.

The Insert contains Photograph A for Question 2.

The Insert is **not** required by the Examiner.

This document consists of **22** printed pages, **2** blank pages and an insert.



1 (a) Study the map of Bangladesh (Fig. 1) and name the following features.

For
Examiner's
Use

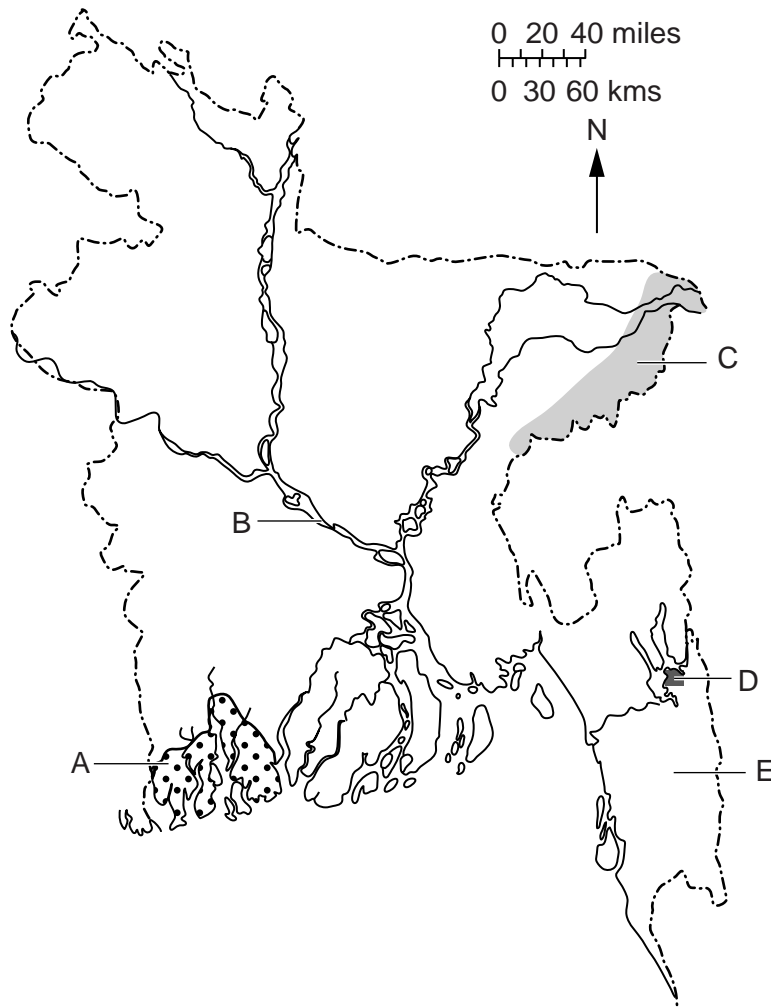


Fig. 1

- area A
- river B
- main crop grown in area C
- power generated at D
- hills E [5]

(b) (i) Study Fig. 2, which shows arsenic pollution of groundwater in parts per billion.

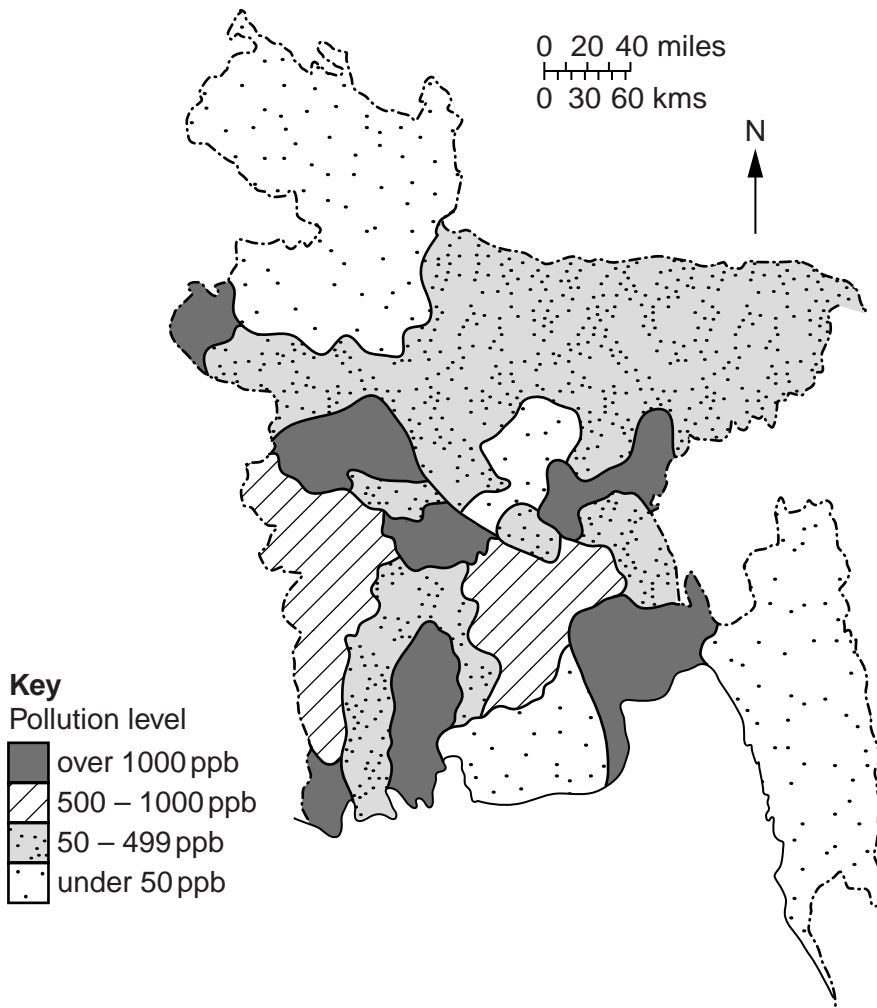


Fig. 2

Using Fig. 2, describe the distribution of arsenic pollution levels in Bangladesh.

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..... [4]

(ii) Explain how groundwater becomes polluted with arsenic.

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..... [2]

(iii) What effects does arsenic pollution have on the people who drink the water?

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..... [2]

(c) Study Fig. 3, a climate graph of Bogra.

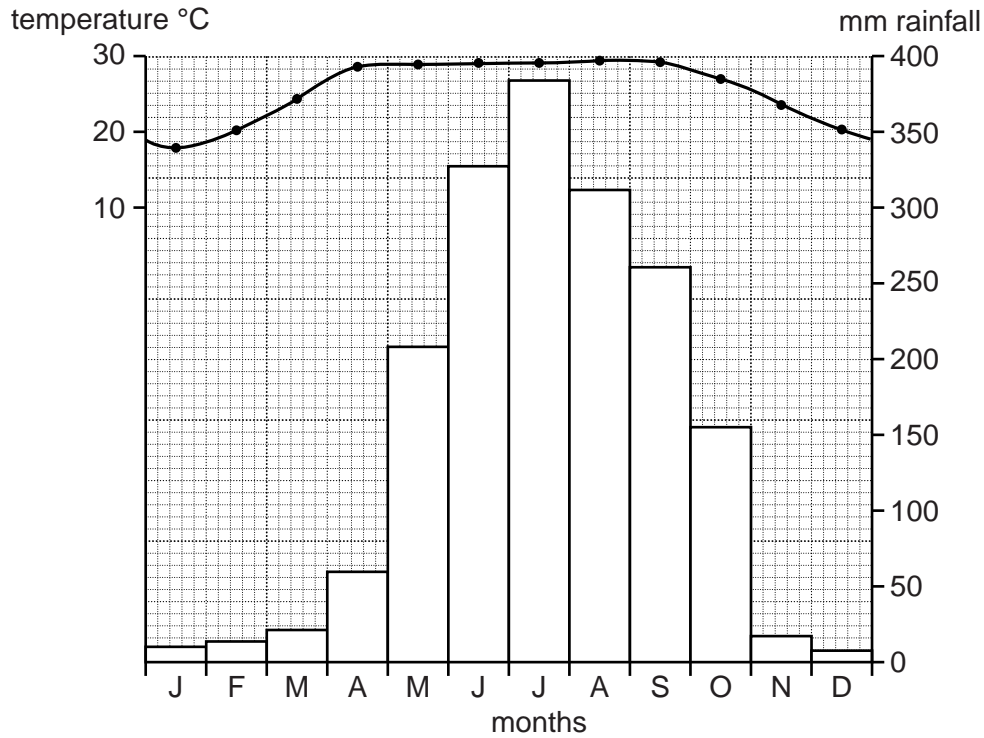


Fig. 3

- (i) What is the highest temperature? °C [1]
- (ii) Which month has the lowest temperature? [1]
- (iii) What is the highest rainfall? mm [1]
- (iv) Which month has the lowest rainfall? [1]
- (v) Explain why there are seasonal variations in the climate.

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..... [3]

(d) Study the two statements below.

- A 'The climate of Bangladesh is ideal for growing crops.'
- B 'Many problems are caused for farmers by Bangladesh's climate.'

(i) Give **one** piece of evidence which supports statement A.

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..... [1]

(ii) Give **one** piece of evidence which supports statement B.

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..... [1]

(iii) Which statement do you agree with the most? Give reasons for your answer.

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..... [3]

[Total: 25]

- 2 (a) (i) Study Photograph A on the Insert, which is a satellite image of part of the Padma (Ganges) delta.

Describe the river features seen in the photograph.

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..... [4]

- (ii) Explain how a delta, such as the Padma (Ganges), is formed.

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(ii) Explain how coastal floods are caused.

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(iii) What can people and organisations do to limit the damage caused by coastal floods?

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..... [4]

(c) Study the two statements below.

- A 'Climate change is causing heavier and less reliable rainfall.'
- B 'Climate change is causing less rainfall.'

(i) Give **one** piece of evidence which supports statement A.

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

(ii) Give **one** piece of evidence which supports statement B.

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

(iii) In your opinion, which pattern of climate change poses the greater threat to Bangladesh, A or B? Give reasons for your answer.

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..... [3]

[Total: 25]

3 (a) (i) Aquaculture is also known as the Blue Revolution.
What is aquaculture?

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..... [2]

(ii) Study Fig. 5, a graph of aquaculture production in Bangladesh.

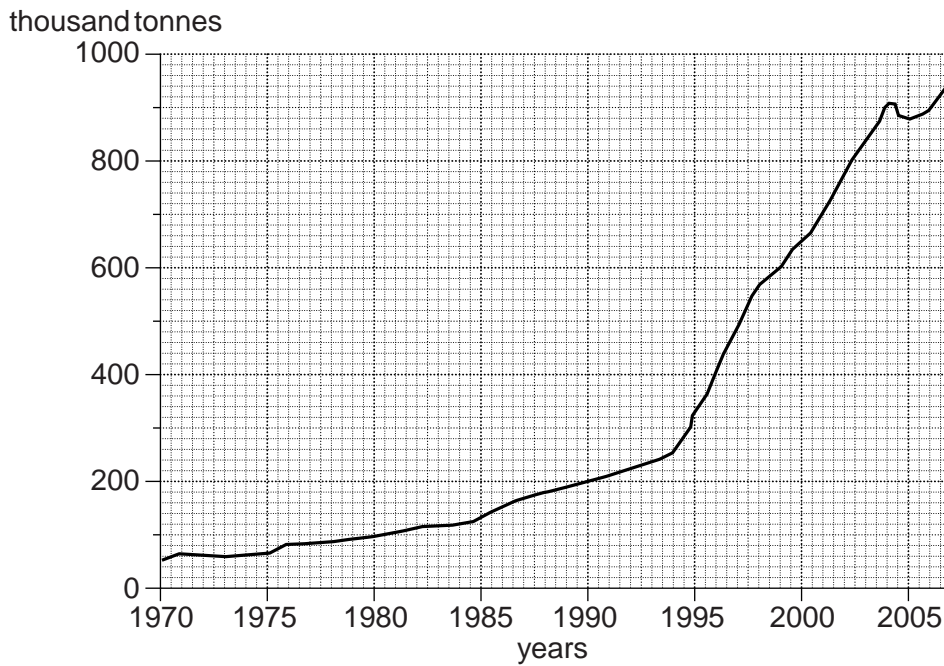


Fig. 5

Using Fig. 5, describe the general trends in aquaculture production in Bangladesh.

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..... [4]

(iii) Why is aquaculture important to the people of Bangladesh?

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(b) (i) What is meant by 'sustainable development'?

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..... [2]

(ii) Explain how the sustainable development of natural resources, such as forests, can be achieved.

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(c) (i) Study Fig. 6, which shows coal production in Bangladesh.

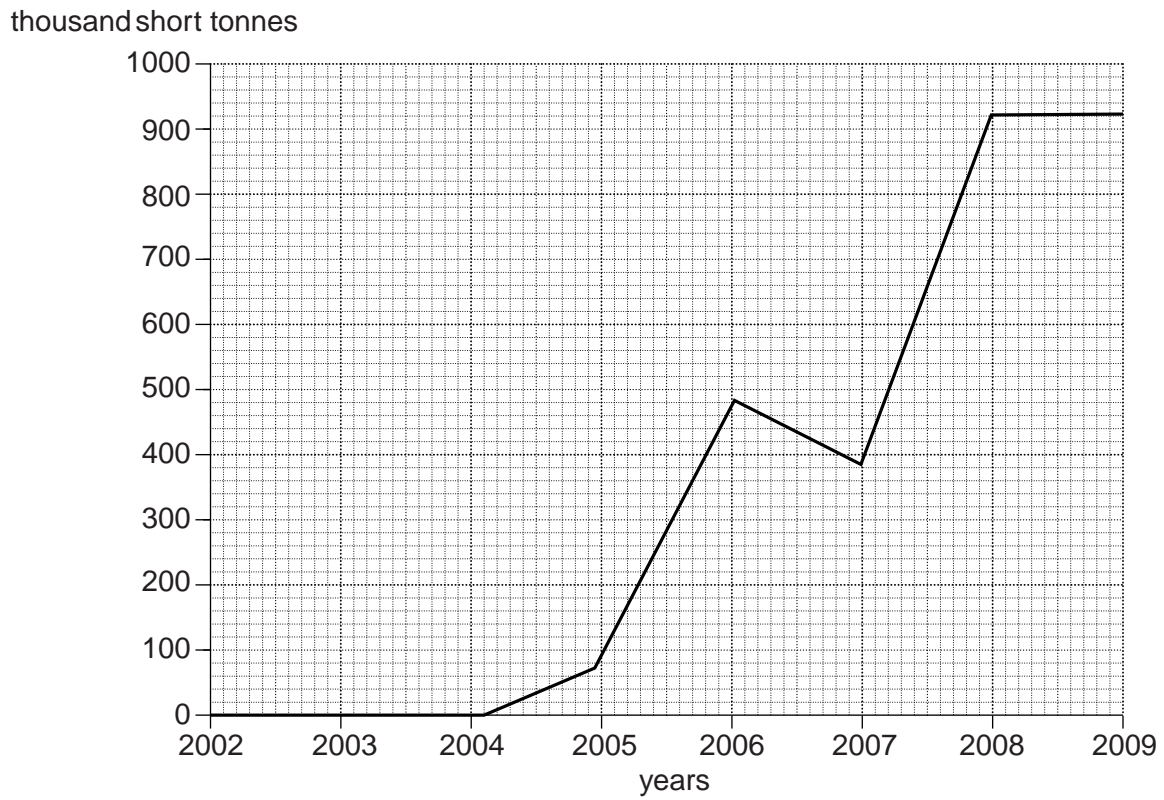


Fig. 6

Using Fig. 6, describe the changes in coal production between 2002 and 2009.

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..... [4]

(ii) How can the use of coal help to reduce deforestation?

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..... [2]

(d) There were many differing opinions when it was proposed to open a new coal mine at Phulbari. Below are two different views.

For
Examiner's
Use

I do not want to lose my home and fields to a coal mine.

local farmer

Coal under the ground is worth more than growing rice on the surface.

government official

(i) Give **one** piece of evidence in support of the farmer.

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

(ii) Give **one** piece of evidence in support of the government official.

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..... [1]

(iii) Which opinion do you agree with the most? Give reasons for your answer.

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..... [3]

[Total: 25]

(ii) Explain how technological advances, such as the Green Revolution, may have caused the changes in wheat production between 1989 and 1999.

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(b) Study Fig. 8, which shows simple technology that helps farmers to grow crops on the infertile sand bars (chars).

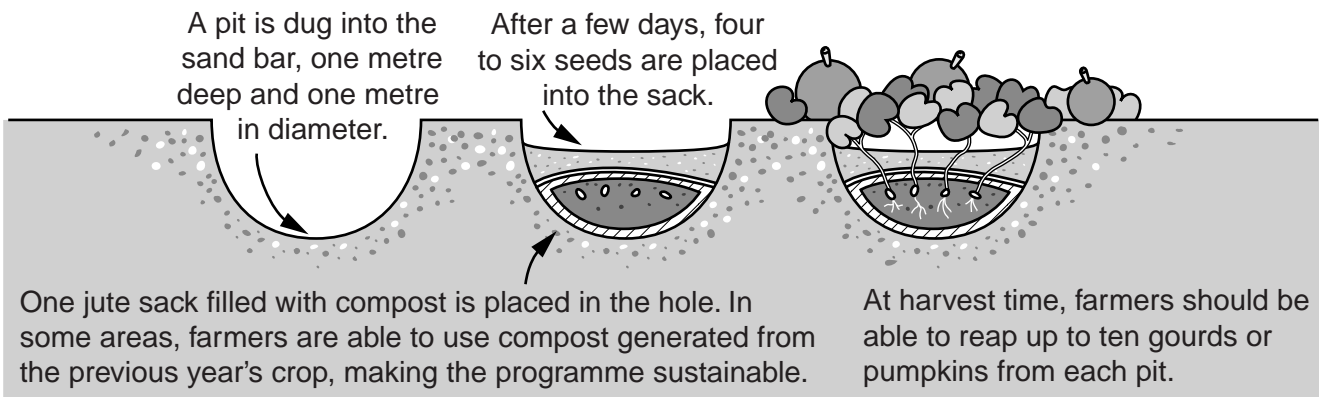


Fig. 8

Explain how the farmers can grow crops in the infertile sand.

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..... [4]

(c) Complete the table below to compare a cottage industry and a large-scale industry.

For
Examiner's
Use

	<u>cottage industry</u>	<u>large scale industry</u>	
example	[2]
labour	[2]
machinery	[2]
export and earnings	[2]

(d) Study the **two** statements below.

- A 'It is important to encourage more cottage industries to reduce unemployment.'
- B 'Investment in large-scale industries is necessary for Bangladesh's continuing development.'

(i) Give **one** piece of evidence which supports statement A.

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

(ii) Give **one** piece of evidence which supports statement B.

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

(iii) In your opinion, which statement will be the more beneficial to Bangladesh? Give reasons for your answer.

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..... [3]

[Total: 25]

- 5 (a) (i) Study Fig. 9, which shows the percentage of the population living in rural and urban areas in Bangladesh.

For
Examiner's
Use

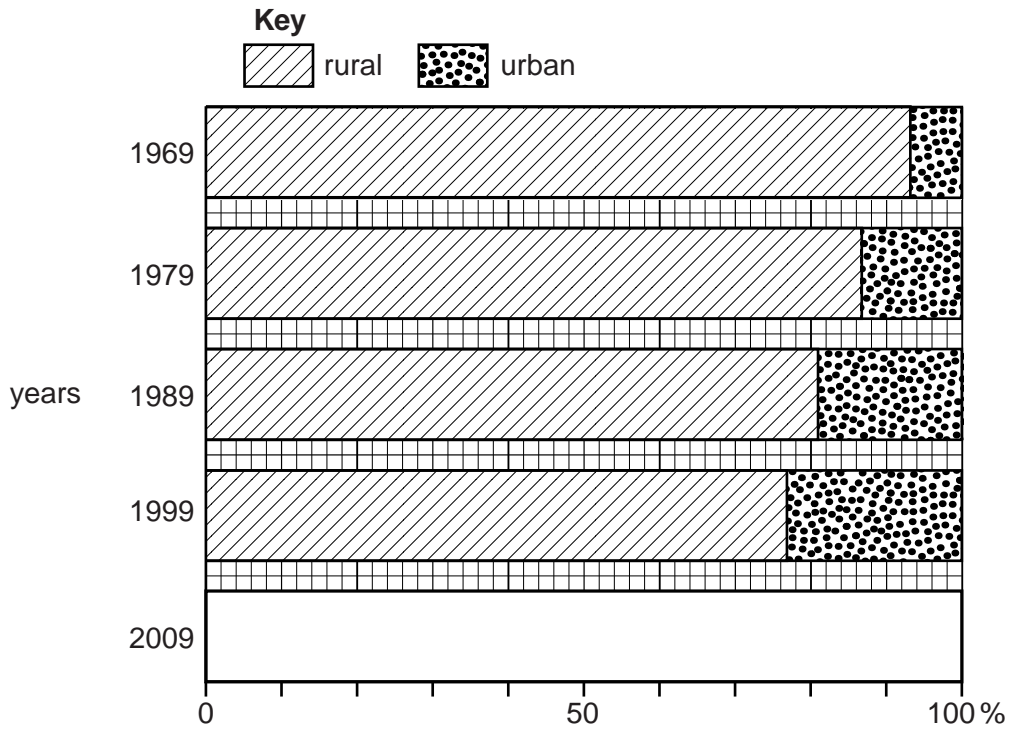


Fig. 9

On Fig. 9, complete the bar for 2009 when 73% lived in rural areas and 27% lived in urban areas. (It has been left blank for you to fill in.) [2]

- (ii) What does Fig. 9 show about the changes to rural and urban populations in Bangladesh?

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 [1]

- (iii) What are the effects in rural and urban areas of the changes shown in Fig. 9?

in rural areas

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..... [4]

(b) (i) Study Fig. 10, which shows the population structure of Bangladesh in 1979 and 2009.

For
Examiner's
Use

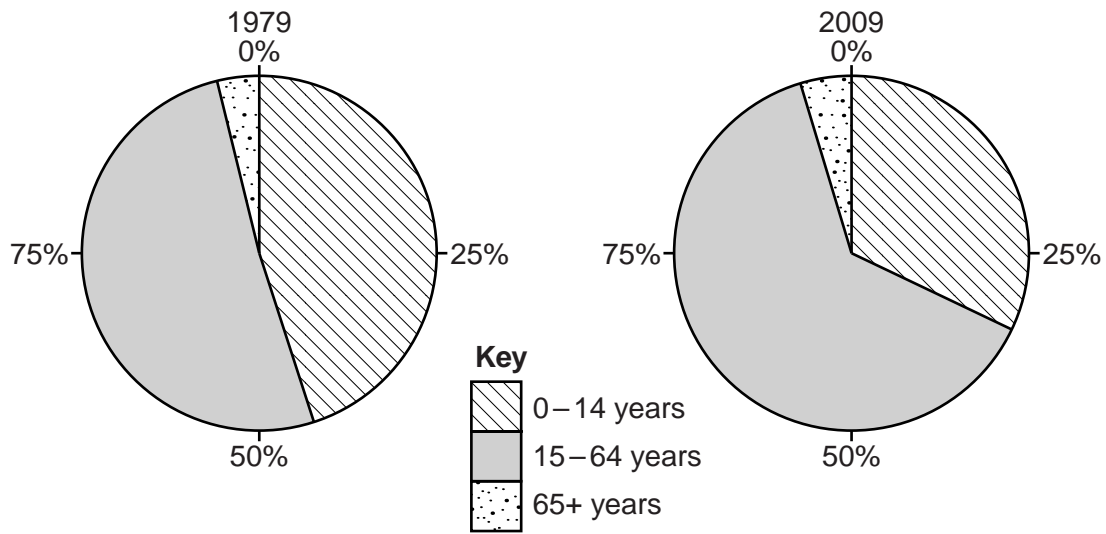


Fig. 10

Using Fig. 10, describe the changes that took place in each age group between 1979 and 2009.

0-14 years

..... [1]

15-64 years

..... [1]

65+ years

..... [1]

(ii) Explain how improvements in health care have led to the changes in the 0-14 years age group that you described in (b)(i).

.....

 [3]

(iii) Give **one** reason for the change in the 65+ age group.

.....
 [1]

- (c) (i) Study Fig. 11, which shows the percentage of children at secondary school in three countries in 1973 and 2003.

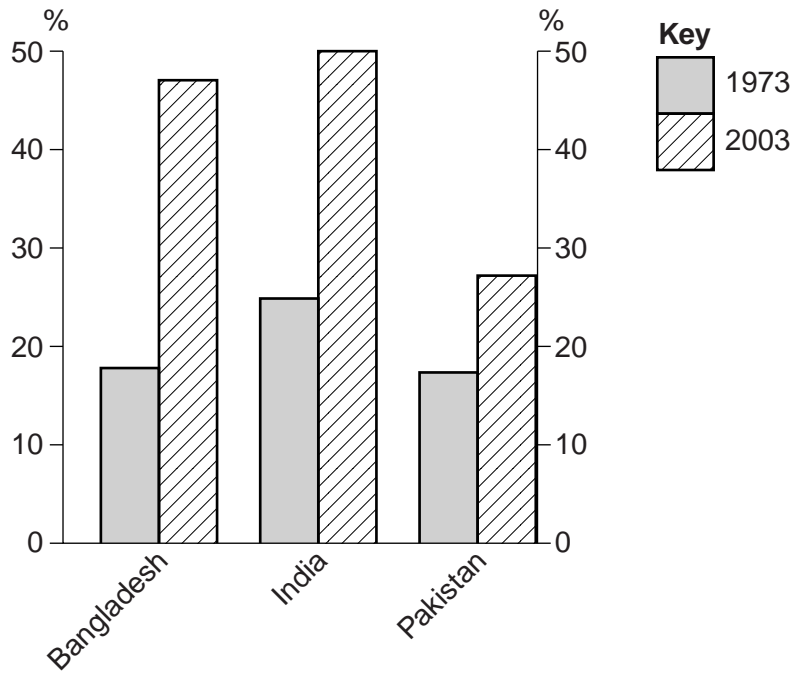


Fig. 11

Using Fig. 11, describe how the percentage of children in secondary schools in Bangladesh changed compared to India and Pakistan.

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..... [3]

- (ii) In Bangladesh, the percentage of children in primary schools is 95%. Why is there such a decrease when children go to secondary school?

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..... [2]

(iii) Why is secondary education important?

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..... [2]

(d) 'Developing occupational skills is more important than university qualifications for the economic development of Bangladesh.'

How far do you agree with this statement? Give reasons for your answer and examples where possible.

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..... [4]

[Total: 25]

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Copyright Acknowledgements:

Question 1(b)(i)	© adapted: http://www.nvo.com/ghosh_research/arseniccontaminationinthebengalbasin1 .
Question 2(a)(i)	© NASA.
Question 2(b)(i)	© adapted: http://climatechangeapsychology.blogspot.com/2010/12/deborah-phelan-bangladesh-cop16-real.html .
Question 3(a)(ii)	© adapted: http://www.fao.org/fi/figis/graphs/countrysector/Aquaculture/16.gif .
Question 4(a)(i)	© adapted: http://www.indexmundi.com/agriculture/?country=bd&commodity=wheat&graph=production .
Question 4(b)	© adapted: http://praticalaction.org/appeal_bangladeshcompost .
Question 5(a)(i)	© adapted: http://www.tradingeconomics.com/bangladesh/school-enrolment-secondary-percent-gross-wb-data.html .

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