

MARK SCHEME for the May/June 2015 series

0449 BANGLADESH STUDIES

0449/02

Paper 2 (Environment and Development of Bangladesh),
maximum raw mark 75

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

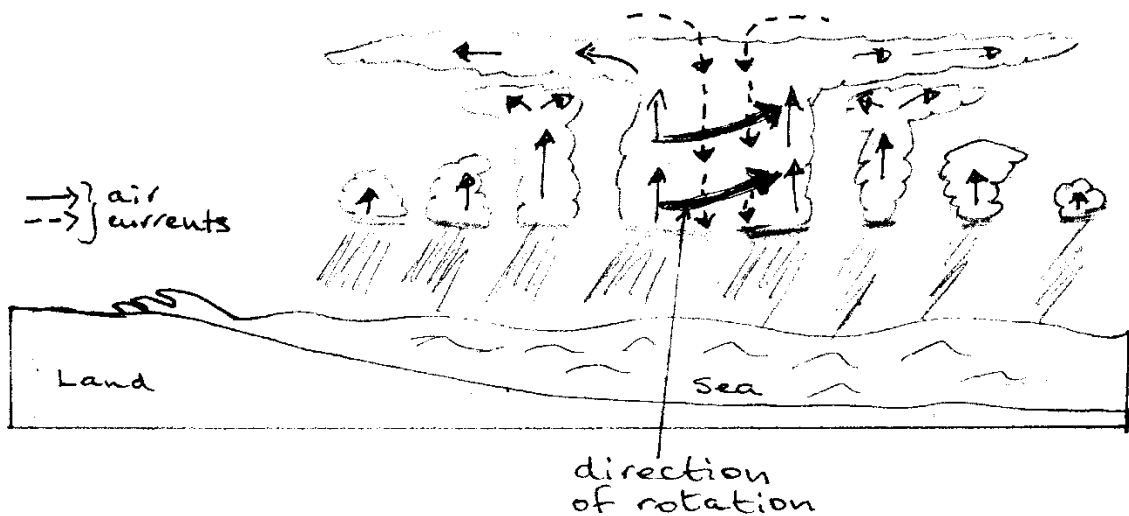
Cambridge will not enter into discussions about these mark schemes.

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1 (a) (i) Study Fig. 1, a cross-section of a cyclone

On Fig. 1 use arrows to label the following features of a cyclone
The direction of rotation has been completed as an example

- **warm air current** – to any of solid arrows
- **cool air current** – to any of dotted arrows
- **eye** – between the 2 cool air currents/directly underneath
- **storm surge** – the waves meeting the land



(ii) In which type of pressure system does a cyclone develop? [1]

low pressure

(iii) Describe the weather associated with a cyclone 3 × 1 mark [3]

strong winds
+120 kmh
heavy rainfall
calm when eye passes
no rain when eye passes
thunder and lightning

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- (b) (i) Describe the health related effects that people can suffer after a storm or cyclone 3 × 1 mark

lack of safe/clean drinking water
leads to diarrhoea, hepatitis, cholera, typhoid/water borne diseases
stagnant water leads to malaria, dengue fever
also cases of pneumonia, jaundice, eye infections, skin diseases
mental health problems
malnutrition/famine due to loss of crops/livestock/fish
death/injury

- (ii) Explain how such health problems, mentioned in (b)(i), can be reduced 3 × 1 mark [3]

water treatment plants set up
water tankers sent
bottled water/fresh/clean water supply
construction of latrines/sanitation restored
medicines/health aid/mobile hospitals/clinics
food aid/emergency stock of food
counselling
vaccination/immunisation
mosquito nets

- (c) (i) Study Fig. 2, a map showing areas of drought
Describe the distribution of areas suffering from severe and moderate [3]

general mark – on the western side
severe drought – in N–W
plus one named district
one small area in S–E/Cox’s Bazaar
moderate drought – around edge of severe drought in N–W
scattered
in S–W
2 patches in S–E
only one named district
reserve 1 mark for each of severe and moderate drought
N–W and S–E once only unless specific detail

- (ii) What problems does drought cause to the people who live in the areas described in (c) (i)? 3 × 1 mark [3]

crops fail
famine/malnutrition/lack of food
lack of fodder
livestock die
loss of income/livelihood
price of food rises/high prices
scarcity of drinking water
arsenicosis (deeper wells for groundwater)
irrigation less effective

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(d) Study the statement below

‘River floods can be both a benefit and a disaster to the farmers of Bangladesh.’

(i) Give one piece of evidence which supports floods as a benefit to the farmers [1]

alluvium/silt deposited
fertile soil
high yields
moist soils
water for irrigation/crops
financial benefit

(ii) Give one piece of evidence which supports floods as a disaster to the farmers [1]

crops ruined/washed away
livestock lost
homes lost
death/injury
lack of food
fertilisers washed away – expense

**(iii) Do you think floods are more of a benefit than a disaster for the farmers? [3]
Give reasons for your answer**

Points can be taken from those in (i) and (ii) and developed further
No marks for stating their view, only for reasons
Accept answers that support both sides of the argument or just one side

[Total: 25 marks]

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- 2 (a) Study Fig. 3, which shows oil production and consumption from 1987 to 2011 in Bangladesh

Describe the main changes in oil production and consumption shown in Fig. 3

Must be a change and increase must be specified

1 general mark for increase

production –

low

steady up to 2000

steady rise to 2003/peak

then steady decrease

consumption –

always much higher

large increase

slight decline 1989–1990

steady increase to 2001

levels off 2001–2005

then rapid increase

allow 1 max for figures worked out

Reserve 1 mark for each of consumption and production

- (b) Two oil fields have been discovered in the north-east of Bangladesh with reserves of 137 million barrels 2 × 1 mark [2]

- (i) Name two products that can be made from oil

transportation fuel – Petroleum/gasoline/diesel/aviation fuel (fuel needs qualifying)

energy – electricity/heating/lighting

(petro)chemicals

plastics

fertilisers

synthetic fibres(nylon, etc)/rope/rubber

detergents

lubricant

- (ii) Why is the discovery of new oil fields important to Bangladesh? 2 × 1 mark [2]

save on imports

new source of energy/present supplies low

new raw material for industry

possibly export oil/products

earn money/increase GDP

not dependent on other countries when a crisis arises

- (iii) Why will foreign consultants be needed by the company drilling for oil? [1]

lack of knowledge/training/unknown area of expertise

lack of technology/machinery

may need investment/capital

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(c) (i) Name two types of biomass and state how they are used

4 ×

solid biomass – trees, crop residue, animal and human waste
domestic use
biogas – digest animal waste/dung to produce methane gas
domestic use
liquid biofuels – organic materials (sugar cane, etc) to produce a liquid fuel
ethanol/fuel for vehicles

(ii) What are the advantages of biomass?

3 × 1 mark [3]

biogas and liquid fuel cleaner than solid biomass
cheap to collect solid biomass around home/farm) cheap by itself once only = 1
cheaper than imported fuels
not subject to load shedding/shortages
use residue as fertiliser
cleaner than fuelwood/less harm to environment
readily available/abundant/found naturally
sustainable/renewable

(d) Fig. 4 is a graph which shows the composition of GDP in Bangladesh, 1990–2010

(i) Complete the graph (Fig. 4) for 2010 using the following figures

[3]

- agriculture 19%
- manufacturing 28%
- services 53%

1 mark for each correct line = 2
1 mark for correct shading

(ii) Describe the main changes in the GDP contributions from the three sectors between 1990 and 2010?

[2]

agriculture declined
manufacturing increased
services steady/slight increase

(e) Study the statement below

‘Developing the service industry is the best way forward to improve the economy of Bangladesh.’

(i) Give one piece of evidence which supports this statement

[1]

Informal sector –
employs unskilled
employs many people/lowers unemployment
provides earnings/taxes/reduces poverty

Formal sector –
high-value services such as finance, medicine, research, IT
earn money/foreign exchange

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(ii) Give one piece of evidence which does not support this statement

- need agriculture to feed the population
- need industry to provide goods
- to reduce import bill
- employs both educated and unskilled people
- if informal – cannot export/earn foreign currency
- poorly paid

(iii) Do you agree with the statement? Give reasons for your answer [3]

Points can be taken from those in (i) and (ii) and developed further
No marks for stating their view, only for reasons
Accept answers that support both sides of the argument or just one side

[Total: 25 marks]

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3 (a) Study Photograph A (Insert) which shows farming in northern Bangladesh

(i) What crop is being grown in the fields?

rice

(ii) Describe the relief of the area in Photograph A [1]

flat
low-lying
floodplain/plain land

(iii) Name three human inputs to farming seen in Photograph A [3]

labour/man power
seeds/seedlings/planting
animals
plough/cart
irrigation
bunds/embankments

(b) (i) Name two pulses grown as foodcrops any × 1 mark [2]

lentils, mungbean, chick pea/gram, black gram, masur, khesari,
pigeon pea, mashkalai

(ii) Why are pulses an important foodcrop? 2 × 1 mark [2]

protein/nutritionally rich/healthy
roughage/fibre
cheap
easy to grow/in rainfed areas/very productive

(c) (i) Study Fig. 5, pie charts which show the changing size of farms in Bangladesh as a result of land fragmentation 3 × 1 mark [3]

Describe how the size of farms has changed from 1985 to 2005

more very small
more small farms
now 90% of farms from 70% (approx.)
small stayed same/similar 1995–2005
v small great increase 1995–2005
fewer medium farms
reduced by ½
medium decreased greatly 1995–2005
fewer large farms/almost none

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- (ii) Explain why land fragmentation occurs and the effect it has on farming methods. Reserve 1 mark for each part of question.

inheritance laws
land split between sons
becomes smaller each time
scattered plots
too small to use machinery
too small to have surplus
earn little money
cannot buy good seeds/fertilisers
low yields
no longer big enough to support families

allow positive comments e.g. can just grow enough to feed a family

- (d) One effect of land fragmentation is the increasing number of landless families migrating to the cities [4]

What effect does this migration have on the cities?

overcrowded
development of slums/homelessness
unemployment
crime rates increase
unhygienic conditions/poor sanitation
lead to disease spreading
increased pressure on infrastructure or named type(eg education healthcare)

more labour available
more markets available
increase in informal sector
thriving/dynamic cities

- (e) Study the two statements below

A 'More cash crops need to be grown for industry and export.'

B 'Increasing food production for the people of Bangladesh is the most important use of agricultural land.'

- (i) Give one piece of evidence which supports statement A [1]

increase GDP/foreign exchange if more industry and export/profit/earnings
increase employment if more industry results
jute important to Bangladesh's economy

- (ii) Give one piece of evidence which supports statement B [1]

need food to survive
increasing population needs more food/no food scarcity
reduce cost of importing food

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

Points can be taken from those in (i) and (ii) and developed
No marks for stating A or B, only for reasons
Accept answers that support both statements

[Total: 25 marks]

4 (a) (i) Read the article below (Fig. 6) on water pollution

3 × 1 mark [3]

Using the article (Fig. 6) to help you, describe the causes of water pollution near the school

untreated water dumped in canal
many industries along canal
increasing number of industries
dye plants colour the water
sewage/dirty water from drainage pipe

(ii) What effects can water pollution have on people and the environment?

[4]

unclean drinking water/dirty water no use in home
water borne diseases
bad odours/air pollution
poor quality water for irrigation
blocks irrigation canals
insects/pests attracted – attack crops
block waterways and hinder boats
unhealthy to travel by river/canal
kills fish/aquatic life

reserve 1 for effects on people
reserve 1 for effects on environment

(iii) Describe how the problem of water pollution could be reduced

[3]

laws/regulations/rules
to be enforced
no corruption
water treatment/purification facilities
sand filters
fines/punishments
sewage plants
sanitation facilities for every home
limit use of fertilisers
education/awareness

(iv) Name another type of pollution affecting the environment

[1]

air/noise/visual

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(b) Study Fig. 7, a graph showing the value of Bangladesh's total exports and garment exports from 1990 to 2012

(i) Describe the main changes in the total value of Bangladesh's exports from 1990 to 2012 3 × 1 mark [3]

increased
by 22bn US\$
slow/steady growth to 2001
(small) decrease 2002
faster growth to 2010
then rapid increase 2010–2011/fastest growth

(ii) Using evidence from Fig. 7 explain the importance of the garment industry to Bangladesh [2]

exports increase
foreign earnings
makes up most of the export value
75%–80% of export value

(c) Explain, with examples, how foreign and multinational investment has affected the development of industry in Bangladesh [4]

Bangladesh/local companies need money/support to develop/poor country
investment needed to raise productivity and quality
usually from foreign direct investment (FDI)
or multinational/transnational companies (MNCs/TNCs)
provide capital
difficult to raise capital from Bangladeshi banks
provide expertise
provide technology/machinery
open up markets
gas industry has attracted foreign investment
garment making industry attracts foreign companies
limited success/increased productivity/increased GDP
train workers

(d) Study the two statements below.

A 'Increased ownership by the private sector is the best way to improve industrial production.'

B 'State ownership is most likely to improve industrial production.'

(i) Give one piece of evidence which supports statement A [1]

capital available, particularly from foreign firms
possibly higher wages
develop small scale industries
desire to make a profit – no subsidy
efficient use of man-power and resources/more productive
more technology

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

- subsidised by the state
- allowed loans from banks
- profits kept within the country – not private hands
- possible corruption/obverse – law enforcement
- certain industries set aside for state ownership/issue licences
- have control of infrastructure
- political pressure to do well/regulated by government
- train workers
- slow development

(iii) Which opinion do you agree with the most? Give reasons for your answer [3]

Points can be taken from those in (i) and (ii) and developed
No marks for stating A or B, only for reasons
Accept answers that support both statements or neither

[Total: 25 marks]

5 (a) (i) Study Fig. 9, a graph showing the percentage of the population below the poverty line in rural areas of Bangladesh [3]

Complete the graph (Fig.8) for urban areas using the following figures

Year	1992	1996	2000	2005	2010
%	43	28	35	28	21

- 5 correct plots and lines = 3
- 3–4 correct plots and lines = 2
- 1–2 correct plots and lines = 1

(ii) Suggest why the percentage living below the poverty line is decreasing 3 × 1 mark [3]

- improved education/literacy rate – employment accessible
- increased industry/ more employment
- more women employed eg garment industry
- improved health care – able to work
- smaller families – finances not stretched
- aid to help the poor
- microfinance available – to set up business

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(b) Study Fig. 10 which shows the population growth rate in Bangladesh and near countries in 1993 and 2012 .

(i) Describe the change in the growth rate in Bangladesh.

decreased// -1.25% to -1.35%

(ii) Compare the change in growth rate in Bangladesh with the three other countries shown on Fig. 9. [3]

decreased the most
lower than Pakistan
close to India but greater decrease
Myanmar much lower in both years

(iii) Explain how Bangladesh has achieved such a change in its population growth rate. [4]

population control strategies successful/family planning
average number of children per woman reduced/smaller families
awareness of problems caused by overpopulation
improved maternal health/reduced infant mortality
improved education/literacy,
particularly girls
empowerment of women
later marriages
banned child marriages
improvement in economy/ income – children educated not just carers/workers
improved employment opportunities particularly women eg garment making

(c) (i) Describe two differences between the public sector and the private sector. [2]

public sector –
low spending – limited finances
free
poor quality
caters for rural poor
for the majority

private sector –
pay for the service/for the rich
increased quality of health/education
increased spending on health/education
in urban areas
specialist hospitals/clinics/educational establishments
profit based

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(ii) Explain the advantages and the disadvantages of the private sector in developing either health care or education.

general comments for both
only for those who can pay
mainly in cities/towns
good equipment/resources
higher quality/experienced staff
no corruption
health –
not for emergency treatment

specialised research
specialist facilities
education –
more private universities concentrating on humanities and business
difficult to fund science labs, equipment, etc.

allow comments relating to NGOs e.g. respond to emergencies

(d) Study the two statements below.

- A 'The main educational challenge for Bangladesh is to improve the literacy rate.'
- B 'The main educational challenge for Bangladesh is to improve the quality of higher (tertiary) education.'

(i) Give one piece of evidence which supports statement A. [1]

much of population low literacy rate
key to improving quality of life/decreases poverty
improves employment prospects/get jobs

(ii) Give one piece of evidence which supports statement B. [1]

need for management/entrepreneurs to develop industry/services
skilled and specialised man-power
need for research
loss of talented students who go abroad to study/retain talent
limited science places in higher education

(iii) Which opinion do you agree with the most? Give reasons for your answer. [3]

Points can be taken from those in (i) and (ii) and developed
No marks for stating A or B, only for reasons
Accept answers that support both statements or neither

[Total: 25 marks]