MARK SCHEME for the May/June 2014 series

7094 BANGLADESH STUDIES

7094/02   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.

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1 (a) The rivers of Bangladesh change course often. Explain how rivers change course and form ox-bow lakes. You may use a diagram(s) to explain your answer.

erosion on outer banks
deposition on inner banks
cause a river to migrate downstream
when meander pronounced/more circular
erosion on outer bend forms a narrow neck
deposition builds up on inner bend
neck eventually eroded
river flows straight/breaks through
deposits seal off the meander to create ox-bow lake [4]

(b) Study Fig. 1 which shows the number of passengers and the amount of cargo transported by rivers between 1995 and 2010.

(i) Describe the changes in passenger numbers between 1995 and 2005.
fluctuating/variable/<u>gradual or slight</u> increase [1]

(ii) Between which years did the amount of cargo carried stay the same?
1995–2002 [1]

(iii) When was the biggest increase in the number of passenger transported by river?
2005–2006 [1]

(c) Explain why rivers are an important form of transport in Bangladesh.

large network of rivers/rivers everywhere
well connected to rest of transport system
cheap means of transport
natural/environmentally friendly
2/3 country flooded during monsoons – roads/railways limited use
                                       – provide aid/essential services
roads and railways expensive to build/maintain
roads congested/traffic jams/pressure on roads
main towns/commercial centres on river banks
villages not always accessible by roads/poor quality roads
large amount/bulky goods carried
ferries instead of bridges
inland ports [4]

(d) (i) Study Fig. 2 which shows the annual rainfall in Bangladesh.
Describe the distribution of rainfall in Bangladesh.
heavy/+3500 – in NE
high/2500-3500 in – hilly regions/Sylhet/Chittagong
                     – coastal areas at delta/mouth of Ganges/Padma
moderate/2000-2500 – in N/NW
                        extending SEwards
lower/1500-2000 – towards W
lowest/-1500 – extreme W, near Rajshahi

any 3 sections @ 1 mark each [3]

(ii) **Study Fig. 3 which shows annual rainfall patterns in Rajshahi and Chittagong. Using Fig. 3 only, compare the rainfall patterns of Rajshahi and Chittagong.**
Rajshahi lower than Chittagong in all months
same pattern
most in July/July-September/monsoon period for both
very little rain in November-April for both [2]

(iii) **State when thunderstorm rainfall occurs and explain the causes of this rainfall.**
summer/March-September
late monsoon/October–November
afternoons

reserve 1 mark

on hot, humid days air above ground heated
warm, moist air rises
expands
cools
condenses into water vapour
form cumulo-nimbus clouds – leads to rainfall

reserve 1 mark [4]

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

A   **'Hydro-electric power could greatly improve Bangladesh's electricity supply.'**

B   **'The scope for increasing the generation of hydro-electric power is very limited in Bangladesh.'**

(i) **Give one piece of evidence which supports statement A.**
cheaper than coal/oil/gas
renewable/gas running out
necessary physical features – hilly, high rainfall, fast flowing rivers – available in parts of NE and SE
15 rivers identified as having potential for HEP [1]

(ii) **Give one piece of evidence which supports statement B.**
only 1 HEP station at Kaptai
majority of land low and flat/most rivers in final stage
need to use dams built in neighbouring Myanmar
causes displacement of people
expensive to build [1]

(iii) **Which statement 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 [3]

2 (a) Study Fig.4, a pie chart which shows the percentage of fish caught in different types of areas.

Complete the pie chart for the inland fisheries where aquaculture is practised using the figures below:

ponds and baors – 35% =1
shrimp farms – 5% =1 [2]

(b) (i) Describe <u>two</u> differences between marine and inland fishing.
Marine –
at sea/in salt water
larger/powered/specialised vessels needed e.g. trawlers
mackerel, dogfish, shark, ray
Inland –
fresh water
use rods and small nets/small/traditional boats
carp, catfish, shrimps, tilapia
cultured, aquaculture, genetically engineered species

Need to compare the 2 types [2]

(ii) Describe methods of inland fishing.
Capture/caught –
in shallow waters
rafts/small boats
use bare hands
lines/rods and traps of bamboo
nets of different meshes
allow traditional names
Aquaculture –
improved breeding and feeding techniques
use derelict ponds, irrigation canals, roadside ditches
Polycultures –
e.g. poultry-fish, rice-fish
tidal areas – rotation of aquaculture and agriculture
– high salinity – shrimps reared, low salinity – rice grown [4]

(iii) Why has it been difficult to increase the amount of fish caught in the marine fishing industry?
short marine fishing season October – March because of adverse weather conditions
lack of modern methods/need modernised boats/advanced tools
most traditional boats with small engine – limited to coastal fishing
over-exploitation of fish in coastal waters
need for conservation and management
many fishermen poor – cannot afford to expand/receive no loans
many fishermen illiterate – do not try new methods [3]

(c) Study Fig. 5 which shows the distribution of forests in Bangladesh.
Describe the distribution of the three types of forests.

deciduous – scattered in central and Sylhet areas/in E/one to the NW/Dinajpur
evergreen – in Chittagong Tracts area, to the E/SE
mangrove – coastal areas, to SW/Sundarbans

1 mark for each type [3]

(d) (i) Study Photograph A (Insert) which shows a mangrove forest in Bangladesh.

Describe the trees shown in Photograph A.

pneumatophorus roots/roots above ground level
prop roots
pencil-like roots
fallen/leaning trees
canopy of leaves
very thin trunks/vines/lianas
grow in water/flooded area/in mud/swamp
close together/dense vegetation [3]

(ii) Explain why it is important to conserve the mangrove forests.
most productive of the forests
buffer against storms, tsunamis, etc.
protect coast from erosion
diversity of wildlife
important tourist area
home of Bengal tiger
source of fuelwood
breeding ground of fish/shrimps [3]

(e) Study the two statements below.

A 'Deforestation is unavoidable with the increasing population of Bangladesh.'

B 'It is necessary to maintain the forests of Bangladesh to prevent environmental problems.'

(i) Give **one** piece of evidence which supports statement A.
more land needed for housing, agriculture, industry
increased use of timber for housing, industry
increased need for fuelwood
expansion of shrimp cultivation [1]

(ii) Give **one** piece of evidence which supports statement B.
leads to desertification Barind/NW
soil erosion – leading to flooding
reduction of rainfall – lack of evaporation from leaves
climate change/global warming
loss of habitat and species of plants and animals
less flooding [1]

(iii) **Which statement 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 [3]

3 (a) (i) **Study Fig. 6 which shows the employment structure and GDP per person of three countries.**

Complete the graph for India using the figures below:

agriculture – 50%
manufacturing industry – 15%
services – 35%

1 mark for each sector with correct % and shading [3]

(ii) **Using the information from Fig. 6 describe the relationship between employment structure and GDP in the three countries.**
Myanmar least developed/GDP – most agriculture/least services
Bangladesh slightly more GDP – more industry/less agriculture
India the most developed – more services, even though more agriculture than
Bangladesh and less industry
increased service sector = increased GDP

Allow 1 general mark if GDP is linked to a sector but not a country [3]

(b) (i) **Read the following article (Fig. 7) taken from a newspaper in May 2011.**
Using Fig. 7 only, explain why Bangladesh's economy has increased.
increase in industry/manufacturing/garment industry
increase crop yields/better weather for rice and wheat [2]

(ii) **Using your own knowledge, explain why small scale industries, such as the garment industry, have been so successful in Bangladesh.**
do not need state assistance/foreign buyers supplied credit
exports
no quota restrictions/large exports
cheap labour/low wages
plenty of (trainable) labour
simple technology/advanced machinery not necessary
quality control
demand for cheaper clothing from abroad
as a less developed country – preferential treatment from USA and EU
government incentives – streamlined export-import formalities, warehouse facilities [4]

(iii) **Why is a reliable electricity supply necessary for industrial growth?**
needed for efficient use of machines
higher output/fewer stoppages/continuous production
needed for office work – computers, etc.
for lights/fans/air conditioning
to compete with other countries [2]

(c) (i) **The money sent back to Bangladesh by international migrants is another reason for the economic growth.**

Which countries are the most popular destinations for international migrants from Bangladesh?

Middle East or 2 named countries – Saudi Arabia, Kuwait, UAE, Oman, Qatar, etc.
For Asia – must name 1 or 2 countries – Singapore, Malaysia, S Korea, etc.　　　　[2]

(ii) **Explain why people migrate to other countries.**
poor living conditions/for better standard of living
improve quality of life/better health care
unemployment/looking for jobs
better wages/escape poverty
landlessness
better opportunities for career
to study/education
join family
political/religious problems　　　　[4]

(d) Study the two statements below.

A **'More manufacturing industries are needed to improve the economy.'**

B **'Increasing the service sector is the best way to improve the economy.'**

(i) **Give one piece of evidence which supports statement A.**
higher value goods
productivity higher than agriculture
export goods
earn foreign exchange
high-wage employment
employment　　　　[1]

(ii) **Give one piece of evidence which supports statement B.**
attracts finance
high value-added services
informal service sector not so valuable/increases employment of poor/unskilled
education key to development – more teachers
allow a named service if linked to development　　　　[1]

(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　　　　[3]

4 **(a) (i)** **Study Fig. 8 which shows the main growing areas for three cash crops.**
Describe the distribution of the jute, sugar cane and tea growing areas.
Jute – along main rivers, central area, small area in SW
Sugar cane – to W, along western border/NW
Tea – to E, higher areas /Sylhet/Chittagong

1 mark for each crop [3]

(ii) **Why is it important to grow cash crops?**
export
earn foreign exchange/increase GDP
raw materials for industry
source of employment [2]

(b) (i) **Study Fig. 9 which shows the percentage change in acreage and production of three cash crops between 1997 and 2010.**

Complete the production graph using the figures below:

sugar cane: – 40%
tea: +13%

1 mark for each crop [2]

(ii) **Explain why it is difficult to increase the production of cash crops such as jute and sugar cane.**
demand/need for food crops
more profitable to grow food
low investment/no subsidies/e.g. of lack of investment (irrigation, land, fertiliser, etc.)
low world demand for jute
scarcity of land/pressure on land
low world prices/low profit
competition from other countries [4]

(iii) **Name two products made from jute**
carpets, bags, sacks, hessian cloth, rope, home textiles [2]

(c) **Read the article, Fig. 10, on Bangladesh's glass industry.**

(i) **Why has the glass industry in Bangladesh grown?**
increase in construction
basic raw material/silica sand found in Bangladesh [1]

(ii) **Name two raw materials needed for the glass industry.**
silica sand and limestone [1]

(iii) **What provides the power for the glass industry?**
(natural) gas [1]

(d) What can the State do to encourage industrialisation in Bangladesh?

improve infrastructure – transport, electricity, ports – max 2
encourage investors and MNCs
enforce legal framework
prevent strikes
train workers/increase skills
improve financial system/resolve bad debt problem/provide loans/subsidies
reduce taxes on imports/exports
develop EDZs
protect infant domestic industries with legislation [4]

(e) Study the two statements below.

A   'Modern techniques are needed in agriculture to increase food production.'

B   'Modern techniques in agriculture cause too many problems.'

(i) Give one piece of evidence which supports statement A.
HYVs increase yield – multiple cropping – mature faster
fertilisers increase yield, soil fertility
pesticides prevent loss of crops to insects
irrigation provides reliable supply of water
machinery/technology efficient/fast/prevents wastage
training/education/awareness of new techniques
population increase needs more food/prevent malnutrition [1]

(ii) Give one piece of evidence which supports statement B.
expensive (for small farmers)
fertilisers damage the soil over time
fertilisers cause water pollution – eutrophication
pests become resistant to pesticides
pesticides cause water pollution
mechanisation causes unemployment
irrigation causes arsenic contamination of water [1]

(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 [3]

5 (a) (i) Study Fig. 11 which shows the birth rate in India, Bangladesh and Pakistan for 1980 and 2010.
Complete the graph for Pakistan on Fig. 11 using the figures below:
1980 – 43
2010 – 27

1 mark for each year [2]

(ii) Compare the changes in birth rate from 1980 to 2010 in Bangladesh with the changes in India and Pakistan.
Bangladesh biggest decrease
Bangladesh started highest now lowest
decreased by 24/1000 cf India 13/1000 – 1/1000 lower
cf Pakistan 16/1000 – 7/1000 lower [3]

(b) (i) What is meant by the term 'infant mortality rate'?
number of babies dying (per 1000 of the population)
under 1 year of age [2]

(ii) Study Fig. 12 which shows the infant mortality rate between 1980 and 2010 for Bangladesh, India and Pakistan.
How has the infant mortality rate for Bangladesh changed in comparison to India and Pakistan between 1980 and 2010.
Bangladesh – rapid/steep decrease cf steadier decrease of India and Pakistan
– biggest decrease
– by 92/1000
– started highest now lowest
Pakistan – by 52/1000
India – by 54/1000 [3]

(iii) Explain how the health care system has brought about the changes in the infant mortality rate and birth rate in Bangladesh.
expanding immunisation
diarrhoeal disease control/oral rehydration
epidemic control
family planning + awareness of population increase and situation
establishing health complexes/clinics in every upazila/rural area
NGOs and delivering health care to the poor
health, sanitation and nutrition education/awareness re health
maternal and antenatal care
more hospitals
more/better trained doctors/improved ratio to people [4]

(c) (i) Explain what is meant by 'a non-governmental organisation (NGO)'.
private not public/state sector
run on non-profit basis/reinvest any profit
financed by charities/donations (particularly international donors) [2]

(ii) Describe the type of work done by NGOs, such as BRAC and Proshika, in Bangladesh.
provide healthcare/education
in rural areas
for the poor
immunisation programmes, Child Survival Programme
family planning
training health cadres in communities
teaching households about hygiene and sanitation
distribution/provision of food and medicine
building houses for the homeless/provide shelter
empowerment of women/the poor/underprivileged
access to microcredit/loans to set up business [4]

(d) Study the two statements below.

A 'The health care system is vital to improving the quality of life of the poor in Bangladesh.'

B 'Improving nutrition will enhance the quality of life of the poor in Bangladesh.'

(i) Give **one** piece of evidence which supports statement A.
controls disease, e.g. malaria, diarrhoea
hygiene education
enables people to work/earn money
but other agencies need to be involved, e.g. clean drinking water, sanitation,
increase LE/decrease DR [1]

(ii) Give **one** piece of evidence which supports statement B.
poor nutrition = poor health/healthier
e.g. anaemia, malnutrition, blindness
government set target to raise per capita calorie intake
affects ability/energy to work, enjoy life [1]

(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 [3]

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