MARK SCHEME for the May/June 2011 question paper

for the guidance of teachers

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 must be read in conjunction with the question papers and the report on the examination.

- Cambridge will not enter into discussions or correspondence in connection with these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2011 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

1 (a) Study Fig. 1, a map showing the main rivers of Bangladesh. Name the rivers marked A, B, C and D.

A Tista, B Padma (accept Ganges), C Meghna, D Karnaphuli   [4]

(b) Study Fig. 2, which shows a small area of the Jamuna river.

(i) Describe the patterns of water channels *and* vegetation that are shown on this map.

Many channels/lots of islands or chars/sand bars/varying widths of channels/some channels dried up/braiding
Vegetation like islands or in patches/varying size/separated by rivers or deposits with no vegetation
4 × 1 but max 3 for either channels or vegetation   [4]

(ii) What difficulties are faced by the people who live close to this river?

Flooding/when river rises after rains/changing channels/bank being eroded/transport difficult due to many channels/access to areas of vegetation difficult due to width of river/ no bridges
Max 1 for reference to general effects of flooding
Up to 2 development marks   [3]

(iii) Explain the causes of the braiding of the rivers like the Jamuna.

Variable flows over year/due to monsoon/due to snow melt in Himalayas/large amounts of sediment brought down by river/sediment deposited when volume of water reduces/ sediment loose so channels change each time river floods/accept reference to shallow etc.

Up to 2 development marks   [4]

(c) Explain how rivers in Bangladesh are affected by *each* of the following:

(i) Deforestation

Rain reaches rivers more quickly/greater scope for soil erosion/rivers rise quickly leading to faster flooding/greater erosion by raised water levels

(ii) Construction of barrages

Slow flow of rivers below barrage/sediment trapped behind barrages/land downstream may become less fertile due to loss of annual sediment/land above barrage becomes flooded/holds back water which prevents flooding downstream

Max 3 for (i) or (ii)   [4]

(d) Study the two statements below about global warming:

A 'Global warming could have disastrous effects on the rivers of Bangladesh.'

B 'Global warming makes people and countries work together to deal with the effects of climate change on Bangladesh.'

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

Accept answers which do not necessarily focus just on rivers
Snow melt/changed rainfall patterns/backing up of water as sea levels rise/additional river flooding/accept reference to rivers drying up   [1]

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

Pressure to reduce deforestation in hills or Himalayas or Nepal/rivers do not start in Bangladesh so pressure to address problems in surrounding countries/Bangladesh is one of the most affected countries so rest of world becoming more aware etc.   [1]

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

No marks for yes or no but for giving reasons
Many of points to be mentioned are covered in the lists above   [4]

[Total: 25]

2 (a) Study Fig. 3, which shows the changing percentages of Bangladeshi people living in urban areas.

(i) Describe the changes to Bangladesh's urban population from 1970 to 2015.

Increased rapidly from 9% in 1970 to 20% in 1990/more gradual increase from 1990 to 26% in 2008/steep increase estimated for period up to 2015

Need reference to 'estimated' or similar for 2015 otherwise max 2.
Also max 2 for referring to dates and figures. Reference to nature of the change needed for third mark e.g. 'increased rapidly'.   [3]

(ii) Explain how landlessness may cause people to leave rural areas.

Too many people to survive on available land/land too fragmented or subdivided/other paid work is unreliable/jobs may be lost due to floods or other natural disaster/not possible for family to survive on available land or available job income.
Answers should focus on 'push' factors
2 × 1 development   [2]

(iii) Explain two other reasons for rural to urban migration.

Lack of educational opportunity in rural areas/natural disasters causing loss of home and-or land/opportunities for informal sectors in cities/better opportunities for health/ education/family connections etc.
Don't accept converse reasoning
4 × 1 but development
Max 3 for one reason   [4]

(b) Study Photograph A on the insert.

(i) Describe the types of housing shown in the photograph.

New multi-storey blocks in background/details such as 'better ventilated' or reference to windows/temporary or makeshift homes in foreground/partly built on stilts/frameworks built of wood or trees/near stream/evidence of plastic sheeting for part of roof and wall etc.
Credit general statements re two types of housing for max 1
No credit for reference to 'shanty' on its own.
3 × 1   [3]

(ii) Describe *two* benefits and *two* problems caused by the rapid growth of cities.

Opportunities for economic growth due to large workforce/large market/economic to provide facilities such as health, education or entertainment/better infrastructure for communications etc./overcrowding leading to disease/unsanitary conditions or reference to water etc./shortage of housing/opportunities for crime (no credit for 'crime will increase')/pollution
Accept references to adverse effects on rural areas e.g. decrease in agricultural production
4 × 1
Max 2 for benefits, 2 for problems   [4]

(c) Study Fig. 4 which shows the net international migration figures for Bangladesh. Net migration means the numbers of people arriving minus the numbers of people leaving.

(i) Describe what the graph shows about people leaving Bangladesh.

More people leaving than arriving (reserve 1 for this)/increase in net outward migration for each of four periods. Accept reference to increasing numbers of people leaving but max 1 if no reference to 'net' or 'balance of people arriving and leaving' or similar
Max 1 for figures   [2]

(ii) Name *one* advantage and *one* disadvantage of people leaving the country.

Advantage: remittances of money/reduces pressure of population on land or resources or services. Accept references to slowing down population growth
Disadvantage: breaks up families/may involve trained and skilled people needed in Bangladesh/may end up being exploited
2 × 1   [2]

(d) Study the two statements below about rural to urban migration.

A 'Rural services should be improved to encourage people to stay in rural areas.'

B 'A growing population is needed in cities to meet the demand for labour.'

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

Cities cannot cope with growing number of migrants/many migrants end up with no job and poor housing/services cannot keep pace with migration/problems of poverty etc. are in rural areas so that is where improvement needed/land is fertile so people needed to farm it/growing food is a priority/migration to cities just transfers problems from rural to urban areas/need to develop rural areas [1]

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

Cities are where development is taking place/industry and investment is in cities/ opportunities for informal jobs in cities/provision of services may be easier where people are concentrated/rural areas cannot support growing population etc. [1]

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

No marks for yes or no but for giving reasons
Many of points to be mentioned are covered in lists above [3]

[Total: 25]

3 (a) Study Fig. 5 which shows a climate graph for Dhaka.

(i) Which month has the greatest difference between its average minimum and average maximum temperatures?

March [1]

(ii) What is the annual range of minimum temperatures?

(Range means the difference between lowest and highest.)

14degC   No tolerance   Accept from 12 to 26 [1]

(iii) What is the total rainfall for the months of January and February?

40 mm [1]

(iv) Using Fig. 5 only, describe the climate for the four monsoon months of June to September.

High rainfall for all four months/highest in July at 435 mm/decrease to 250 mm in September/temperatures show little change between 25 and 31 or accept 'high'/ differences between maximum and minimum are not great/number of sunshine hours is low – 2 to 3 hours/ high number of wet days 12 to 16

Max 2 if no mention of temperature or rainfall
Max 2 if only figures given [4]

   (v) Suggest *three* effects of the monsoon season on people in urban areas?

Rivers may flood/transport links may be broken/telephone and power cables damaged/ hot and humid so unpleasant for working/drains overflow or do not work/damage to buildings/accept reference to relief from high temperatures preceding monsoon.
3 × 1   [3]

(b) (i) Explain the causes of the monsoon rains.

Winds change direction/differential heating of water and land/due to low pressure developing over northern India/land heats up faster than sea/high pressure to south of equator or northern Australia/water cooler/winds blow from south or southeast/coreolis effect/winds blow across ocean and accumulate moisture/which falls as rain over Bangladesh
6 × 1   [6]

   (ii) Rain may also be caused by depressions. Explain the cause of this type of rainfall.

Credit will be given for the use of a diagram.

Depressions are areas of low pressure/warm moist air from south meets dry cool air from north/known as a weather front/warm air rises over the cool air/air cools as it rises/ condenses/clouds form and moisture falls as rain   [4]

(c) Study the two statements below about the monsoon.

  A 'Bangladesh people rely on the monsoon rains.'

  B 'The monsoon brings misery to the Bangladesh people.'

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

Needed to make crops grow/main source of rain for Bangladesh/land is very fertile provided there is enough rainfall/two or three crops a year possible due to climate/rice and jute both require plenty of water/water supply   [1]

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

Monsoon is unreliable/can be disastrous if arrives too late for crops/or too heavy so destroys crops/causes flooding which can ruin crops/damage buildings/loss of life   [1]

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

No marks for yes or no but for giving reasons
Many of points to be mentioned are covered in lists above   [3]

                                                                         [Total: 25]

4 (a) Study Fig. 6, which shows the main areas of production for three main cash crops.

Describe the distribution of production areas for:

(i) Tea

Main area in NE/Sylhet hills/Moulvi bazaar/next to border/smaller area in Chittagong province/edge of Rangamati hill tracts/north of Kamaphuli river etc. Accept 'hilly areas'

(ii) Jute.

Valley of Jamuna/Tista rivers/E Rahshaji province/W of Dhaka province/area to west of Padma/ middle part of Khulna province/western part of Khaka province etc. Accept 'flood plains'

Max 3 for one crop. Credit references to distances and named physical or human features   [4]

(b) Study Fig. 7a, which shows production figures for three main cash crops and Fig. 7b, which shows the value of selected exports.

(i) How much sugar cane was produced in 2000?

6,800,000 tonnes + or – 50,000 or 6.8 m tonnes
Units must be stated   [1]

(ii) What was the value of tea exported in 2004?

1000 million taka   [1]

(iii) Compare the *production* of jute with the *export* of jute for the period shown on the graphs.

Production of jute changed little but export value increased/production stayed below 1 m tonnes/declined slightly after 1995/whereas manufactured jute goods increased rapidly until 1995 then declined slightly/but still much higher than 1988/raw jute exports varied/ decreased between 1990 and 1995/other times increased/increased steeply between 03 and 04 etc.
4 × 1 but max 2 if no comparative statements   [4]

(c) (i) Why are cash crops important for Bangladesh's economy?

Can be sold/creating wealth to be spent on other goods and services/can be exported so earning foreign exchange/Bangladesh needs forex for development/raw material for industry/can be processed thus adding value etc.
3 × 1 Allow development   [3]

(ii) What difficulties are there in trying to increase the production of cash crops in Bangladesh?

Shortage of land/lack of capital/problems in getting finance etc./lack of good transport links to get products to market/shortage of machinery/price varies/growing population requires increased food production etc.
3 × 1 allow development   [3]

(d) (i) Name *two* products made out of jute.

Sacks/rope/fabrics/yarn/packaging etc.
2 × 1   [2]

(ii) Many of the products that can be made from jute are also made from artificial fibres based on oil. Suggest *two* advantages of using jute rather than oil.

Sustainable/grows well in Bangladesh/cheap to grow/recyclable/not finite like oil/ Bangladesh can grow jute, does not have much oil/jute is more environmentally friendly etc.
2 × 1   [2]

(e) Study the two statements below about crops in Bangladesh:

A 'Production of jute in Bangladesh should be increased.'

B 'The most important use of land in Bangladesh is for growing food.'

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

Valuable exports/demand will increase as oil runs out/gets more expensive/provides jobs for landless labourers/helps to counter rural poverty/can avoid people having to move to cities/Bangladesh has good conditions for growth etc.   [1]

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

Limited amount of land in Bangladesh/growing population needs food/better to grow food than import it/same conditions that are good for jute are also good for other crops like rice etc.   [3]

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

No marks for yes or no but for giving reasons
Many of points to be mentioned are covered in lists above   [3]

[Total: 25]

5 (a) Study Fig. 8, which shows employment and the contribution to the Gross Domestic Product (GDP) of each sector of Bangladesh's workforce.

   (i) Name *two* examples from Bangladesh for *each* of:

   • Primary sector
     Agriculture/forestry/fishing/mining

   • Secondary sector
     Garments/sugar refining/jute processing/steel/machinery etc.

   Accept one example for each   [2]

   (ii) What percentage of Bangladesh's workforce is employed in the tertiary sector?

   35% + or – 1   [1]

   (iii) What percentage of Bangladesh's GDP comes from the tertiary sector?

   48% + or – 1   [1]

   (iv) Suggest why the secondary sector contributes a higher percentage to GDP than it does to employment.

   Higher value added/greater use of machinery/better trained workers/goods exported so adding to GDP etc.
   2 × 1 or 1 + development   [2]

   (b) Study Fig. 9, which shows the number of teachers employed in different types of education, an example of a formal service in the tertiary sector.

   (i) How many teachers are employed in primary education?

   340 000 + or – 2000   [1]

   (ii) Which type of education has the largest *number* of teachers in the private sector?

   Secondary education   [1]

   (iii) Which type of education has the largest *proportion* of teachers in the private sector?

   Madrasah education   [1]

(c) (i) It is estimated that about half of all service jobs in Bangladesh are in the informal sector. What is meant by the 'informal service sector'?

Unregulated/no taxes paid/not included in official statistics/no controls/no benefits such as holidays
2 × 1 or 1 + development   **[2]**

(ii) Explain why the informal service sector is so important in Bangladesh.

Lack of formal jobs/open to poor who must work/lack of finance to start up formal services/provides jobs to migrants/qualifications not required/most informal services are low level etc.
3 × 1 with max 1 for development   **[3]**

(iii) What are the disadvantages of the informal sector?

No protection/can be exploited/no security/no taxes paid/does not contribute to development of Bangladesh/may be unsafe/no quality control/low wages etc.
2 × 1 with max 1 for development   **[3]**

(d) Finance is required if a service is to become part of the formal sector.

(i) Name *two* possible sources of finance in Bangladesh.

(ii) Give *one* advantage and *one* disadvantage of each source.

Grameen bank or micro credit – open to poor/no collateral needed etc. but only small sums offered/need to be part of a group Moneylender – money available quickly/may be available to people who cannot borrow money any other way etc. but very high interest rates/risks if fail to pay on time
Nationalised bank (or just bank) – could borrow larger sums of money but collateral needed/difficult to get loan
Private bank – need collateral/may be more able than government to lend but often for short terms/high rates

Accept other possible sources of finance (e.g. 'foreign direct investment', NGOs, government or 'mncs') provided advantages and disadvantages are relevant.

Credit answers that refer generally to sources of finance even if not related to a service.
4 × 1 No marks for naming sources   **[4]**

(e) Choose *one* from the list below of possible providers of services. For the *one* you have chosen, explain what you consider are its advantages and disadvantages.

Government
Private sector
Non-Governmental Organisations (NGOs)

Government has organisation to reach all parts of country/can raise money from taxes/can match charges to ability to pay etc./but may be inefficient/lack of funds/may be political requirements/any profits go back to government/taxes may need to rise etc.

Private sector can draw on a wide range of expertise/can be well organised but must charge/needs to make a profit/will not cover whole country/or all people

NGOs have necessary skills/can draw on trained people from overseas/may not need to charge but mainly small scale/dependent on aid or charities/unlikely to be able to cover whole country/or meet all needs

4 × 1   3 max for advantages or disadvantages   [4]

[Total: 25]