

CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

MARK SCHEME for the October/November 2013 series

0453 DEVELOPMENT STUDIES

0453/02

Paper 2, maximum raw mark 80

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) (i) Ideas such as:
 Without it we would not survive/we would die/there would not be any life/for the body to function;
 Or suffer dehydration/it hydrates people/people suffer thirst;
 We need it for drinking/cooking/washing/grow food/sanitation/give water to their animals, etc.

The following answers are insufficient:

- Domestic purposes
- Keeps them healthy
- People need it
- Used by animals (unless qualified)

2 @ 1 mark

[2]

- (ii) Basic needs such as:
 food/balanced diet;
 housing/shelter/somewhere to live;
 health care or example;
 education or example;
 clothing

The following answers are insufficient:

- Health
- Diet

The following answers = 0:

- Water
- Electricity
- Sanitation
- Freedom of speech

4 @ 1 mark

[4]

- (b) (i) Basic definition = 1
 How much water each person uses per day/the average amount of water each person uses/the average amount of water used per day)

Full definition = 2

How much water *each person* uses on *average per day*)

[2]

- (ii) Proportionate symbols

[1]

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- (iii) Advantages such as:
it is **visually** effective/eye catching/attractive;
comparison between countries is easy;
easy to read/interpret/understand;

The following answers are insufficient:

- It is clear
- It is easy

Disadvantages such as are insufficient:
drawing it is time consuming;
differences don't appear as big as they actually are

The following answer is insufficient:

- It is not accurate

The following answer = 0:

- Does not show what the water is used for

2 @ 1 mark

[2]

- (iv) Ideas such as:
looking on internet/websites;
book/atlas/textbook;
journal/newspaper;
government statistics/government records;
census

The following answer is insufficient:

- Past records

The following answer = 0:

- How they use it – for example, to draw a graph.

[1]

- (c) (i) Ideas such as:
carry small amounts therefore lots of journeys/journeys are slow;
many do not have piped supplies/water in their homes/they have got no taps;
it is a long way to the water sources/rivers/wells; no river/wells nearby;
they have to queue to use wells/standpipes;
it is the traditional role of women to collect water;
nearby supplies are drying up/people have to search further afield because of drought, etc.
there are no roads/they have no transport/they have to walk to get water

The following answers are insufficient:

- No access to water
- They need a lot of water

3 @ 1 mark

[3]

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- (ii) Ideas such as:
 lack of water infrastructure/no piped water/no wells/no boreholes/few water treatment plants/water not filtered or purified;
 people are using polluted water/water which carries disease/bacteria/contaminated/dirty water;
 water is also used to dispose of sewage/industrial waste/to wash clothes/for bathing;
 they have no alternative but to drink it even though it is diseased;
 people die from cholera/typhoid/bilharzia or other named water-borne disease;
 health care/medical care is poor/cannot afford to treat disease;
 lack of education/lack of awareness about how to purify water;
 cannot afford to buy bottled or clean water/cannot afford to purify water;

The following answer is insufficient:

- No education
- Because they are poor

The following answers = 0:

- Malaria/reference to mosquitoes/insects

3 @ 1 mark

[3]

[Total: 18]

2 (a) (i) Australasia/Africa

Australia = 0

[1]

- (ii) Ideas such as:
 Drought/low rainfall/lots of deserts/climate is too dry/desertification;
 Overpopulation (if Africa chosen);
 Lack of investment in water infrastructure (if Africa chosen) etc.

The following answers are insufficient:

- There are poor
- It is developing
- There is not enough rainfall

The following answer = 0:

- Hot climate

[1]

(iii) Europe

[1]

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- (iv) Africa uses:
 more/higher percentage for agriculture;
 less/lower percentage for industry;
 less/lower percentage for domestic purposes;
 comparison of uses in the rank order – for example, agriculture is highest in and...is highest in

(or reverse statements)

Can use pairs of statistics/figures that compare – allow 5% tolerance

	Africa	North America
Agriculture	90%	40%
Industry	4%	50%
Domestic	6%	10%

NB: Must compare.

3 @ 1 mark

[3]

- (v) Ideas such as:
 Europe has more rainfall/farmers have to use more irrigation in Australasia/Australasia has less rainfall/more drought/more water shortages;
 Australasia has more farmland;
 Europe is more industrial.

(or reverse statements)

The following answers are insufficient:

- More deserts in Australasia
- Better climate in Europe

NB: Does not need to compare. Accept implied comparison.

2 @ 1 mark

[2]

- (b) (i) 45 [1]

- (ii) 207 (litres) – or accept correct total worked out if (i) is incorrect. [1]

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- (iii) Drawing of bar graph. DO NOT accept any other type of graph = 0. If wrong set of figures is used = 0.

Choice of scale (1) – 1 cm = 10% (y-axis) and 1 or 2 cm for one use (x-axis)

Labelling of axes (1) – Total (litres) and Activity/Use

Labelling of bars/key (1) – Name the bars or use a key

Correct plotting (1)

Do not penalise if error on (i).

Without correct scale – MAX 2

4 marks

[4]

- (iv) Ideas such as:

less water will be used in total;

greater proportion is used for washing/food and drink preparation;

as it is likely to be less easily accessible/not piped/people will have to collect it from standpipe/rivers/shortage of water;

less/none will be used for washing machine/dishwasher/shower/toilet;

as they will not have one/cannot afford one etc.

The following answer = 0:

- Water contains disease/they are worried about getting a disease

The following answer is insufficient:

- Some activities don't exist

3 @ 1 mark

[3]

[Total: 17]

- 3 (a) (i) Ideas such as:

they are more familiar with local issues/circumstances/they know what is best;

so they will be aware of the likely implications of decisions/because it will affect them;

they know what they can afford;

a decision is more likely to be made which is supported by them;

so they will have 'ownership'/will be more willing to help;

they will be likely to provide labour for construction;

and ongoing maintenance etc;

community spirit;

They own/use/live on the land.

4 @ 1 mark

[4]

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(ii) No mark for choice as each one can be justified.

Candidates need to explain 2 advantages of their **chosen option**.

Simple explanation = 1 mark

Developed explanation = 2 marks

e.g. Option 1 Build a traditional well

It is low cost = 1

Cost is low as most of work will be done by unskilled locals = 2

The following answer = 0

- Easy/quick/don't have to walk far
- Readily available

<p>1 Well: Low cost Can do it for themselves Low maintenance It won't take long</p>	<p>3 Pipes from Springs: Low cost Reliable/won't dry up Clean</p>
<p>2 Rainwater: Low cost Low maintenance Quick</p>	<p>4 Borehole: Clean/safe water Won't dry up Large amounts of water provided</p>

2 @ 2 marks

[4]

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(iii) No mark for choices.

For each choice of rejected option candidates need to explain one disadvantage.

Simple explanation = 1 mark

Developed explanation = 2 marks

e.g. Option 1 Build a traditional well

The well will not provide water all the time = 1

During periods of drought water will not be available as the level of the water table will be lowered = 2

1 Well: Not hygienic Dangerous to young children Stagnant water Will not provide water all the time	3 Pipes from Springs: Stagnant water in tank Cost (if qualified) Pipes cross peoples' land
2 Rainwater: Not pure or clean No water in the dry season Stagnant water	4 Borehole: Expensive Maintenance Cost of electricity

The following answer would = 0:

- Air/noise pollution

2 @ 2 marks

[4]

[Total: 12]

4 (a) (i) India

[1]

(ii) Methods such as:
 questionnaires;
 discussions;
 observation

Do not accept interviews = 0

3 @ 1 mark

[3]

(iii) Ideas such as:
 so it was representative/accurate/reliable;
 so results would be fair/balanced/reduced bias;
 because different socio-economic groups may access water using different methods;
 so they can compare how different socio-economic groups access the water

The following answers are insufficient:

- They live in different ways
- So they can draw conclusions
- Reference to people rather than socio-economic groups

[1]

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- (iv) Stratified (1) or description
How they collect a stratified sample (1) – for example, ask the village elders or use the census.

2 @ 1 mark [2]

- (v) Ideas such as:

- people may refuse to cooperate/not fill in questionnaire;
 - people may not answer honestly/lie/give wrong information;
 - people may not be able to read the questions;
 - people may not be able to write answers;
 - people will not understand English/will only speak local language;
 - people may not have time to complete questionnaire/attend meeting/discussion;
 - information discussed at informal meeting may not be relevant/researchers time may be wasted;
 - observation of all water sources may not be possible;
 - difficulty/cost of accessing six villages;
 - cost of paper/printing of questionnaires;
 - accommodation/food/water when working in the area;
 - danger of attack/theft etc.;
 - may not trust the researcher/be suspicious;
 - questionnaires not returned;
 - bad weather;
 - people might not be at home/working in the fields
- ACCEPT generic points. The emphasis is on collecting the data.
 - Questionnaires, observation or discussions.

The following answers are insufficient:

- takes a long time
- costs a lot

6 @ 1 mark or **development** [6]

- (b) (i) Some households may use 2 or more different sources of water. [1]

- (ii) All sample households use hand pumps = Anganwa
Most people use traditional rain harvesting structures = Kalijal

2 @ 1 mark [2]

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- (iii) Ideas such as:
 Soorpura is connected to supply pipes but Bacharna is not;
 people in Soorpura are more wealthy;
 there is a river closer to Bacharna than Soorpura;
 water table is higher in Bacharna than Soorpura etc.

(accept reverse statements)

NB: No need for explicit comparison. There are no marks for description – the answer must explain.

The following answer = 0:

- more rainfall

3 @ 1 mark

[3]

- (c) (i) Hypothesis 1
 If people travel a long way to collect water it will take longer than if their supply is nearby [1]
- (ii) Hypothesis 2
 Average amount of water used will be influenced more by method of supply [1]
- (d) (i) Average distance travelled to collect water
 Bacharna
 Modijoshiyan
 Lolawas
 Soorpura
 Average time spent on collecting water
 Kalijal
 Soorpura
 Modijoshiyan
 Lolawas
 2 @ 1 mark [2]
- (ii) Drawing of scatter graph:
 Choice of scales (1) – scales roughly same length/good fit
 Labelling of axes (1) – time (hours)/amount (litres)
 Labelling of crosses (1) – crosses labelled
 Correct plotting (1)
 If candidate use wrong sets of figures = 0. Do not accept any other type of graph. [4]

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(iii) **Levels marking**

Level 1 (1 to 2 marks)

Simple answer which states that the candidate agrees with hypotheses 1 and 2.

Level 2 (3 to 4 marks)

Answer which states that the candidate agrees with hypotheses 1 and 2 supported by reference to villages and/or statistics **or** anomalies.

Level 3 (5 to 6 marks)

An answer showing excellent understanding which states that the candidate agrees with hypotheses 1 and 2 supported by reference to villages and/or statistics **and** anomalies (Hyp 1). [6]

[Total: 33]