MARK SCHEME for the October/November 2013 series

0453 DEVELOPMENT STUDIES

0453/02   Paper 2, maximum raw mark 80

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]

(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]

(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]

(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]

(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

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

2 @ 2 marks   [4]

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

(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]

    (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]

(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]