DEVELOPMENT STUDIES   **0453/02**

Paper 2   **October/November 2019**

MARK SCHEME

Maximum Mark: 80

Published

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 International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2019 series for most Cambridge IGCSE™, Cambridge International A and AS Level components and some Cambridge O Level components.

This document consists of **8** printed pages.

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

     the specific content of the mark scheme or the generic level descriptors for the question
     the specific skills defined in the mark scheme or in the generic level descriptors for the question
     the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

     marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
     marks are awarded when candidates clearly demonstrate what they know and can do
     marks are not deducted for errors
     marks are not deducted for omissions
     answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Question	Answer	Marks
1(a)(i)	A. Libya B. Bangladesh 2 @ 1 mark	**2**
1(a)(ii)	94.4%/most of the women/girls (1) can read and write (2) 2 @ 1 mark	**2**
1(a)(iii)	**Number of doctors (per 10 000 people)** Dominican Republic … Guatemala … Thailand … Bangladesh **Female literacy (percentage)** Thailand … Dominican Republic … Guatemala … Bangladesh **Employment in agriculture (percentage)** Bangladesh … Guatemala … Thailand … Dominican Republic Note: Correct order needed 3 @ 1 mark	**3**
1(a)(iv)	**Economic development:** GDP (per person) (1) as it measures the value of production/goods and services produced/wealth coming into the country (2) **Social development:** Number of doctors/female literacy rate (1) as it is a measure of wellbeing/equality/rights/it reflects the quality of/amount of investment in education/medical services/health care, etc. (2) 2 @ 2 marks	**4**
1(b)(i)	In Finland: Life expectancy is likely to be longer/higher; Education is likely to be higher quality/better/accessible to more people/more children attend school/higher literacy rate; Income per person is likely to be higher/people are richer/earn more money. Note: Credit reverse statements in relation to Dominican Republic 3 @ 1 mark	**3**
1(b)(ii)	Ideas such as: HDI incorporates different aspects of development/combines different indicators/is a composite method/measures overall development; HDI measures social development/quality of life/standard of living; GDP just measures economic development/value of goods and services/value of production/uses only one indicator; HDI uses index numbers/0 to 1 scale for easier comparison; GDP does not consider population size. 3 @ 1 mark	**3**

Question	Answer	Marks
1(c)(i)	Plot Russia on Fig. 1B	**1**
1(c)(ii)	The relationship is positive/higher GDP the more electricity is used (1 mark reserved); However there are anomalies/it is not perfect; Use of statistics to illustrate either of above points (Max 1 Reserved). 3 @ 1 mark	**3**
1(c)(iii)	Ideas such as: People in countries with high GDP can afford electricity; In countries with high GDP most homes have electricity; Higher GDP enables people to afford electrical devices/technology/or examples; The country has more wealth to invest in power stations/to generate electricity; And transfer grid/network to all parts of the country; The more electricity there is available the more industries can be set up/mechanized/automated; In countries with high GDP more electricity will be used in schools/hospitals; In countries with high GDP more electricity will be used for transport, etc. 4 @ 1 mark	**4**

Question	Answer	Marks
2(a)(i)	To compare fuels used for cooking and lighting in two villages/areas/Barbote and Kanyam.	1
2(a)(ii)	Qualitative data is descriptive/written text/not measureable. Quantitative data is numerical/statistical/shows quantities 2 @ 1 mark	2
2(a)(iii)	Primary: Questionnaire/interview/observation Secondary: books/eBooks/journals/online publications 4 @ 1 mark	4
2(a)(iv)	Advantage: it was quick/easy/simple/does not waste time Disadvantage: sample may be biased/not representative/not everyone would have equal chance of being chosen 2 @ 1 mark	2
2(a)(v)	**Personal observations:** Limited aspects can be seen by observers (1) so usually this can only be used to back up findings (2); People being observed may not act in their typical manner (1) to try to impress observers/so they do not appear underdeveloped (2). **Interviews with village leaders:** They may give biased/incorrect information (1) so that their village looks more developed than it is/to convey a more favourable impression (2); Leaders may not be familiar with the lifestyles of villagers (1) as their own lifestyles could be untypical (2). **Secondary data:** May be incorrect/biased/not accurate (1) as it could be out of date/expresses authors viewpoints (2); Not all secondary data may be relevant to aims of study (1) so time can be wasted/study can be weakened by inclusion of irrelevant materials/because data was collected for other purposes (2). 3 @ 2 marks or development	6
2(b)(i)	Completion of pie chart. 2 marks for plots, 1 mark for shading/order	3
2(b)(ii)	Completion of bar graph. 2 @ 1 mark	2

Question	Answer	Marks
2(b)(iii)	Ideas such as: Both villages use a combination of fuels; Firewood is most important in both villages; Similar amounts of firewood used in both villages/slightly more in Kanyam; Similar amounts of LPG used in both villages/slightly more in Barbote; Greater percentage use electricity in Barbote; Greater percentage use charcoal in Barbote; Greater percentage use biogas in Kanyam; Lowest percentage in Barbote is biogas but lowest in Kanyam is electricity, etc. Use of statistics to illustrate any of above points (Max 1 Reserved) 4 @ 1 mark	**4**

Question	Answer	Marks
3(a)(i)	Global environmental problem = an environmental problem which affects the whole world/all/most countries/worldwide. Loss of biodiversity = reduction in variety of species/there will be less different species/less variety of species/less types of plants <u>and</u> animals. Death of/loss of different species/variety of species/types of plants and animals. 2 @ 1 mark	**2**
3(a)(ii)	Acid rain	**1**
3(b)(i)	Ideas such as: Increase in temperature between 1880 and 2010/higher in 2000s; From 13.7/13.8°C to 14.5/14.6°C or by 0.7/0.9°C; Particularly from 1970/1980 onwards; Fluctuations/increase is not even/temperatures go up some years but down in others; E.g. increase from 1942 to 1944 but decrease from 1944 to 1950. 3 @ 1 mark	**3**
3(b)(ii)	Ideas such as: Burning of fossil fuels; Increase in emissions of greenhouse gases/carbon dioxide/methane/increased carbon footprint; As there are more vehicles/factories/power stations/industrialisation/use of electricity; Deforestation/burning rainforest has occurred; So there are less trees to convert carbon dioxide to oxygen; Greenhouse gases build up in atmosphere; Allow sun`s rays to enter the atmosphere; But they cannot escape/they are trapped, etc. 4 @ 1 mark	**4**
3(c)(i)	Impacts such as: Sea level rises; Glaciers melt; Coral reefs damaged; Extinction of species; Droughts; Floods; Storms; Forest fires. 2 @ 1 mark	**2**
3(c)(ii)	Ideas such as: Yields of crops will be reduced/crops damaged/die/will not grow; Due to drought/lack of water/flooding/forest fires/storms/sea level rise, etc. 2 @ 1 mark	**2**

Question	Answer	Marks
3(c)(iii)	Ideas such as: Some may benefit from the increase whilst others be disadvantaged/impacts are less in some countries so less concern; E.g. developed countries crop yields may initially increase, tropical crops could be grown in temperate areas; Some countries are more able to invest in strategies to reduce the impacts/e.g. irrigation, coastal defences; Not all countries have areas on the coasts which would be threatened by rising sea levels/some are more low lying; Some countries rely on glaciers/snow for tourism but others benefit from hot weather for tourism/e.g. skiing in the Alps; Some countries are more focussed on economic development; Some countries are more focussed on agriculture than others; Some countries may be more affected by drought/floods/storms, etc.; Some countries are already struggling to provide food/water, etc. 4 @ 1 mark	**4**
3(d)(i)	Ideas such as: It won't prevent sea level rises/protect people against sea level rises; The small population of the Maldives are unlikely to use much energy; So their contribution to rising sea levels is minimal; And not all energy used can be from solar or wind power; E.g. boats and vehicles use oil so it would be impractical/cost too much to convert them; The causes of emissions are global not local; So global sea levels will still rise because of emissions from other countries with large population/industries, etc. 4 @ 1 mark	**4**
3(d)(ii)	Levels marking Level 1 (1/2/3 marks) An evaluation of the options with basic points Level 2 (4/5/6 marks) An evaluation of the options with developed points Level 3 (7/8/9 marks) A full and sophisticated evaluation of the options with developed points Candidates can choose any of the three methods, B, C and D, and justify them. Statements to be credited which explain why they have chosen the method and why they have rejected the other two. Note: Do not double credit direct opposites	**9**