
GEOGRAPHY**0460/12**

Paper 1

March 2019

MARK SCHEME

Maximum Mark: 75

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.

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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)	4.0 to 4.2	1
1(a)(ii)	<p>It is predicted to decrease (1) From 11.9–12.1% to 7.9–8.1% (2)</p> <p>Note: Accept separate male and female percentages</p> <p>2 @ 1 mark</p>	2
1(a)(iii)	<p>Ideas such as: Base will be narrower/smaller; Top will be wider/bigger; It will be less pyramid shaped/more rounded/the base will have straighter sides etc.</p> <p>3 @ 1 mark</p>	3
1(a)(iv)	<p>Young dependents: Birth rates will be reduced/less children will be born/people want smaller families; Education about/access to/can afford contraception/family planning; More women working/being educated/female equality; Reduced infant mortality rate; Less need for child labour; Later marriage; Anti-natal policies etc.</p> <p>Old dependents: Reduction in death rates/longer life expectancy; Better health care/more doctors/nurses/medicines/vaccinations; Better water supply/sanitation/hygiene; Improved care for the elderly/old age homes/pensions; Better food supply/balanced diet; Healthier lifestyle etc.</p> <p>MAX 3 on young/old.</p> <p>4 @ 1 mark</p>	4
1(b)(i)	<p>(Births – deaths) = 1.1million (1) (Net migration) = 0.9 million (2) (Overall population growth) = 2.0 million (3)</p> <p>3 @ 1 mark</p>	3

Question	Answer	Marks
1(b)(ii)	<p>Ideas such as: Need to provide more housing/less land to live on/homelessness; Need to provide more health care; Need to provide more educational facilities; Traffic congestion; Loss of green belt land/natural vegetation/deforestation; Specified pollution (air/water/noise); Less food supply/farmland; Unemployment; Pressure on water supplies; Need to integrate international migrants/specific problems resulting from migration etc.</p> <p>5 @ 1 mark or development</p>	5

Question	Answer	Marks
1(c)	<p>Levels marking</p> <p><u>Level 1</u> (1–3 marks) Statements including limited detail which describe a population policy used to influence growth rate. e.g. One Child Policy;</p> <p><u>Level 2</u> (4–6 marks) More developed statements which describe how a population policy is used to influence growth rate NOT the impacts.</p> <p>Note: Credit different approaches within a policy, so for example, when marking a China One Child Policy answer, ideas will often cover the following: Incentives; Penalties; Exceptions; Enforcement</p> <p>Note: Credit only 1 L2 mark for each of these four ideas above, although credit should also be given for other ideas such as developing the idea such as applying to have a child/increasing the age of marriage which do not fit the four ideas above.</p> <p>e.g. One Child Policy and free education L2; One Child Policy and use of fines if more than one child L2; One Child Policy and parents not penalised if they have twins or a child is disabled L2; One Child Policy and Granny Police check if couples are conforming to law L2.</p> <p>Note: If another country is given, generally apply the same principle, but other ideas in the Content Guide will be relevant, e.g. gender equality acts or educating women etc.</p> <p>(Note: Max 5 if no named or inappropriate example)</p> <p><u>Level 3</u> (7 marks) Uses named example. Comprehensive and accurate statements including some place specific reference, which can be named parts of the chosen country, population data, reference to a specific named policy/specific details about it etc.</p>	7

Question	Answer	Marks
2(a)(i)	45–47 (million)	1
2(a)(ii)	Completion of bar 1 mark for correct plotting 1 mark for shading 2 @ 1 mark	2
2(a)(iii)	Ideas such as: A greater proportion/more people are living in urban areas/lighter colour on graph increases as year increases/lower proportion/less people living in rural areas; Any valid statistics with year – 2 dates and 2 figures needed (MAX 1); 8× increase in urban areas but same number in rural areas in 2050 as in 2000; In 2000 more people lived in rural than urban areas, but from 2035 onwards more will live in urban than rural areas etc. 3 @ 1 mark	3
2(a)(iv)	Accept pulls or pushes, but do not double credit. Ideas could relate to: Migration to cities/from rural areas/rural areas become built up/cities spread to surrounding countryside; Employment/higher wages; Water supply/sanitation; Food supply; Health care; Education; Entertainment/bright lights etc. 4 @ 1 mark	4
2(b)(i)	Increased: Botswana, Zimbabwe Decreased: Nigeria, South Africa Stayed the same: Kenya, Niger 3 @ 1 mark	3
2(b)(ii)	Ideas such as: Populations are growing rapidly/high natural population growth; There are not enough houses; Many people have migrated to urban areas/rapid urbanisation; People cannot afford to buy houses/poverty/lack of work/cheaper; There is limited building space; Lack of investment in housing from local authorities etc. 5 @ 1 mark or development	5

Question	Answer	Marks
2(c)	<p>Levels marking</p> <p><u>Level 1</u> (1–3 marks) Statements including limited detail which describe the strategies used to improve housing conditions.</p> <p><u>Level 2</u> (4–6 marks) Uses named example.</p> <p>More developed statements which describe the strategies used to improve housing conditions.</p> <p>(Note: Max 5 if no named or inappropriate example)</p> <p><u>Level 3</u> (7 marks) Uses named example. Comprehensive and accurate statements which describe the strategies used to improve housing conditions, with some place specific reference.</p> <p><u>Content Guide:</u> Answers are likely to refer to ideas such as: Self help schemes; Site and services schemes; Building of low cost local authority housing; Infrastructural improvements – electricity, water, sewage disposal etc.</p> <p><u>Place specific reference is likely to consist of:</u> Locational details; Specific details of the schemes; Named parts of urban areas etc.</p>	7

Question	Answer	Marks
3(a)(i)	Strato-volcano	1
3(a)(ii)	<p>X = Crater Y = Parasitic/secondary cone/secondary crater</p> <p>2 @ 1 mark</p>	2
3(a)(iii)	<p>Ideas such as: Lava; Poisonous fumes; Ash; Blast from eruption; Pyroclastic flow; Mudflow; Volcanic bombs; Nuee ardentee; lahars etc.</p> <p>3 @ 1 mark</p>	3

Question	Answer	Marks
3(a)(iv)	<p>Ideas such as: Signs of eruption/swelling of volcano/radan gas increases/smoke comes from the volcano before it erupts; Eruptions can be predicted/forecasted/people can be warned; People can be evacuated/evacuation routes are planned/evacuation centres built; Lava often moves slowly/does not travel far/affects a limited area; Eruptions are often ash clouds which do not cause many deaths; Properties can be protected from ash; Strategies can be used to divert lava/dig channels; Lava can be slowed down by spraying water on it; People are educated to stay safe in an eruption/drills; etc.</p> <p>4 @ 1 mark</p>	4
3(b)(i)	<p>Features such as: Conical; Top has been removed; Crater; Steep sides; Bare rock/little vegetation/ash covered etc.</p> <p>3 @ 1 mark</p>	3
3(b)(ii)	<p>Ideas such as: Plates move apart; Due to convection currents; Gap created between plates; Magma is forced upwards/rises/fills the gap; Due to pressure etc.</p> <p>1 mark reserved for appropriate diagram</p> <p>5 @ 1 mark or development</p>	5

Question	Answer	Marks
3(c)	<p>Levels marking</p> <p><u>Level 1</u> (1–3 marks) Statements including limited detail which describe the impacts of an earthquake.</p> <p><u>Level 2</u> (4–6 marks) Uses named example.</p> <p>More developed statements which describe the impacts of an earthquake.</p> <p>(Note: Max 5 if no named or inappropriate example)</p> <p><u>Level 3</u> (7 marks) Uses named example. Comprehensive and accurate statements including some place specific reference.</p> <p><u>Content Guide:</u> Answers are likely to refer to: Deaths; Injuries; Damage to property, Fires; Damage to gas/water pipes; Disruption of electricity supplies; Damage to roads; Damage to hospitals; Economic impact/damages to factories/offices etc.</p> <p><u>Place specific reference is likely to consist of:</u> Locational details; named places within the area affected; specific details of damage etc.</p>	7

Question	Answer	Marks
4(a)(i)	24.3 to 24.6 (°C)	1
4(a)(ii)	<p>Temperature range = 8 (°C) Annual precipitation = 48 (mm)</p> <p>2 @ 1 mark</p>	2
4(a)(iii)	<p>Ideas such as: Low latitude/Tropics/on Tropic of Capricorn; In southern hemisphere; Sun overhead/high angle of sun/sun's rays are direct/more concentrated; Inland location/away from areas of sea/ocean; Small amount of cloud cover etc.</p> <p>3 @ 1 mark</p>	3

Question	Answer	Marks
4(a)(iv)	<p>Ideas such as: Close to Tropic of Capricorn; High air pressure; Descending air; Air heats up; Wind direction over large areas of land/wind blows from inland/wind blows from land to sea; Cold current reduces water vapour in air/causes condensation to occur over the sea etc.</p> <p>4 @ 1 mark</p>	4
4(b)(i)	<p>Kisangani (1 mark)</p> <p>Ideas such as: High temperatures throughout the year/low temperature range; High total/annual rainfall/it has the highest rainfall/there is no month with rainfall less than 100 mm/high rainfall every month; No seasons etc.</p> <p>Note: Accept statistics as alternative to statements.</p> <p>3 @ 1 mark</p>	3
4(b)(ii)	<p>Ideas such as: Lots of vegetation/rapid growth due to constant/lots of rainfall; High temperatures throughout the year encourage rapid growth/lots of vegetation; Emergents/lianas reach for sun/very tall due to competition from dense vegetation; Evergreen due to constant growing season/all year round rain/high temperatures all year; Drip tip leaves to shed water; Broad leaves to obtain more sunlight; Buttress roots for stability/due to marshy ground; Shrubs/ground cover in clearings/where there is sunlight etc.</p> <p>5 @ 1 mark or development</p>	5

Question	Answer	Marks
4(c)	<p>Levels marking</p> <p><u>Level 1</u> (1–3 marks) Statements including limited detail which explain why deforestation has taken place.</p> <p><u>Level 2</u> (4–6 marks) Uses named example.</p> <p>More developed statements which explain why deforestation has taken place.</p> <p>(Note: Max 5 if no named or inappropriate example)</p> <p><u>Level 3</u> (7 marks) Comprehensive and accurate statements which explain why deforestation has taken place including some place specific reference.</p> <p><u>Content Guide:</u> Answers are likely to refer to: Road building; Logging; Mining; Dam building; Settlement building; Ranching; Commercial agriculture; Manufacturing/industry; Increasing population etc.</p> <p><u>Place specific reference is likely to consist of:</u> Locational details; Named areas/development schemes etc.</p>	7

Question	Answer	Marks
5(a)(i)	Human Development Index	1
5(a)(ii)	<p>Europe is higher/has a higher average/South America is lower/lowest HDI in Europe is the highest in South America; Europe has a narrower range of values/South America has a wider range</p> <p>Note: Accept relevant comparative statistics as an alternative on each line.</p> <p>2 @ 1 mark</p>	2

Question	Answer	Marks
5(a)(iii)	<p>Ideas such as: It takes into account a variety of factors/uses more than one indicator/composite indicator; Life expectancy/numbers of years in school/GNI are used (at least 2 needed); Gives an overall score from 0 to 1; Easy to carry out statistical comparisons between countries/change over time etc.</p> <p>3 @ 1 mark</p>	3
5(a)(iv)	<p>Indicators such as: Average number of people per doctor/percentage dying from specified illness; Life expectancy; GDP/GNP/GNI/National Income per capita; Literacy/% completing secondary education; IMR/death rate; Birth Rate; Employment structure/% employed in primary/secondary/tertiary etc.</p> <p>1 mark for identification of indicator with a further mark for explaining how it can be used.</p> <p>E.g. life expectancy (1) will be higher when a country is at a higher level of development. (2)</p> <p>2 @ 2 marks</p>	4
5(b)(i)	<p>Primary = Fig. 5.4 Secondary = Fig. 5.2 Tertiary = Fig. 5.3</p> <p>3 @ 1 mark</p>	3
5(b)(ii)	<p>Ideas such as: The structure will be dependent on level of development/how rich the country is/whether it is LEDC or MEDC; Proportion of primary economic activity tends to decrease in MEDCs/with development due to mechanisation; Proportion of primary economic activity tends to decrease in MEDCs/with development due to exhaustion of resources; Secondary increases as development occurs due to investment by TNCs; Secondary increases as more development occurs due to automation; Tertiary increases as development occurs due to education/skills increase; Tertiary increases as development occurs due to increase in wealth creating demand for services etc.</p> <p>5 @ 1 mark or development</p>	5

Question	Answer	Marks
5(c)	<p>Levels marking</p> <p><u>Level 1</u> (1–3 marks) Statements including limited detail which describe the impacts of an economic activity on the natural environment.</p> <p><u>Level 2</u> (4–6 marks) Uses named example.</p> <p>More developed statements which describe the impacts of an economic activity on the natural environment.</p> <p>(Note: Max 5 if no named or inappropriate example)</p> <p><u>Level 3</u> (7 marks) Uses named example. Comprehensive and accurate statements, including some place specific reference.</p> <p><u>Content Guide:</u></p> <p>Answers could refer to any economic activity at any scale and are likely to refer to issues such as: Air pollution; Water pollution; Destruction of vegetation; Impacts on ecosystems/food chains; Impacts on climate/global warming; Acid rain; Soil erosion etc.</p> <p><u>Place specific reference is likely to consist of:</u> Locational details/named areas within country/area chosen statistics etc.</p>	7

Question	Answer	Marks
6(a)(i)	Changing (raw) materials/inputs into a (finished) product	1
6(a)(ii)	<p>Features such as: Old; Large; Tall/7 storeys; Many windows; By the dockside/near the sea/near water/near a river; Delivery bays for boats; Flat roof; Chimney; Big sign etc.</p> <p>2 @ 1 mark</p>	2

Question	Answer	Marks
6(a)(iii)	Inputs: electricity, sugar cane Processes: drying, packing Outputs: sugar, waste materials 1 mark for 1 or 2 correct 2 marks for 3, 4 or 5 correct 3 marks for 6 correct	3
6(a)(iv)	Ideas such as: Air pollution/gases/greenhouse gases; Water pollution/acid rain pollutes water; Kills wildlife/wildlife forced to move/extinction of species; Destruction of vegetation/deforestation; Impacts on ecosystems/food chains; Loss of habitats; Noise scares animals etc. 4 @ 1 mark	4
6(b)(i)	Ideas such as: Mainly in southern India/south west/south east/west/centre/peninsular India; Clustered together; E.g. Karnataka/Maharashtra/Gujurat etc.; Isolated areas/some/few further north; E.g. Punjab/Haryana. Note: MAX 1 overall on examples IN CONTEXT 3 @ 1 mark	3

Question	Answer	Marks
6(b)(ii)	<p>Advantages such as: Employment/higher wages; Skills development; Multiplier effect; Improvement electricity/water supply; Improvement of transport network/roads/airports; Encourages development/economic growth/improves the economy; New technology; Government income / taxes etc.</p> <p>Disadvantages such as: Low pay; Exploitation; Profits go abroad/not kept locally/economic leakage; High paid jobs filled by foreigners; Specified pollution; Depletion of resources (or example); Traffic congestion; Competition for local industry; Can pull out at any time etc.</p> <p>MAX 4 for advantages/disadvantages</p> <p>5 @ 1 mark or development</p>	5

Question	Answer	Marks
6(c)	<p>Levels marking</p> <p><u>Level 1</u> (1–3 marks) Statements including limited detail which describe and/or explain the location of a factory or industrial zone.</p> <p><u>Level 2</u> (4–6 marks) Uses named example.</p> <p>More developed statements which explain the location of a factory or industrial zone.</p> <p>(Note: Max 5 if no named or inappropriate example or no valid description of location)</p> <p><u>Level 3</u> (7 marks) Uses named example. Comprehensive and accurate statements, which describe and explain the location of a factory or industrial zone including some place specific reference.</p> <p><u>Content Guide:</u> Answers could refer to: Raw materials; Market; Power supplies; Communications; Inertia; Workforce etc.</p> <p><u>Place specific reference is likely to consist of:</u> Locational details; Specific details of industry; Named/numbered roads etc.</p>	7