



GEOGRAPHY

0460/12

Paper 1

October/November 2018

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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This document consists of **18** 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)	6400–6500	1
1(a)(ii)	<p>In Bihar there are more/greater percentage of young dependents/less young dependents in Delhi;</p> <p>In Bihar there are decreasing numbers from 0 to 14 but in Delhi there are increasing numbers from 0 to 14/0 to 4 is highest in Bihar but 10–14 is highest in Delhi/0 to 4 is lowest in Delhi but 10–14 is lowest in Bihar;</p> <p>Answer must be comparative. Assume answer is about Bihar unless otherwise stated.</p> <p style="text-align: right;">2 @ 1 mark</p>	2
1(a)(iii)	<p>Birth rate is high in Bihar: The base of the pyramid is wide; There are large numbers of young dependents/lots of babies/children/0–4 year olds;</p> <p>Note: Do not credit reference to 5–9/10–14 years</p> <p>Rural depopulation has taken place in Bihar: There is a (big) drop/less/not as wide in population of 15–29/15–19/20–24 /economically active/more young dependents than economically active</p> <p>There is gender imbalance in Delhi: There are more males/less females;</p> <p style="text-align: right;">3 @ 1 mark</p>	3
1(a)(iv)	<p>Ideas such as:</p> <p>Lack of/no/cannot afford contraception/family planning; Not educated about birth control/do not know how to use contraceptives/not aware of impacts of large families; Abortions not available; High infant mortality rates; Have babies until a boy is born; Need children to send out to work/work on farms/for labour; Need children to work in house/collect firewood/water/to look after younger children; No pensions/children needed to look after elderly; Large families are traditional/culture/gift of god/prestige/evidence of virility; Religious opposition to contraception/family planning; Lack of education for women; Many women don't have careers; Early marriages/have children at a young age; Polygamy; Etc.</p> <p style="text-align: right;">4 @ 1 mark</p>	4

Question	Answer	Marks															
1(b)(i)	<p>Ideas such as: dependency ratio will reduce/be less in 2050/higher proportion of dependents in 2000/reduced proportion of dependents in 2050;</p> <p>statistics as follows for MAX 1: Needs to have figures for 2000 and 2050. Figures could be either total number of dependents or both old & young dependents as separate figures for 1 plus economically active.</p> <table border="1" data-bbox="316 548 1313 875"> <thead> <tr> <th></th> <th>2000</th> <th>2050</th> </tr> </thead> <tbody> <tr> <td>Old dependents</td> <td>50–60 m</td> <td>230–250 m</td> </tr> <tr> <td>Young dependents</td> <td>360–380 m</td> <td>320–340 m</td> </tr> <tr> <td>Total dependents</td> <td>410–440 m</td> <td>550–590 m</td> </tr> <tr> <td>Economically active</td> <td>640–660 m</td> <td>1130–1150 m</td> </tr> </tbody> </table> <p>2000 Dependency Ratio = 62–63 but DR = 50 in 2050/lower by 12–13 in 2050 OR 2000 = 1:1.15 but 2050 = 1:2</p> <p>Note: All answer lines must be comparative. 3 @ 1 mark</p>		2000	2050	Old dependents	50–60 m	230–250 m	Young dependents	360–380 m	320–340 m	Total dependents	410–440 m	550–590 m	Economically active	640–660 m	1130–1150 m	3
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1(b)(ii)	<p>Ideas such as in India there are: Decreasing death rates/increasing life expectancy; Improving health care/medical facilities/hospitals/clinics; More doctors/nurses; Vaccinations; Cures for diseases/medicines; Improvement in water supply/clean water; Improved food supply/better diet/less famine; Better hygiene/sanitation, etc. Setting up of care structure for old; e.g. old peoples' homes; Pension schemes being set up; Healthy lifestyle/more exercise; Education about diet/hygiene; Etc.</p> <p>Note: Comparison not needed. 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 the problems caused by an increase in young/old dependents.</p> <p><u>Level 2</u> (4–6 marks) Uses named example. More developed statements which describe the problems caused by an increase in young/old dependents. Use of appropriate statistics = 1 × L2 (could also be credited as place specific)</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 ageing population but could refer to increasing percentage of young/old dependents.</p> <p>If ageing population is chosen answers are likely to include reference to:</p> <ul style="list-style-type: none"> • Dependency ratio • Difficulties of providing pensions • Cost of services such as healthcare • Pressure on working population • Lack of workforce/innovation • Impacts of inward migration • Difficulty of defending country, etc. <p><u>Place specific reference is likely to consist of:</u> Named parts of the chosen country, Population data, etc.</p>	7

Question	Answer	Marks
2(a)(i)	Most areas occupied by houses, shops, offices and factories Very little open space Both needed for 1 mark	1
2(a)(ii)	Vernon Montreal 2 @ 1 mark	2
2(a)(iii)	Calgary (1 mark) Ideas such as: Lowest unemployment/higher unemployment in others; Lowest crime index/higher crime index in others; Highest household income/lower household income in others; 3 @ 1 mark	3
2(a)(iv)	Problems such as: Lack of open space/green land/playing fields; Housing may be small/overcrowded houses/no space for gardens/need to build high rise; Not enough houses/high house prices/people live on streets/slums; Traffic problems/traffic congestion/lots of traffic/traffic delays; Pressure on public transport; Air pollution causes breathing difficulties/asthma, etc. Noise pollution; Water shortage/sanitation problems; Pressure on services/education/hospitals; Unemployment/lack of jobs; Need for landfill; 4 @ 1 mark	4
2(b)(i)	Ideas such as traffic problems: Delays/cause people to be late for work/school/to destination; Result in loss of revenue for businesses/goods delivery delayed; Cause road rage/frustration/angry drivers; Time wasted; Uses more fuel; Increased accidents; Delays emergency services; Result in atmospheric pollution/asthma/lung disease; Increase noise levels/to make more peaceful; Result in loss of time/revenue for businesses/goods delivery delayed; Note: Can be phrased either way e.g. (traffic congestion) leads to more accidents or idea (that traffic management) leads to reduced accidents 3 @ 1 mark	3

Question	Answer	Marks
2(b)(ii)	<p>Ideas such as:</p> <p>More regular buses/trains/trams;</p> <p>More bus routes;</p> <p>So that all parts of the city are served by buses;</p> <p>Bus only lanes/roads;</p> <p>Install tram/metro/railway;</p> <p>Park and ride;</p> <p>People park on edge of city and use buses to CBD;</p> <p>Integrated public transport;</p> <p>Ensuring that bus, train, metro, etc. All meet at hubs;</p> <p>Free/subsidised public transport/decrease prices/multi-use card/oyster card;</p> <p>Longer/higher/double decker/more capacity; (Note: not bigger/larger)</p> <p>More comfortable/wifi/toilets/food on board/electric sockets;</p> <p>Note: Credit development of method of transport not for reasoning or impact</p> <p style="text-align: right;">5 @ 1 mark or development</p>	5

Question	Answer	Marks
2(c)	<p>Levels marking</p> <p>Note: Candidates should focus on one land use change, so mark first change only if more than one is stated.</p> <p><u>Level 1</u> (1–3 marks) Statements including limited detail which describe a new land use and explain why this has caused conflict.</p> <p>Note: Max 2 marks for description/explanation</p> <p><u>Level 2</u> (4–6 marks) Uses named example.</p> <p>More developed statements which describe a change (before and after) in land use and explain why this has caused conflict.</p> <p>Note: Max 5 marks for description/explanation</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 which describes a change in land use and explains why this has caused conflict with some place specific reference.</p> <p><u>Content Guide:</u> Answers are likely to focus on a change in land use such as: New housing development Building of a new industry Road building Building of a new shop/supermarket Closing industry Urban fringe development Shanty towns, etc. Problems can be accepted as the idea of conflict</p> <p>Credit description and explanation as L1/L2 statements as appropriate. Accept any changes in land use and any appropriate reasons for conflict as a result of the stated change in land use.</p> <p><u>Place specific reference is likely to consist of:</u> Locational details, Named parts of urban area Specific details of the land use change, Named business, etc.</p>	7

Question	Answer	Marks
3(a)(i)	Spit	1
3(a)(ii)	5.8–6.2 km NE	2 2 @ 1 mark
3(a)(iii)	Prevailing winds blow from the north west; Waves/swash approach the coast/go up the coast/go up beach/at an angle/go in same direction as wind; Backwash retreats/pebbles go back /down the beach vertically /straight down/at right angles; Beach materials moved in zig-zag manner/along coast; (Known as) longshore drift; Recurved/hooked as a result of wind from different direction; Deposition at end/in deeper water/at change of direction of coastline;	3 3 @ 1 mark
3(a)(iv)	Ideas such as: Winds blow from the sea/onshore/across the beach ; Winds pick up/carry sand particles/blow sand; Drop them around an obstacle/pebble/plant; Dunes increase in size due to more build up of sand/deposition; Colonisation by vegetation/plants grow on them/vegetation anchors sand, etc.	4 4 @ 1 mark
3(b)(i)	Opportunities such as: Fishing/port/harbour; Trade/transport/export/load/unload goods/port/harbour; Tourism/leisure/restaurant/bars/boat rides; Note: Credit port/harbour once only	3 3 @ 1 mark
3(b)(ii)	Ideas such as: Kill/injure/endorsement people; Homes/gardens/property/lost/damaged/flooded; Transport/roads/paths damaged/flooded Boats/ships/ports/harbour damaged/fishing industry disrupted; Loss of farmland/crops/grazing land/kills livestock; Businesses/example flooded/lost Loss of electricity/water supply/contaminates water; Waterborne diseases; Less tourists Note: Ignore headings and so credit all ideas whether for coastal erosion or tropical storms but do not double credit.	5 5 @ 1 mark or development

Question	Answer	Marks
3(c)	<p>Levels marking</p> <p><u>Level 1</u> (1–3 marks) Statements including limited detail which explain the formation of a cliff and/or wave cut platform. e.g. named erosional process <u>or</u> description of = L1</p> <p><u>Level 2</u> (4–6 marks) More developed statements which explain the formation of a cliff and/or wave cut platform. e.g. named erosional process <u>and</u> description = L2</p> <p><u>Level 3</u> (7 marks) Uses named example. Comprehensive and accurate statements which explain the formation of a cliff and wave cut platform, <u>including an appropriate labelled diagram/series of diagrams.</u></p> <p><u>Note:</u> Do not penalise references to cave arch and stack. Any relevant points made about e.g. types of erosion within such accounts can be credited.</p> <p><u>Content Guide:</u> Answers are likely to refer to: Corrosion Hydraulic action Corrasion/abrasion Undercutting Wave cut notch Retreat of cliffs, etc.</p>	7

Question	Answer	Marks
4(a)(i)	Shading on map Note: Must shade all of relevant area, can shade parts lying in Angola	1
4(a)(ii)	High temperatures; Note: Hot=0 Seasonal differences; Large daily/diurnal temperature range/low temperatures at night/valid statistics for day and night temperatures; Low humidity; 2 @ 1 mark	2
4(a)(iii)	Latitude: It is close to the Tropic of Capricorn; Rays of sun concentrated/high angle of/overhead sun; High pressure/sinking/descending air; Prevailing winds: Blow from across the land; Dry winds/the winds lose moisture before they reach the desert; Ocean Current: Cold current; Cold temperatures make it less likely that the air will hold moisture/rain falls at sea/air mass is dry when it reaches land; 3 @ 1 mark	3
4(a)(iv)	Ideas such as: The air mass rises (on windward side) of mountain range; Air expands; Air mass cools; Condensation of water vapour; Saturation of air mass; Precipitation on mountains; Air descends; Heating of air mass at leeward side; No condensation takes place/no moisture in air/dry air; 4 @ 1 mark	4
4(b)(i)	Ideas such as: The vegetation needs the soil to grow/nutrients in the soil are used by the vegetation; Animals/insects/primary producers(or example) eat/get energy from/energy flows from plants; Animals/predators eat/get energy from/energy flows from animals/insects (or examples); Nutrients returned to soil from rotting vegetation/decaying fauna/animals excretion; 3 @ 1 mark	3

Question	Answer	Marks
4(b)(ii)	Characteristics such as: Deep/long/tap roots; Wide/shallow roots; Fleshy/thick/large stems/trunk; Thorns/spikes/small leaves/prickles/leathery leaves/waxy leaves; Tough/leathery/waxy/thick/ridged bark/skin; Few stomata/pores; Hairy/waxy cuticle; Low level vegetation/short; Light colour/white/light green; Ephemeral/remains dormant during drought/only flowers when rain falls/sheds leaves if dry; Wide distance apart; 5 @ 1 mark or development	5
4(c)	Levels marking <u>Level 1</u> (1–3 marks) Statements which describe <u>or</u> explain the characteristics of tropical rainforest vegetation. <u>Level 2</u> (4–6 marks) Uses named example. More developed statements which describe and explain the characteristics of tropical rainforest vegetation. E.g. Tall and so compete for light = L2 Buttress roots for stability = L2 (Note: Max 5 if no named or inappropriate example) <u>Level 3</u> (7 marks) Comprehensive and accurate statements which describe and explain, including place specific information. <u>Content Guide:</u> Answers are likely to refer to: Layers Lianas Epiphytes Parasitic vegetation Buttress roots Undergrowth <u>Place specific reference is likely to consist of:</u> Named places, Named species, etc.	7

Question	Answer	Marks
5(a)(i)	Agriculture/farming/mining 1 mark	1
5(a)(ii)	Example of manufacturing such as: Car assembly/iron and steel/sugar refinery/toy making/any appropriate product, etc. Example of tertiary employment such as: Teaching/banker/shop assistant/office worker/cleaner/driver/hospital/airport/tourism/offices/office work, etc. 2 @ 1 mark	2
5(a)(iii)	Ideas such as: Increase in tertiary sector; Increase in manufacturing; Decrease in agriculture; Quaternary employment in 2010/introduced/and none in 1990; 3 @ 1 mark	3
5(a)(iv)	Ideas such as: Mechanisation/robots; Industrialisation/building of factories; Exhaustion of natural resources; Skills development/improved education; People can afford more/greater demand for services/examples; Import of food/manufactured products so agric/manufacturing became less important; TNCs established in country Etc. 4 @ 1 mark	4
5(b)(i)	Ideas such: Next to main road/by pass/national highway; Next to railway; Between railway and road/lake; West/NW of (Danang) City; 10–15 km (1) NW of Danang International airport (1); 5 km away from coast/Danang Bay/W of Danang Bay; 10 km (1) S/SW of Lien Chieu Seaport (1); 9–10 km (1) S/SW of Lien Chieu Industrial Park (1); <u>Note:</u> Do not credit near/close to as need 'next to' <u>Note:</u> The Industrial Park is the purple area indicated by the arrow and not the symbol for the industrial park. <u>Note:</u> Allow one mark for correct distance and one for correct direction from named feature. Allow some tolerance with distance. 3 @ 1 mark	3

Question	Answer	Marks
5(b)(ii)	<p>Ideas such as:</p> <ul style="list-style-type: none"> Ease of importing raw materials/components for (high tech) industries; Ease of export of finished products by air/sea; Labour/workforce available from urban area; Road/rail transport links to move finished goods; Proximity to sea for seafood to process; Agricultural products available from hinterland; Market for packaging in nearby industries/port; Near farm area to get raw materials for processing; Large/flat/more than enough land area to build/expand factories; Sharing expertise helps hi tech industries; Close to university to help hi tech industries; Water from lake for food processing; <p>Note: Candidates need to give reasons for location 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 name the different methods of energy supply.</p> <p><u>Level 2</u> (4–6 marks) Uses named example. More developed statements which describe the importance of different methods of energy supply. For this answer developed statements can be defined as follows : X% of the total energy is from ... An important source is ... (L2); A small amount of ... is used (L2); Locational reference e.g. HEP is found in the Rhone area of France (L2); There has been a change from x to y e.g. coal to renewable energy (L2);</p> <p><u>Note:</u></p> <ul style="list-style-type: none"> • Max one L2 for each energy type. E.g. coal is an important source of energy providing 70% of the energy ... (1 × L2) • Max one for each way of achieving L2 (i.e. as listed above) E.g. small amounts of energy are obtained from HEP, wind power and nuclear power (1 × L2) <p>(Note: Max 5 if no named or inappropriate example)</p> <p><u>Level 3</u> (7 marks) Uses named example. Comprehensive and accurate, including some place specific reference.</p> <p><u>Content Guide:</u> Answers are likely to refer to: Fossil fuels and renewables Coal Oil Natural gas Solar power HEP Wind power Wave power Nuclear power, etc.</p> <p><u>Place specific reference is likely to consist of:</u> Locational details/named locations within area/country Statistics, etc.</p>	7

Question	Answer	Marks
6(a)(i)	A person who is travelling/visiting a place <u>for</u> leisure/holiday/sightseeing/see culture, etc.	1
6(a)(ii)	Ideas such as: Plotting of 950 000 (must not touch 940–960 000 lines) at 2013; Completing line between 2012 and 2013;	2 2 @ 1 mark
6(a)(iii)	Increase in numbers; Steep/rapid (this refers to general increase which could either be stated or implied); Especially after 2006/2012/between 2006 and ... Almost three times as many by 2013; 250 000–260 000 in 2004 compared with 710 000–720 000 / 50 000 per year; Note: Max 1 for statistics (not reserve)	3 3 @ 1 mark
6(b)(i)	Ideas such as: Jobs/earning money/relevant example/learn new skills; Improvement of airport; Road improvements; Increased market/more customers for crafts/souvenirs/businesses/shops/hotels/restaurants/campsites, etc. Increased sales of farm produce/fish; Cultural exchange/learn a new language/preserve culture; Improvements in water supply/sanitation/electricity; More money/investment for schools/health;	3 3 @ 1 mark

Question	Answer	Marks
6(b)(ii)	<p>Problems for people such as: Noise; Litter; Traffic congestion; Fumes from cars causes asthma; Overcrowded streets/shops; Loss of culture; Loss of housing area; Loss of farmland; Offensive behaviour from tourists/drunkenness/prostitution/vandalism/graffiti/wearing shorts/bikinis/disrespect culture; Increase in prices/inflation; Seasonal employment; Low wages/exploitation/long hours; Disruption of fishing industry; Excessive demand for/shortage of water, etc.</p> <p>Problems for natural environment such as: Deforestation/vegetation destroyed; Loss of habitat; Destruction of food chains/ecosystems; Atmospheric pollution/exhaust fumes/fumes from planes; Water/sea pollution/diesel spillage; Death of species/extinction of fish; Noise scares animals; Footpath/soil erosion; MAX 2 on people/natural environment</p> <p style="text-align: right;">2 @ 1 mark</p>	4
6(b)(iii)	<p>Attractions such as: Beaches; Blue/shallow/clean/calm sea; Cliffs; Historical sites; Religious sites; Marina/harbour; Bays/inlets; Forests/lush vegetation/thick vegetation; Hills/mountains; Swimming/snorkeling/sunbathing/hiking/named activity;</p> <p style="text-align: right;">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 that explain how negative impacts of tourism are managed. E.g. Create National Park (L1)</p> <p><u>Level 2</u> (4–6 marks) Uses named example. More developed statements that explain how negative impacts of tourism are managed. E.g. Create National Park where animals are protected/building is controlled (L2) Educate people not to litter by using posters (L2) Install litter bins so animals don't eat it</p> <p>(Note: Max 5 if no named or inappropriate example. Not a country unless small e.g. Antigua)</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> Methods are likely to include: National Parks Wildlife/nature reserves Litter bins/collection of litter Fines for dropping of litter Fencing off vulnerable areas/restrict access Limit numbers of tourists Ban vehicle access Restriction of poaching, etc.</p> <p><u>Place specific reference is likely to consist of:</u> Locational details; Names of places/resorts within chosen area Specific details of methods, etc.</p>	7