Cambridge
O Level

Cambridge Assessment International Education
Cambridge Ordinary Level

GEOGRAPHY **2230/01**

Paper 1 Themes **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.

Cambridge International is publishing the mark schemes for the October/November 2018 series for most Cambridge IGCSE™, Cambridge International A and AS Level components and some Cambridge O Level components.

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.

LEVELS OF RESPONSE MARKING

It is the quality of the response which determines the mark achieved and differentiates between candidates rather than the quantity of comments. However, once assigned to a level, the mark achieved within that level is determined by the number of points made.

Level 1 [L1] is characterised by simple statements.

Level 2 [L2] will contain statements which are developed/elaborated. A candidate can immediately enter L2 by making developed points from the outset, without making any L1 statements.

For **Level 3** [L3], a candidate must have achieved the top end of L2 [6 marks] with an answer containing developed statements which address all aspects of the question and include at least one clear example, if required [7 marks].

LEVEL	CHARACTERISTICS	MARKS	CONTENTS
L1	Simple statements	**1**	1 simple statement
		2	2 simple statements
		3	3 simple statements
L2	Developed statements	**4**	1 developed statement
		5	2 developed statements
		6	3 or more developed statements
L3	Top of L2 statements [i.e. 3 or more developed statements]	**7**	3 or more developed statements All aspects of question covered [A] At least one example, if required

Theme A: The natural world

Answer **one** question from this theme, **either** Question 1 **or** Question 2.

Question	Answer	Marks
1(a)	**Name the equipment used for measuring earthquake magnitude.** Seismograph/seismometer (Seismogram = 0)	**1**
1(b)(i)	**Study Fig. 1.1, which is a block diagram of an earthquake zone.** **Identify the type of plate boundary <u>and</u> points <u>A</u> and <u>B</u> shown in Fig. 1.1.** Transform/conservative = 1 A … focus = 1 B … epicentre = 1	**3**
1(b)(ii)	**Explain how severe earthquakes are caused in the area shown in Fig. 1.1.** Plates move past each other (At plate margins = 0) Driven by convective force/convection currents In opposing directions/different/opposite (Moving apart = 0) Becomes stuck/movement not smooth Due to friction Pressure builds/energy builds (Sudden) release	**5**
1(c)(i)	**Study Fig. 1.2 (Insert), which shows a sketch of an area recently affected by an earthquake.** **Describe and explain the damage shown in Fig. 1.2.** Due to plate movement/shaking/shock waves/tremors = 1 (reserve) Roads/road bridges collapsed/broken Buildings shattered Cars crash/crushed/damaged Trees fall/uprooted (Death/injury = 0)	**4**
1(c)(ii)	**Explain how building methods can reduce the impact of earthquakes in built environments.** <u>Reserve 1 for explanation (no repetition)</u> <u>No explanation mark without description</u> Steel (framed) = 1 … less likely to collapse = 1 Pyramid shaped housing/wider base than top = 1 … increases stability = 1 Shock absorbers/springs = 1 … buildings sway instead of collapsing = 1 Bricks and concrete = 1 … strong materials resist movement = 1 Deep/strong foundations = 1 … greater support = 1 Emergency shutoff valves = 1 … reduces chance of fire = 1 Shutters/unbreakable glass = 1 … reduces injuries = 1	**5**

Question	Answer	Marks
1(d)	**Describe how tsunamis are formed. Explain how education and drills can reduce the number of deaths in areas where earthquakes and tsunamis occur. Give examples to support your answer.** Levels marking (Early warnings = 0) <u>Examples of simple statements</u> Earthquakes cause the tsunami to form Sea floor is displaced Children are taught earthquake drill Emergency services practise regularly <u>Examples of developed statements</u> Offshore earthquake activity displaces the ocean floor Faulting causes a change in water height, creating a wave which moves towards the land School pupils regularly practise simple procedures like sheltering under desks Emergency services are prepared to rescue trapped people with machinery and trained dogs	**7**

Question	Answer	Marks
2(a)	**Name and describe <u>two</u> processes of coastal erosion.** Corrasion/Abrasion = 1 moving pebbles/sand, etc. wearing away coast = 1 Corrosion/Solution = 1 … dissolving action of water removing coast = 1 Hydraulic action = 1 … force of water removing material = 1 Attrition = 1 … load becoming smaller and smoother = 1	**4**
2(b)(i)	**Study Fig. 2.1 (Insert), a photograph which shows part of a coastline, and Fig. 2.2, a sketch map of the same coastline.** **Using Fig. 2.1 and Fig. 2.2:** **apart from the sea cliffs, name <u>four</u> physical features of this coastline;** Bays Beaches/sand/boulders Headlands Wave-cut platforms Rockfalls/slumping rock Cave Vegetation Stump (Stack = 0)	**4**

Question	Answer	Marks
2(b)(ii)	**Explain how sea cliffs form;** Sea/waves erode coast/erosion/named process At high tide Undercutting Forms a notch Develops overhang Collapse occurs Material removed Repetition of process (Cliff retreat/wave-cut platform = 0)	**5**
2(b)(iii)	**Explain why some sea cliffs are steeper than others;** Harder/softer or more/less resistant/resistancy of rocks/rock type Faulted rock Regularly undercut Regular collapse Porous/permeable Younger cliffs are steeper due to less erosion/weathering	**3**
2(b)(iv)	**Suggest why this coastline has an irregular shape.** Coast made of rocks of differing resistance Harder rocks slow to erode/jut out to sea/form headlands Softer rocks easy to erode/worn inland/form bays	**2**
2(c)	**Explain the causes of coastal flooding. Give examples to support your answer.** Levels marking (Must refer to coastal locations/not simply river flooding) <u>Examples of simple statements</u> Heavy rainfall linked to coastal locations High waves batter coast Waves pushed by a storm surge Lowland more easily affected Undefended coast is more prone to flooding <u>Examples of developed statements</u> High tides allow strong waves to flood coastal areas Winds will drive a storm surge onto a lowland coastal area Waves become higher as bay decreases in depth/width so cause more damage Absence of sea-walls/groynes, etc. allow easier access of storm waves	**7**

Theme B: People, food and settlement

Answer **one** question from this theme, **either** Question 3 **or** Question 4.

Question	Answer	Marks
3(a)	**Study Fig. 3.1, which shows the climate of a rice growing area.** **Describe the features of the climate which will encourage the cultivation of rice.** Hot/mainly over 20°C Wet/high rainfall/over 1000 mm/wet season	**2**
3(b)	**Define *subsistence farming*.** Subsistence farming is for personal consumption/not for sale	**1**
3(c)(i)	**Study Fig. 3.2 (Insert), a photograph which shows a rice growing area.** **Explain why the area shown in Fig. 3.2 is good for rice farming.** <u>Must relate to photograph</u> Allow development of each point as shown (no repetition) Flat land/low lying = 1 … retains water more easily = 1 River/flooding/water supply = 1 … needed for lowland rice/allows rice to grow = 1 Embankments/bunds = 1 … to control water depth = 1 Alluvial soil = 1 … high fertility = 1 Impermeable soil = 1 … holds water = 1 (rainfall = 0/thick soil = 0/big areas = 0)	**6**
3(c)(ii)	**Give a reason why the farming activity shown is an example of subsistence farming.** Low technology/no machinery/animal power/work done by hand	**1**
3(d)(i)	**Study Table 3.1, which gives information about rice growing in three countries.** **Using information from <u>Table 3.1 only</u>:** **explain why the Philippines has the lowest rice production;** Small(est) area	**1**
3(d)(ii)	**Explain why Vietnam has the highest rice production.** High(est) yield	**1**

Question	Answer	Marks
3(e)	**Explain how farmers can increase the output from their farms.** Allow development marks – max 1 per point (no rep) Fertiliser Pesticide Irrigation Mechanisation Better seeds/super seeds/green revolution Improved education re. farming practices Better storage Land reform Increase land area (Increase labour = 0)	**6**
3(f)	**Describe the fishing industry in Brunei and explain its importance to the country.** Levels marking Examples of simple statements Fishing is carried out in the sea, rivers, lakes and ponds Most fishing is carried out in the inshore fishing area Fishing is a good source of protein for the population A traditional form of fishing is use of the bubu or fish trap Examples of developed statements There has been a great increase in fish farming since 2000 with 600 tonnes in 2012 Most fishing is done in small boats near the coast as these boats cannot cope with the rougher seas further out Fish stocks have been reduced by habitat destruction, e.g. coral reefs destroyed by water pollution Local fishing means that less fish has to be imported, so the economy of Brunei prospers	**7**

Question	Answer	Marks
4(a)(i)	**Study Fig. 4.1, which shows death rates and public health spending per person for selected countries in 2010.** **State the death rate for Japan and the public health spending for Mexico.** Death rate Japan 9.5 Spending Mexico 450 US$ per person	**2**

Question	Answer	Marks
4(a)(ii)	**Does Fig. 4.1 show that, in general, the lower the death rate the higher the amount of public health spending? Use graph information to support your answer.** No = 1 (reserve) S/M and SK show low DR and low spending/allow accurate figures to demonstrate a stated relationship USA/N/B/F/J show higher DR and higher spending/allow accurate figures to demonstrate a stated relationship	**3**
4(b)	**Explain why the death rate in many countries is decreasing.** Better food supply/diet/nutrition Clean water/better hygiene Better sanitation Better housing Healthcare/hospitals/doctors/medical training Better medication/vaccines Improved education re. health Healthy lifestyle/exercise (Better lifestyle/Standard of Living = 0) Less conflict/wars Coping better with natural disasters Care homes for the elderly More money for …	**5**
4(c)	**Study Fig. 4.2, which shows changes in birth rate, death rate and natural increase over time.** **Using only Fig. 4.2, explain how and why the rate of natural increase changes from point A to point B.** Natural increase at A is greater than at B/Natural increase decreases Birth rate decreases more than death rate Gap between BR and DR gets narrower	**3**
4(d)	**Countries which have a high natural increase may become overpopulated. Define *overpopulation* and describe how it affects people.** Overpopulation means too many people for available resources (for reasonable living standard) = 1 (reserve) Unemployment (Low standard of living = 0) Poverty Poor health care/pressure on medical services Lack of education Poor housing/squatter settlements Water/noise/air/visual pollution – max 2 Crime Lack of food/starvation/malnutrition/poor diet/rising cost of food Lack of water supply Lack of electricity/fuel supply Lack of space/lack of land/overcrowding/traffic congestion	**5**

Question	Answer	Marks
4(e)	**'Improvement in education has been the main cause of falling birth rates.' How far do you agree with this statement? Give examples to support your answer.** Levels marking <u>Examples of simple statements</u> Later marriages Lack of contraception makes birth control difficult The tradition of large families is difficult to ignore Higher incomes often lead to fewer children <u>Examples of developed statements</u> Better education may lead to better jobs, so less need to have many children earning money Increase in living standards means that children become more expensive leading to families becoming smaller Improved healthcare means lower infant mortality so less need for as many children	**7**

Theme C: Industry, energy and tourism

Answer **one** question from this theme, **either** Question 5 **or** Question 6.

Question	Answer	Marks
5(a)	**Is tourism classed as primary, secondary or tertiary industry?** Tertiary	**1**
5(b)	**Study Fig. 5.1, which shows the number of tourists visiting Australia from Japan and the UK from 2000 to 2014.** **Compare the changing trends and numbers in the visitors to Australia from Japan and the UK.** (Single years = 0) 2000–2005 Japan more than UK 2000–2005 Japan falling; UK rising 2005–2014 UK more than Japan 2005–2012 Japan falling; UK falling slightly/Japan falling more than UK 2012–2014 both steady/UK fluctuates and Japan steady **Overall** Japan declines/UK increases Japan goes from 730 to 325 000/UK from 580 to 625 000 Japan changes by 405 000 ± 10/UK by 45 000 ± 10	**4**
5(c)	**Describe the advantages of tourism to the economy of the country visited.** Increases employment Increases income/GDP/economy Increases tax revenue Diversifies economy Develops infrastructure/roads/railways/airports Encourages multiplier effect Improves international links	**4**
5(d)(i)	**Study Fig. 5.2 (Insert), a photograph which shows a tourist resort in the UK.** **Describe the tourist attractions shown in Fig. 5.2.** Sea Beach Carousel/fun fair/playground/theme park (Entertainment = 0) Shops/souvenir selling Pier Cafes/bars/restaurants/food stalls Pathway	**4**

Question	Answer	Marks
5(d)(ii)	**Describe the problems the tourist industry may cause in a place like that shown in Fig. 5.2.** Litter/rubbish Water/noise/visual/air pollution Crime Seasonal employment Congestion/parking/overcrowding Increased costs for locals Overdevelopment/pressure on facilities	**5**
5(e)	**Describe the cultural and natural attractions of Brunei for tourism.** Levels marking <u>Examples of simple statements</u> Many tourists visit Kampong Ayer/Water village The rainforest in Temburong is very popular Royal memorabilia are on display in the Royal Regalia building Tourists visit the Sultan Omar Ali Saifuddien Mosque <u>Examples of developed statements</u> Tourists visit Kampong Ayer by water taxi There is a National park in Temburong where tourists are able to use a canopy walkway Visitors to the Royal Regalia are able to view the crown and the royal chariot	**7**

Question	Answer	Marks
6(a)(i)	**Study Fig. 6.1, which shows sources of generating electricity for four countries in 2014.** **State the main source of generating electricity for China and for France.** China … fossil fuels = 1 France … nuclear power = 1	**2**
6(a)(ii)	**Describe the various problems which result from using large amounts of fossil fuels.** Non-renewable Causes air pollution/smog/visual pollution Releases CO_2/greenhouse gases (Causes) Global warming Releases SO_2/NOx (Causes) Acid rain Extraction of fossil fuels causes impact on landscape	**4**

Question	Answer	Marks
6(b)(i)	**Study Fig. 6.2 (Insert), a photograph which shows a nuclear power station.** **Describe the features of the nuclear power station shown in Fig. 6.2.** Built on flat land Near river/water Large/wide area Isolated location/Away from residential areas Pylons/transmission cables Rectangular/large buildings (Cooling) tower/chimney Nuclear reactor/circular/dome building Many low/single storey buildings Car park (Roads = 0/Accessibility = 0)	**3**
6(b)(ii)	**Explain the benefits of this location for a nuclear power station.** Only credit the explanation points Flat land … allows ease of construction Near water supply … for cooling/power generation/required in process Dock available … for any necessary imports/heavy goods Isolated location … reduce worry of nuclear power to locals/safety purposes Apparently unused land … cheaper land for building Large area …… for future expansion/car parks	**3**
6(c)	**Describe the disadvantages of using nuclear power to generate electricity.** Very expensive to construct High degree of expertise required Skill/technology imported Fears of explosions/meltdown/natural disasters/no on-off switch Dangers of radioactivity/mutations Storage of nuclear waste/expensive disposal Hot water released into local rivers Decommissioning problems Terrorist threat	**5**
6(d)(i)	**Define the term *carbon footprint.*** Greenhouse gas/carbon dioxide emissions caused by activities of particular person/community/organisation	**1**

Question	Answer	Marks
6(d)(ii)	**Describe the various methods of reducing the carbon footprints of countries and people. Give examples to support your answer.** Levels marking <u>Examples of simple statements</u> Walk instead of taking car to school Switch lights off at night Countries could use renewable energy <u>Examples of developed statements</u> Countries could recycle goods as far fewer emissions are created than if goods made from scratch Houses could be insulated from heat/cold so that fewer heaters/coolers needed, so fewer emissions result Car-pooling could be used with four people travelling in one car instead of four cars, so fewer emissions result	**7**