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 will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2012 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.
The features of the marking scheme

Each question carries 25 marks. Candidates cannot earn above the maximum marks available within each sub-section.

The marking scheme attempts to give guidance about the requirements of each answer and lists a number of responses, which will earn marks along with the general principles to be applied when marking each question.

It should be noted that candidates can earn marks if their answers are phrased differently provided they convey the same meaning as those in the mark scheme. THE CANDIDATES DO NOT NEED TO USE THE SAME WORDING TO EARN MARKS.

The notation ‘etc’ at the end of an answer in the mark scheme signifies that there may well be other correct responses or examples that can be given credit. Providing the statement is true, relevant to the question asked and not repetition of a previous point made, credit should be given.

A point made within one sub-section which is an answer to the question set in a different sub-section should not be given credit as each sub-section asks different questions which require independent answers.

The mark scheme uses semi colons (;) to separate marks and diagonals to separate alternative answers.

Levels of response marking is used for section (c) of each question. Thus it is the quality of the response that determines which level an answer is achieved rather than the quantity of statements contained within it. However, once assigned to a level the mark achieved within that level is determined by the number of points made.

Levels 1 and 2 are distinguished by whether statements are simple (level 1) or developed/elaborated (level 2). A candidate can immediately enter L2 by making developed points without making any L1 statements. In order to achieve L3 a candidate must have already reached the top end of L2 – in addition his/her answer should have a clear example and if the answer is place specific as well (7 marks).

Where statements are assigned levels by the examiner this should be indicated by the use of L1, L2 and L3 next to the statements. A summary of the overall level and mark awarded should be written at the end of the answer. Ticks should not be used on answers that are marked using levels of response marking.

Summary:
Level 1 (1 to 3 marks):
1 simple statement (1 mark)
2 simple statements (2 marks)
3 simple statements (3 marks)

Level 2 (4 to 6 marks):
1 developed statement (4 marks)
2 developed statements (5 marks)
3 or more developed statements with example (6 marks)

Level 3 (7 marks)
3 or more developed statements + named example with at least one piece of place specific detail.
1 (a) (i) The balance between immigration and emigration/difference between immigration and emigration/the number of immigrants minus the number of emigrants/number or migrants compared with number of immigrants;

1 mark

(ii) A. 2002

2 @ 1 mark

(iii) Ideas can be push or pull such as:
- employment/job/better pay;
- better medical care/or examples;
- to escape (political/religious) persecution;
- to join families/friends/marriage;
- to escape drought/starvation/famine/natural hazards;
- escape war/civil war;
- education;
- brick built housing/housing with running water/electricity; etc

NB: No double credit.

3 @ 1 mark

(iv) Ideas such as:
- high cost of migration/poverty;
- difficult to obtain VISA/documents/legal requirements;
- language difficulties;
- cannot be guaranteed work/low pay/exploitation;
- cannot afford to buy a home;
- discrimination;
- don’t want to be separated from family;
- strict government controls on entry/exit/restrictions on number of immigrants/asylum seekers/refugees not allowed to stay;
- lack of transport/transport difficulties/distance involved to travel; restrictions on people with criminal record;
- etc

4 @ 1 mark

(b) (i) Ideas such as:
- Rise in housing price/rental fees increased;
- Rise in price of food/oil;
- Overcrowded schools/overburden on education/cramped classrooms;

3 @ 1 mark
(ii) Ideas such as:
provides more workers; so that production increases/more goods produced (dev);
provides skilled labour supply; e.g. doctors/dentists/technicians/brings in new ideas (dev);
provides cheap/unskilled labour; to do jobs locals do not want or examples (dev);
results in a multi-cultural society;
which enhances cultural understanding/new languages (dev);
Provision of specialist amenities;
e.g. restaurants/takeaways (dev)
bring a new business to the country; therefore creates employment/generates income (dev);
positive multiplier effect/increases size of local market; local businesses sell more goods (dev);
provides more people to defend country/join armed forces; therefore country is more secure in times of conflict/war (dev);
more taxes for government/country; can be used to improve services/infrastructure or examples (dev)
etc

5 @ 1 mark or development [5]

(c) Levels marking

Level 1 (1–3 marks)
Statements including limited detail describing problems caused by under population.

Level 2 (4–6 marks)
Uses named example
More developed statements describing problems caused by under population.

Level 3 (7 marks)
Uses named example (eg Australia).
Comprehensive and accurate statements including some place specific reference.
Candidates are likely to refer to issues related to:
Workforce
Economy
Resources
Defence
etc
Place specific detail could include names of places within the country etc.

[Total: 25]
2 (a)  (i)  Built up area/town/city/populated area with many services and/or developed infrastructure;

1 mark  [1]

(ii)  A. Photograph A
     B. Photograph C

2 @ 1 mark  [2]

(iii) Ideas such as:
     bowling green/sports/football/cricket/rugby pitches/stadia;
     parks/gardens/picnic area/playgrounds;
     woodland;
     allotments;
     public squares;
     areas being redeveloped;
     cemeteries;
     lake/reservoir/pond;
     etc

3 @ 1 mark  [3]

(b)  (i)  North West of city centre/Paris;
     15–20 km from centre of Paris;
     Close to outer ring road of Paris;
     Urban fringe/suburbs of Paris;
     North of River Seine;
     Distance from either named airport (max 1);
     Direction from either named airport (max 1);
     etc

3 @ 1 mark  [3]

(ii) Ideas such as:
     Easy access via outer ring road/rapid transit line/main roads;
     Easy access to airport;
     Plenty of space/land/not as crowded/bigger houses;
     Lower cost land/cheaper housing;
     Preference for/proximity to open/rural land;
     Low levels of atmospheric pollution;
     Low levels of noise pollution;
     Easy or quick to get to centre/easy to commute to centre (for work/shopping);
     etc.

4 @ 1 mark  [4]
(iii) Ideas such as:
    traffic congestion;
as many people who live in new developments commute to
work in CBD (dev);
loss of farmland;
due to new housing developments/road construction (dev);
atmospheric pollution;
from increased traffic (dev);
loss of woodlands/deforestation;
resulting in loss of habitat (dev);
less open space accessible for urban population;
so they have to drive further for days out (dev); etc

5 @ 1 mark or development 

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail on attempts to solve problem of traffic congestion in and
around CBD.

Level 2 (4–6 marks)

Uses named example
More developed statements on attempts to solve problem of traffic congestion in and around
CBD.

Level 3 (7 marks)

Uses named example (eg Traffic congestion in London ).
More developed statements on attempts to solve problem of traffic congestion in and around
CBD including some place specific reference. 

Candidates are likely to refer to issues related to: Transport
    Pedestrianisation
    New road building
    Park and ride
    Congestion charging
    etc.

Place specific detail could include names of areas or features such as roads in the city.

[Total: 25]
3 (a) (i) Waves which build beaches/deposit material/waves with strong swash and weak backwash/stronger swash than backwash; etc

1 mark [1]

(ii) Features such as:
hard/resistant rock/limestone/chalk;
white/grey;
steep/45 degrees;
high;
bare rock near base;
vegetation/grass covered near top;
varying heights;
wave cut notch;

etc

2 @ 1 mark [2]

(iii) A. Hydraulic action – power weight of water/air compressed in cracks

B. Abrasion – sandpapering action/load thrown against cliff by waves

C. Corrosion – chemicals in water dissolve/destroy rock/rocks are dissolved;

etc

3 @ 1 mark [3]

(iv) Ideas such as:
Soft and hard rock layers/outcrop along coast;
Bays formed in soft rocks;
as soft rocks are worn away more rapidly/easily;
hard rocks form headlands;
as they are more resistant to erosion;

etc

4 @ 1 mark [4]

(b) (i) Ideas such as:
Warm water/seas/temperatures above 20 degrees C;
Shallow water/not more than 60 metres deep;
Water free from sediment/clear;
Plentiful supply of oxygen in water/unpolluted;
Plentiful supply of plankton;
Calm seas/currents not strong;
Low acidity/high PH;

etc

3 @ 1 mark [3]
(ii) Ideas such as:
   Longshore drift;
   Deposits materials/swash/sediment moved in direction of predominant/prevailing wind;
   moves materials at (oblique)/(45 degrees)/ angle (dev);
   backwash at right angle (90 degrees);
   materials move in zig-zag fashion (or shown on diagram);
   deposition of materials at change of direction of coast;
   curving at end due to change in wind direction/river estuary;
   etc

   5 @ 1 mark or development

(c) Levels marking

Level 1 (1–3 marks)
Statements including limited detail describing how natural environment provides opportunities and problems for people.

Level 2 (4–6 marks)
Uses named example
More developed statements describing how natural environment provides opportunities and problems for people.

Level 3 (7 marks)
Uses named example (eg Californian coast).
To gain full level 3 marks comprehensive means that candidates must refer to opportunities and problems relating to their selected area.

Place specific reference can be made to names of features, dates, statistics etc. [7]

[Total: 25]
4 (a) (i) July and August (both needed)

1 mark [1]

(ii) 700 mm (2 marks)
1700 (1 mark only) [2]

(iii) Ideas such as:
- high pressure in deserts;
- descending air in deserts;
- winds blow from land/winds blow across large areas of land/distance from sea/centre of continents;
- rain shadow;
- low evaporation;
- cold offshore currents;
- etc

3 @ 1 mark [3]

(iv) Ideas such as:
- sun is overhead/direct sunlight/high temperatures;
- evaporation of water/transpiration;
- vapour rises/ascending air;
- cooling at high level;
- condensation;
- saturation of airmass;
- forming cumulonimbus clouds;
- etc

4 @ 1 mark [4]

(b) (i) Ideas such as:
- Roots are deeper/longer in B/nearer surface in A;
- Roots spread out more in A;
- Thorns in A but not in B;
- B is deciduous A is not;
- A is taller than B;
- A is thicker than B;
- B’s roots go down into water table but A’s do not etc

3 @ 1 mark [3]
(ii) Ideas such as:
Seeds/plants remain dormant during long dry spells;
they have a short life cycle so they can grow in the short time water is available (dev);
narrow/spiky leaves; reduce rates of evapotranspiration (dev);
as there is a smaller surface area (dev);
long roots; to search for water; deep underground (dev);
wide spreading roots; use small amounts of water/dew near the surface (dev);
Some plants/cacti store water;
in order to survive long periods of drought (dev);
waxy leaves; to stop water loss through transpiration (dev);
spiky leaves; to stop animals eating them/drinking water (dev); etc

5 @ 1 mark or development [5]

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail describing and/or explaining characteristics of natural vegetation of tropical rainforest.

Level 2 (4–6 marks)

More developed statements describing and/or explaining characteristics of natural vegetation of tropical rainforest.

Level 3 (7 marks)

Comprehensive and accurate statements describing and explaining characteristics of natural vegetation of tropical rainforest, including fully labeled diagram. [7]

Description could include reference to: Density
Structure
Type
etc

With appropriate explanation. [Total: 25]
5  (a)  (i)  1000 (million)

1 mark

(ii) more in Europe/less in Americas (reserve);
Use of statistics for 2nd mark
E.g. 500 million in Europe but 200 million in Americas;
2 and a half times as many in Europe/just less than 3 times as many in Europe;
300 million more in Europe;
etc

2 @ 1 mark

(iii) Ideas such as:
Increasing affluence/more money/disposable income;
Longer (paid) holidays/more time off work;
Improvements in transport;
Low cost airlines/cheaper transport/or examples;
Growth of marketing of holidays/advertising;
Ease of booking through internet;
Greater awareness of foreign destinations;
Growth of tourist companies/travel agents;
Population growth/living longer/healthier in old age so able to travel;
Etc.

3 @ 1 mark

(b)  (i) Ideas such as:
Large area of/sandy beach;
Clear/unpolluted water/blue sea;
Sheltered area of water (by offshore breakwater);
Harbour/boats/water sports;
Cliff scenery;
Area of parking;
Traditional settlements/settlement may have shops/bars;
Palm trees/tropical vegetation;
etc

3 @ 1 mark

(ii) Ideas such as:
Employment in hotels/need for accommodation for tourists;
Employment in transport/need for transport of tourists;
Specific tourist related jobs e.g. tourist guides/water sports instructors;
Employment in shops/retail sector/souvenir shops;
Employment in restaurants/cafes-bars/nightclubs;
Jobs in construction industry;
Cleaning/maintaining beach/streets/breakwater/agriculture;
Fishing/ag
etc

4 @ 1 mark

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(iii) Ideas such as:
Building/improvement of roads/railways;
For tourist use can be used by locals (dev);
Building/extending airports;
Gives residents better access to other countries (dev);
Water supply network developed;
So people can use piped water for their homes (dev);
Electricity grid extended;
So people can use it in their homes (dev)
Money used to invest in healthcare; so improves life expectancy (dev);
Money used to invest in education; so gain better qualifications for higher paid jobs
(dev);

5 @ 1 mark or development [5]

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail describing the impacts of human activity on the natural
environment.

Level 2 (4–6 marks)

Uses named example
More developed statements which describe the impacts of the chosen human activity on the
natural environment.

Level 3 (7 marks)

Uses named example (e.g. Majorca).
Comprehensive and accurate statements including some place specific reference. [7]

Candidates may refer to ideas such as: Animals
Vegetation
Coral
Visual impact
Air pollution
Water pollution
etc.

Named example should be smaller than a country but if a small country is named such as
Jamaica that is acceptable.

[Total: 25]
6 (a) (i) Preserving/protecting/Saving things/(for the future/next generation)/keep earth safe for next generation;

1 mark  \[1\]

(ii) Ideas such as:
So the earth`s resources can be used today/people's needs are met; but protected for future generations/so that they don't run out; to avoid destroying the environment/planet; Or any example e.g. to avoid extinction of animals; Slow down/prevent global warming; etc

2 @ 1 mark  \[2\]

(iii) Ideas such as:
Loss of/overuse of natural resources; Water pollution; Over fishing; Increasing Carbon dioxide/global warming; Threats to wildlife; etc

3 @ 1 mark  \[3\]

(iv) Ideas such as:
Population is large/growing in many countries; People use/depend upon many different resources or examples; Need to clear areas for agriculture; Need to clear areas to build settlements/homes/factories; Growth of industry leads to specified types of pollution; Development/profit seen as more important than the natural environment; Need for transport as part of everyday life; Burning fuels is vital to provide energy/electricity; Need for international collaboration/work together; Governments have other priorities; People don't know/don't care/people think it won't affect them; etc

4 @ 1 mark  \[4\]

(b) (i) Ideas such as:
Centre of Singapore; Direction from either airport i.e. SW of Seletar airport/W of Changi airport; Distance from either airport i.e. 8km from Seletar airport/20 km from Changi airport; Around lakes; etc

3 @ 1 mark  \[3\]
(ii) Ideas such as:
- Singapore is densely populated/industrialised;
- So there are limited areas which are not built on (dev);
- It is a rich country/developed/have knowledge;
- So many areas will have been cleared for economic development (or examples e.g. large areas of rainforest have already been cleared) (dev);
- It is an area of primary rainforest;
- So need to protect large numbers of plants/prevent deforestation (dev);
- There are large numbers of animals/to protect wildlife;
- Need for recreational area for population;
- It is a potential tourist attraction;
- They want to maintain biodiversity;
- etc

5 @ 1 mark or development

(c) Levels marking

**Level 1** (1–3 marks)

Statements including limited detail describing how renewable energy supplies are being developed.

**Level 2** (4–6 marks)

Uses named example

More developed statements describing how renewable energy supplies are being developed.

**Level 3** (7 marks)

Uses named example (eg UK).

Comprehensive and accurate statements describing how renewable energy supplies are being developed including some place specific reference.

Candidates may refer to ideas such as: Tidal power

- HEP
- Wind
- Solar
- etc.

A named example can be a country or an area within a country and students can describe all types of renewable energy development within the country or focus upon a particular type.

[Total: 25]