

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2015 series

0680 ENVIRONMENTAL MANAGEMENT

0680/12

Paper 1, maximum raw mark 60

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 2015 series for most Cambridge IGCSE[®], Cambridge International A and AS Level components and some Cambridge O Level components.

® IGCSE is the registered trademark of Cambridge International Examinations.

Page 2	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2015	0680	12

- 1 (a) (i) physical factors:
temperature, humidity, water, rain, salinity, light, pH, soils, nutrients, wind, rock type, etc.
Any three.
- living factors:
producers, consumers, food chains/webs, competition, predation, pollinators, dispersal agents, decomposers, microbes, plants, animals (named), etc.
Any three.
- All six for three marks. Four or five for two marks. Two or three for one mark.* [3]
- (ii) hg simply collect what they can find and roam around to do so;
np heard animals but still roam around for new pastures and collect plants for food;
sf grow crops/graze animals in one place and use that for themselves and to sell to others; ORA [3]
- (b) (i) clearance for fuelwood; subsistence and cash crop farming; settlement;
timber extraction; grazing; [2]
- (ii) more efficient use of timber;
recycling (paper / timber);
named alternative materials to timber;
increase price via tax;
- Allow any one point developed for an additional mark.* [2]
- 2 (a) (i) Mount Sinabung and other volcanoes lie on the GSF / a plate boundary;
such faults allow magma / or molten rock described, to come to surface; [2]
- (ii) early in day;
they had warning / ref. evacuation;
volcano not actually near homes; [2]

Page 3	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2015	0680	12

- (b) (i) $(0.67 \times 240\,000 =) 160\,800$; [1]
- (ii) ref. better preparedness/infrastructure in other places in the world/ORA;
 more people live near volcanoes in Indonesia than anywhere else/ORA;
 many volcanoes in Indonesia;
 very powerful volcanoes in this region;
 very active plate boundary there;

Accept other valid suggestions. [3]
- (iii) soil fertility;
 scenery/tourism;
 family ties;
 precious minerals, etc.; [2]
- 3 (a) (i) *Two marks for fully correct plot, one mark if one error.
 One mark for correct labels.* [3]
- (ii) $(21 + 5 + 6) = 32\%$ [1]
- (b) (i) description of anemometer/wind gauge (in terms of speed cups);
 and direction (arrow)/vane; [2]
- (ii) clean/non-polluting; detail;
 idea of free once erected/no (fuel) costs;
 ref. windy a lot in that country;
 ref. winds high in that country;
 ref. investment;
 sustainable;
 points about fossil fuels being none of these (limited to two marks);; [4]

Page 4	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2015	0680	12

- 4 (a) (i) carbon dioxide
photosynthesis
oxygen
- Three correct for two marks. One or two correct for one mark.* [2]
- (ii) it is a greenhouse gas / eq.;
explanation of what this means; [2]
- (iii) description:
rises overall;
any development of this (e.g. levels off between 2000 and 2004, drops at 2005, starts rising again at 2006);
- reasons:
ref. to increased cattle; rice paddies; permafrost melting; etc.
- Max two marks from either section alone.* [3]
- (b) (i) NO_x or sulfur dioxide; (*Accept formulae or words.*) [1]
- (ii) gases produced by only some countries;
blows to others in the atmosphere; [2]
- 5 (a) (i) oil; [1]
- (ii) raw sewage;
- adds nutrients to water;
causes plant algal growth;
which die and oxygen is used up; [3]
- (iii) plastics;
- ref. currents swirl OWTTE;
carrying plastics to these places where the water is still;
plastics (mostly) float;
do not degrade (very quickly); [3]
- (b) (i) typhoid and cholera both circled; [1]
- (ii) ref. treatment;
before disposal;
keep away from fresh water; [2]
- 6 (a) (i) nutrients / minerals / named mineral;
oxygen; [2]
- (ii) chemicals such as pesticides / GM; help stop disease spreading;
fertilisers; prevent soil exhaustion; [3]

Page 5	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2015	0680	12

(b) (i) $0.42 / 4 \times 100$;
10.5%; [2]

(ii) should cover production costs;
money guaranteed allows for conditions for work;
money guaranteed allows for environmental protection;
gives money to help in community;
allows sustainability; [3]

[Total: 60]