CAMBRIDGE INTERNATIONAL EXAMINATIONS
Cambridge International General Certificate of Secondary Education

MARK SCHEME for the May/June 2015 series

0680 ENVIRONMENTAL MANAGEMENT

0680/43   Paper 4 (Alternative to Coursework), 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 May/June 2015 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

www.dynamicpapers.com

Page 2	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – May/June 2015	0680	43

1 (a) $87 \times 0.25 = 21.75$ million;   [1]

(b) (i) could not transport goods; long travel delay; cost of extra fuel; not many customers; possible power cuts; goods damaged by water;   [3]

(ii) desert climate / very little rain; only one day a month; so only short-term effects; low risk of long-term damage; probably not going to increase much in the future; hot so rapid evaporation; use of figures to support;;   [3]

(c) strong pull factors to urban areas; jobs; better wages; more services / example; less labour needed on farms;   [3]

(d) (i) not an adequate sample / eq.; reason to support this, e.g. only 10 people / one street / district;   [2]

(ii) larger sample so more representative; allows mean to be calculated;   [2]

(iii) one more question about either health / sources of pollution / anything being done to solve the problem;   [1]

(iv) convert to % (yes / no);   [1]

(v) industry / garbage burning;   [1]

(vi) temperature inversion; ref. to dense air; cold air holds pollution near ground;   [1]

(e) city: could restrict traffic – any valid example – or stop industrial production; people: go out less / wear masks;   [2]

(f) (i) N / S is course of river Nile so needed for crops; prevent pollution; need for green spaces;   [2]

(ii) only desert / not a farming area / away from Nile;   [1]

(iii) furthest area shaded for housing and one of small areas near the Nile shaded for farming; key used;   [2]

(g) good spacing between blocks; all built in the same way / to a set standard; AVP;   [2]

(h) descriptions of:
sewage pipes / treatment; green spaces / trees; garbage collections; reliable power; move industry / e.g. out of city; AVP;;   [5]

Page 3	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – May/June 2015	0680	43

2 (a) (i) both axes labelled; orientation; plots correct;; [4]

(ii) overall increase / eq. / comment on 2008 and / or 2010; [1]

(iii) imports to help balance poor harvests; top up reserves; cost of imports; cost to GDP; [2]

(iv) (4.6 – 1.7) / 1.7 = 2.9 / 1.7 = 170.6%;; [2]

(v) to prevent any shortage; need more reserves as population has increased; still same proportion of annual consumption / eq.; [2]

(b) (i) any three valid points from the data;;; [3]

(ii) 308, 52; 16 016; [2]

(iii) Sakha grains must be smaller / weigh less / converse; [1]

(iv) more protein (= better growth rate / immune system / less disease / eq.); [1]

(v) to check findings / eq.; [1]

(vi) to make best use of expensive fertilisers / fuel; maximise yield / prevent pollution; AVP; [2]

(c) eutrophication; added nitrates / phosphates; algal bloom; death of algae; blocking light to other plants; bacteria increase; respire the oxygen; death of fish; [4]

(d) improve size / numbers of grain; so no increase in area of fields needed (may not be possible); increase in protein content; nitrogen uptake more efficient; more efficient use of water; ref. to drought resistance; disease resistance; AVP; [3]

AVP = Alternative Valid Point.

[Total: 60]