

**CAMBRIDGE INTERNATIONAL EXAMINATIONS**

Cambridge International General Certificate of Secondary Education

## **MARK SCHEME for the October/November 2014 series**

# **0680 ENVIRONMENTAL MANAGEMENT**

**0680/12**

Paper 1, maximum raw mark 60

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- 1 (a) the oak tree is a plant and makes its own food using energy from sunlight/by photosynthesis;  
the caterpillar gets its food/energy from the oak tree;  
the insect-eating bird gets its food/energy from the caterpillar;  
woodlice get their food/energy from dead leaves; [4]
- (b) (i) they have more;  
species of living things;  
variation amongst living things;  
habitats;  
than most other places; [2]
- (ii) deforestation;  
urbanisation;  
pollution/named pollutant; [2]
- (iii) plants may contain undiscovered medicines;  
wild plants may do better in new climates;  
wild animals may give better pest control;  
animals and plants provide ecosystem services; [2]
- 2 (a) (i) A – magma chamber;  
B – magma;  
C – vent;  
D – lava; [2]
- (ii) two plates meeting;  
it is a subduction zone;  
so one plate goes under the other and melts to create lava;  
which builds up to form mountain/volcano; [3]
- (b) (i) *a farmer:*  
buried their land;  
added nutrients to their land;
- a taxi driver:*  
reduced tourism so reduced business;  
increased tourism to see volcano so increased business;
- an hotel owner:*  
reduced tourism so reduced business;  
increased tourism to see volcano so increased business; [3]
- (ii) earthquakes widespread;  
earthquakes not predictable/volcanoes predictable;  
volcanoes in isolated places; [2]

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- 3 (a)** the Sun is overhead at the Equator whereas it is a slanting angle at the poles;  
so one square metre at the Equator receives more sunshine than one square metre at the poles;  
has to pass through more atmosphere at the poles than at the Equator;  
so more heat is absorbed and scattered at the poles;  
snow is much more reflective than trees and vegetation; [3]
- (b) (i)** equatorial tropical:  
croplands;  
because there is plenty of rainfall;
- tropical savannah;  
grazing lands;  
because many animals especially sheep and goats can exist on poor vegetation; [4]
- (ii)** water;  
irrigation;  
centre pivot; [2]
- (iii)** fertiliser / minerals / air; [1]
- 4 (a) (i)** sedimentary;  
pressure;  
erosion;  
sediment;  
sedimentary; [2]
- (ii)** manufacture of steel;  
manufacture of cement and concrete;  
as a fertiliser; [3]
- Credit valid alternatives.*
- (b) (i)** to produce energy the coal has to be burnt;  
releasing carbon dioxide;  
ref. greenhouse gas;  
which may cause global warming;  
ref. SO<sub>2</sub>;  
acid rain; [3]
- (ii)** turn off lights / electrical appliances;  
install insulation;  
walk / cycle / use public transport / car share; [2]

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- 5 (a) (i) the Sun; [1]
- (ii) A – evaporation;  
B – precipitation;  
C – infiltration; [2]
- (iii) arrows and labels both needed;  
arrows in correct direction and position;  
e.g. transportation from tree, interception towards tree, run-off along ground surface. [2]
- (iv) rainwater harvesting; [1]
- (b) (i) 6 labels added correctly;;  
*Six correct for two marks. Five correct for one mark.*  
WC  
personal washing  
laundry  
drinking / dishwashing  
drinking / dishwashing  
car washing [2]
- (ii) WC flushing / clothes washing;  
water-related diseases cannot be transmitted; [2]
- 6 (a) (i) plot;; correct axis label; [3]
- (ii) education of all;  
but especially women;  
better infant survival;  
via better nutrition;  
better health care;  
pension schemes; [3]
- (b) air travel, will not help people still travel to destination;  
pollution, still some from travel;  
ecotourists more likely to engage in recycling schemes etc.;  
trampling, likely to be concerned;  
guides will enforce rules on this;  
poor jobs for locals, likely to improve with tourist demands for good guides etc.,  
destruction of cultures, likely to be reduced as ecotourists have interest and sympathy;  
pressure on water, not likely to help as still need same amount water as traditional  
tourists; [4]

**[Total: 60]**