

**MARK SCHEME for the October/November 2010 question paper  
for the guidance of teachers**

**0680 ENVIRONMENTAL MANAGEMENT**

**0680/11**

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 must be read in conjunction with the question papers and the report on the examination.

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- 1 (a) (i) long lag;  
sudden increase; [2]  
(R) straight line of any sort that goes beyond about 1950  
ignore levelling off
- (ii) 1 C;  
2 A;  
3 B;  
4 D; [4]
- (b) (i) poor / no hospitals / doctors / ; [2]  
excellent hospitals / doctors
- (ii) bright lights; excitement; better wages; more jobs; better education;  
better employment conditions; [2]  
NOTE Must have a qualification where noted
- 2 (a) (i) krill; squid; [2]
- (ii) krill OR phytoplankton; [1]
- (iii) leopard seal; elephant seal; squid; other birds; [3]  
4 for 3  
2–3 for 2  
1 for 1
- (b) (i)  $20 \times 5000$ ; = 100 000 units; [2]
- (ii) bio control; e.g. (such as predators / parasites or GM methods); [2]  
physical barrier; e.g. of what barrier keeps out;
- 3 (a) (i) A crust / lithosphere; [3]  
B mantle;  
C core;
- (ii) igneous; [4]  
(accumulation of) small rock particles / sediments / shells / organic matter;  
R sedimentation  
limestone / clay / sandstone / coal / avp  
slate / marble / avp;
- (b) (i) accurate plots;; [2]
- (ii) silver; [1]

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- 4 (a) (i) state of the atmosphere / troposphere;  
plus example pressure / temp / precipitation / rainfall / wind / sun; [2]
- (ii) any 2 of above with correct explanations e.g.  
barometer; detail;  
thermometer; detail (e.g. screen etc.);  
rain gauge; detail;  
anemometer; detail; placement R wind gauge  
sunshine recorder; detail any two max [4]
- (b) (i) correctly plotted points;; [2]
- (ii) savannah; wet season, but always warm to hot; [2]
- 5 (a) (i) air air 19–20  
shipping 9–10 [2]
- (ii) add nutrients; stimulate algal growth; dead bodies; decompose  
deplete oxygen; fish death; eutrophication; [4]
- (b) (i) seas linked to each other; currents move pollutants [2]
- (ii) preventing:  
double hulls / pipelines; [1]
- (iii) dealing:  
booms / detergent / skimmers / burn off; [1]
- 6 (a) (i) amount of energy / power / heat received on a surface / incoming solar radiation; [1]
- (ii)  $342 - 242 = 100$  units more;  
 $\frac{100}{242} \times 100 = 41.3\%$ ; ((A) 41 but not 42) [2]
- (iii) nearness to coast / water body / (warm / cold) currents (large lake); amount of snow;  
altitude; cloud cover; winds if say where from; [2]
- (b) (i) fossil fuels pollute; e.g.;  
fossil fuels running out / limited;  
fossil fuels non renewable;  
3 marks for three bit can have one development mark with any.  
can award converse in any case [3]
- (ii) HEP / geothermal / wave / wind / tidal / nuclear / biogas;  
relevant development; [2]