MARK SCHEME for the October/November 2008 question paper

5014 ENVIRONMENTAL MANAGEMENT

5014/02   Paper 2, 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.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

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

* CIE will not enter into discussions or correspondence in connection with these mark schemes.

INDIA

1 (a) (i) 1050; 350;

   (ii) lower labour costs; less regulation; AVP; [1]

   (iii) metals recycled; less mining needed/eq; less energy used to produce metals; [2]

   (iv) dangerous work/no safety procedures; fall of ship; e.g. of accident; [2]

(b) (i) site 2; [1]

   (ii) site 1; [1]

   (iii) highest reading on site 3 but this is not most polluted/eq; [1]

   (iv) organotin,   PAH's;; [2]

   (v) tired; loss of weight; cancers; poor coordination/any nervous disorder; [2]

(c) (i) orientation; scales; plots with key;; [4]

   (ii) both have peak nearest ships/ both drop away further from ships; slower decline towards G/eq; [1]

   (iii) organotin, it is more soluble in water; [1]

(d) (i) poisons/toxins   pass   through   food   chains;   ref   to   bioaccumulation/ biomagnification; high concs are lethal; [2]

   (ii) short term profit/eq; [1]

   (iii) build dry docks; more samples taken; fine heavy polluters;   AVP; [2]

2 (a) (i) move to slum – all they can afford; find work there;   AVP; [2]

   (ii) lots of industry inside slum; lots of low paid jobs in city; [1]

   (iii) yellow fever/dengue fever/malaria spread by mosquito;
cholera/typhoid spread by water; [2]

   (iv) sewage   floods   slum   spreading   bacteria   into   houses;   drinking   water contaminated; bacteria can multiply in warm wet conditions;   AVP; [2]

(b) (i) people will demand compensation; city does not have alternative land; city would have to provide permanent buildings; [2]

   (ii) lack of trust; interfere with way of life; might have to pay taxes;   AVP; [2]

   (iii) stay – only earn enough for basic needs; too expensive to live out/wages too low to live out;   AVP; [2]

3 **(a) (i)** only one sample point; not enough time; only counting/not weighing; would gi
different answer each time;

    (ii) longer time; more sample points weighing;

    (iii) all plastic and cardboard weighed/eq;   AVP: [1]

(b)   150 + 375 = 525;;   [2]

(c) (i) no more land fill sites/existing ones full; burning releases toxic fumes; causes breathing problems; AVP;   [2]

    (ii) bacterial/microbial decomposition/respiration; to minerals water and carbon dioxide; role of worms; ref to root absorption;   [2]

    (iii) Advantages – not transport cost in time/fuel; less in landfill/to burn;   AVP; Disadvantages – liable to flood during monsoon; could cause illness; attract stray animals;   AVP;   [max 3]

(d) (i) four X two in shade; two in open;   [2]

    (ii) check thermometer read the same; take readings at the same time; thermometers same distance from ground/comment on position; no thermometer in direct sunshine;   AVP;   [2]

    (iii) table drawn; enough spaces; headings for columns/rows;   [3]

(e)   trees have cooling effect; sustainable; no cost of equipment; cost of electricity; pollution saving; carbon neutral;   [2]