

CAMBRIDGE INTERNATIONAL EXAMINATIONS**Cambridge International General Certificate of Secondary Education****MARK SCHEME for the October/November 2015 series****0680 ENVIRONMENTAL MANAGEMENT****0680/43**

Paper 4 (Alternative to Coursework), maximum raw mark 60

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- 1 (a) (i) (most of the) sand is returned / damage only temporary / eq.; [1]
- (ii) reduces imports; encourages manufacturing; employs more people; allows tax revenues; for infrastructure / named example; AVP; [2]
- (b) (i) 3%; [1]
- (ii) 0.9 to 3.6% / 2.7%; [1]
- (iii) sample 5 / eq.; [1]
- (iv) some form of sampling / measuring error; error with magnet; recording error, e.g. mass of sample; mass of ilmenite; AVP; [2]
- (v) could have used a stronger / bigger magnet; different time with magnet; samples taken from deeper in beach; AVP; [2]
- (c) (i) *Accept reasonable responses, e.g.*
- question 1 can now see most of the sand is returned; ref. to temporary disruption; ref. to fishing still ok; turtles returning; AVP;
- question 2 now making more money; still able to fish most of the year; AVP;
- question 3 we all benefit now; keep earning money; need money to feed family; improve standard of living; example described;
- Max. two marks for each question.* [5]
- (ii) a method that does not ask everyone; further detail, e.g. different ages / income groups; [2]
- (d) (i) so the mass of sand is correct; driver's mass must be included (both in and out) / e.q.; [2]
- (ii) to keep pace with inflation / cost of living / eq.; [1]
- (e) (i) suitable scales; axes labelled; up to two marks for plotting (allow one error); [4]
- (ii) increase until year 5; peak at year 3; over 200 employees between year 3–6; then decrease; constant from year 7–9; [2]
- (iii) more mechanisation / eq.; AVP, e.g. less demand / mineral licence runs out; [1]
- (f) ref. to reduced soil erosion by rain; wind; more interception; root binding; returns fertility to soil; creates habitat; AVP, e.g. harvest coconuts; [3]

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- 2 (a) (i)** 47; [1]
- (ii)** correct line; (*Allow ECF.*) [1]
- (iii)** 4320; 6120; [2]
- (iv)** each nesting event is different/eq./more nests gives more eggs/eq./comment on average; [1]
- (b) (i)** dogs looking for food; humans can eat them; both damage nests; [2]
- (ii)** red list helps make people/industry/planners aware of the problem; CITES makes trade in turtles/products illegal; [2]
- (c)** ratios change; less females to lay eggs; or less males to mate; population likely to go down; [2]
- (d) (i)** 655; 1888; [2]
- (ii)** 110; 88;
108/109; 90; [4]
- (iii)** use of any 4 comparative figures in statements, e.g. number of eggs per nest about the same;
number of live hatchlings about the same;
so the proportions of undeveloped are similar and dead hatchlings are similar proportion;
AVP; [4]
- (iv)** so the comparison is fair/eq.; [1]
- (v)** to find out if Olive Ridley Turtles are recovering in numbers/eq.;
using same beaches for nests; control development near beach; AVP; [2]
- (e) (i)** tie the flap down; remove the grill at (sea); [1]
- (ii)** inspect fishing gear at sea; in harbour; sea patrols; fines; boats impounded; [2]
- (f)** create special low-light zone near beach; reduce number of lights; max. power of lights;
reduce lighting during nesting season; reduce traffic near coast at night in season;
AVP, e.g. control development near beach; [3]

AVP = Alternative Valid Point.

[Total: 60]