

ECOSYSTEMS

Mark scheme Higher 2004

Question 10: Ecosystems

(a) (i) Level 1 Basic (1-2 marks)

Basic ideas probably not going much further than information provided
e.g.

loggers can't chop down trees in research area, profits may go down, small area only for logging, large area as reserve, fewer animals in buffer areas,
allows part of the forest to be removed/developed.

Level 2 Clear (3-4 marks)

Clear statements, explaining disadvantages e.g. the reserve may restrict the

land available for shifting cultivation so that land is cleared more often,

more disturbance from scientists and developers may bring western diseases

and a change in the culture of the local people. (4 marks)

(ii) 3x1 forest managed, products exported, nature reserve created, locals

continue shifting cultivation, limited access to reserve, companies pay for

research, divided into 3 zones. (3 marks)

(b) (i) Mixture of trees and grassland = 1, second mark for a development e.g. few

trees in areas that are very dry, two layers of vegetation. (2 marks)

(ii) Level 1 Basic (1-2 marks)

Basic statements that may state adaptations without explaining e.g. loses

leaves in drought, thick barks, stores water.

Level 2 Clear (3-4 marks)

Clear link between the adaptation and the reason e.g. loses leaves during

drought to reduce water loss, thick bark can store water for use during the drought.

Level 3 Detailed (5-6 marks)

Detailed explanation of at least two adaptations e.g. the baobab tree loses its leaves at the onset of the drought. This reduces water loss from transpiration and also means the tree needs less water to survive. The tree also has fleshy cells in its trunk that can store water to help it survive the drought. Some plants e.g. palm trees have very deep tap roots that reach far below the surface to access groundwater supplies. **(6 marks)**