

Mark Scheme (Results)

Summer 2012

ELBS Environmental and Land-Based Studies
Plants & Animal-Role
ES205 01

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Publications Code DP032186

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Question number	Answer	Mark
1(a)	Oranges: Seeds=Y; Flowers=Y; Conifers: Seeds=Y; Flowers=N; Ferns: Seeds=N; Flowers=N Moss: Seeds=N; Flowers=N Must get any 2 correct in each of Seeds and Flowers columns for 2 marks. Must get 1 correct in each column for 1 mark	(2)

Question number	Answer	Mark
1(b)	Oranges: Seeds inside fruit (B) Conifers: Seeds on outside of cones (A) 1 mark for each correct answer	(2)

Question number	Answer	Mark
2(a)	Any of 3 matches = 1 mark Golf course= mole; farm= bindweed; water supply= water hyacinth	(1)

Question number	Answer	Mark
2(b)	Accept any reasonable problem 1 mark per problem or 1 problem + develop. Golf - disturbs turf, holes/mounds on playing surface, ball won't run true, kills off grass in patches, dissuades people from joining club/playing golf Farm - kills crops, reduces output/income, needs weedkiller /weeding = expensive/time consuming/ pollutant Water - chokes water courses/equipment, effects water quality, kills off fish life/affects eco balance	(2)

Question number	Answer	Mark												
3(a)	1 mark per correct match for B,C, D, E <table border="1"> <thead> <tr> <th>Type of vertebrate</th> <th>Characteristic</th> </tr> </thead> <tbody> <tr> <td>Amphibian</td> <td>A</td> </tr> <tr> <td>Mammal</td> <td>E</td> </tr> <tr> <td>Reptile</td> <td>B</td> </tr> <tr> <td>Bird</td> <td>D</td> </tr> <tr> <td>Fish</td> <td>C</td> </tr> </tbody> </table>	Type of vertebrate	Characteristic	Amphibian	A	Mammal	E	Reptile	B	Bird	D	Fish	C	(4)
Type of vertebrate	Characteristic													
Amphibian	A													
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Fish	C													

Question number	Answer	Mark
3(b)	Accept any reasonable use - 1 mark for D and E each D = shell is a form of packaging, protects contents, allows handling/transporting/use of machinery, good food value, protein, ingredient for many foodstuffs e.g. cakes E = good food value, protein, calcium, liquid form easy to acquire/handle/transport, ingredient for many foodstuffs e.g. cheese	(2)

Question number	Answer	Mark
4(a)(i)	One of waste pulp-cows; cattle/cows-manure fields; sugar beet tops-cattle	(1)

Question number	Answer	Mark
4(a)(ii)	One of milk for sale-income/food; meat for sale-income/food ; sc. research -improves cattle/cows	(1)

Question number	Answer	Mark
4(a)(iii)	One of sugar sale-income/food; sugar sale-sc. research; sc. research-improves sugar beet	(1)

Question number	Answer	Mark
4(b)	Level 1: simple one or two way benefits as in (a) above - up to 2 marks Level 2: explain a 3-way benefit eg beet provides food for animals which manure the fields, which reduces costs for the farmer, who can spend more money on improving the plants/animals. OR includes tech knowledge/detail if part of 3-way benefit missing. Up to 4 marks Level 3: add detail/tech knowledge to 3-way benefit, overview, extrapolation Eg Organic farming depends on 3 interacting, better for the environment.	(6)

Question number	Answer	Mark
5(a)	1 mark per match: tamarisk= 3; buddleia= 2. 1 mark per simple reason e.g. Site 3 graph shows wind is bad, tamarisk can grow in windy areas; Site 2 graph shows frost is bad, buddleia can withstand severe frosts OR 2-3 marks for reason developed using resource information e.g. Site 3 is over 100 m high so cold, exposed; site 2 is a frost pocket/cold air sinks to lower ground. 3 marks per plant can be achieved either by correct site+2 simple reasons OR correct site + 1 developed reason OR 1 simple + 1 developed reason OR 1 very well developed reason using technical knowledge.	(6)

Question number	Answer	Mark
5(b)	Simple reason eg different plants require different soil nutrients (1) With develop/detail e.g. bedding/flowering/fruiting plants produce a lot therefore require fertile soils/nutrients/inputs (1)	(2)

Question number	Answer	Mark
5(c)	Simple name/description eg quadrats - 1 mark More description or simple statement on how to use data/what data shows - up to 2 marks Details of equipment, process, use/relevance of data - up to 4 marks	(4)

Question number	Answer	Mark
6(a)(i)	1 mark for UK, Europe, North America - - accept any combination 1, 2 or all 3.	(1)

Question number	Answer	Mark
6(a)(ii)	Level 1: 1 mark for simple statements eg MEDCs using too much wood - furniture, newsprint; LEDCs using for firewood, population growth. Up to a max of 1 marks Level 2: To get 2/3 marks need develop/detail description eg MEDCs changing fashions - whole kitchens/furniture replaced; Brazil - population needs somewhere to live, food to eat - using the Amazon. Up to max 3 marks. Level 3: Sophisticated answer required. Note patterns, links, exceptions, side effects eg LEDCs large debt burden, sell wood to MEDCs; acid rain, global warming in one part causing devastation elsewhere. Up to max 6 marks	(6)

Question number	Answer	Mark
6(b)	<p>1 mark per simple statement relating UK to forests elsewhere eg animals become extinct. Up to 2 marks max</p> <p>Up to 2 marks - develop/ add detail but still tends to be 1-sided eg affects UK through global warming, supply of raw materials.</p> <p>Up to 3 marks - specific detail, examples, use of technical terms/vocab, 2-way responsibility identified, discussion/evaluation/critique of different view points.</p>	(3)

Question number	Answer	Mark
6(d)	<p>Level 1: 1 mark per simple recommendation e.g. do not destroy habitats by cutting down too much forest. A list of recommendations. Up to max of 1 mark</p> <p>Level 2: Detail/development of recommendations. E.g. use appropriate tech to improve fuel efficiency and use less firewood. Up to 3 marks either through 1 development/ details or quality response.</p> <p>Level 3: technical/scientific detail; understanding of limitations/difficulties of recommendations; techniques of making recommendations . Up to 6 marks through 2 details/developments or quality of response.</p>	(6)

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