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Mark Scheme
Sample Assessment Material

Principal Learning

Environmental and Land based Studies (ES101/01)

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General guidance on marking

Examiners should look for qualities to reward rather than faults to penalize. This does NOT mean giving credit for incorrect or inadequate answers, but it does mean allowing learners to be rewarded for answers showing correct application of principles and knowledge, and for critical and imaginative thinking. Examiners should therefore read carefully and consider every response; even if it is not what is expected it may be worthy of credit. The Principal Examiner or Team Leader should be consulted as necessary.

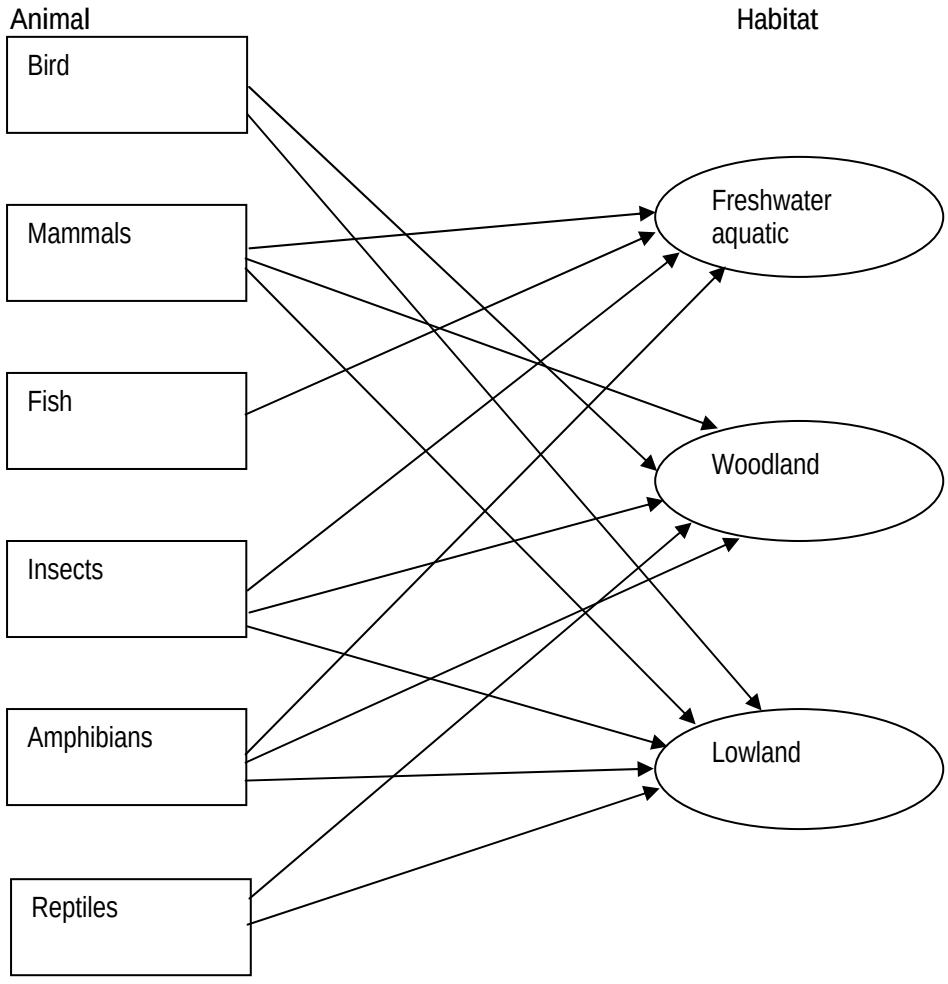
Question Number	Correct Answer	Mark
1(a)	Any three from: • foxes • deer • rabbits • squirrels • mice • badgers or any other woodland mammal.	**(3)**

Question Number	Correct Answer	Mark
1(b)	Any two from: • higher amount of rainfall/not found in dry regions • lots of organic matter in soil or any other suitable answer.	**(2)**

Question Number	Correct Answer	Mark
1(c)	Any two from: • body size • body shape • colour or any other suitable answer.	**(2)**

Question Number	Correct Answer	Mark
1(d)	• It has rich soil (1) that allows further plant growth (1) • It holds much plant life (1) provides habitats for animals (1) or any other suitable answers.	**(4)**

Question Number	Correct Answer	Mark
1(e)	1 mark for each correct answer below	**(5)**



Question Number	Correct Answer	Mark
2(a)	Change in the number of foxes or owls (accept less foxes/owls or more foxes/owls) (1). Change in the number of plants (accept less plants or more plants) (1).	**(2)**

Question Number	Correct Answer	Mark
2(b)(i)	Any one from: • less food for the foxes to eat • foxes would have to eat other food eg rabbits, squirrels or birds.	**(1)**

Question Number	Correct Answer	Mark
2(b)(ii)	Less mice to eat plants, seeds and nuts so there should be more plants.	**(1)**

Question Number	Correct Answer	Mark
2(c)(i)	More plant material for the squirrels to eat as there are no mice eating the plants.	**(1)**

Question Number	Correct Answer	Mark
2(c)(ii)	If there are fewer mice foxes/owls cant eat so many mice so they will eat more of the other animals, like the squirrels.	**(1)**

Question Number	Correct Answer	Mark
3(a)	Any two from: • rainfall • (min and max) air temperature • wind speed • wind direction • cloud cover • sunlight.	**(2)**

Question Number	Correct Answer	Mark
3(b)	A description such as: • The animals may not get enough food and shelter if the weather is very different to normal conditions (1). This may lead to animals dying or not reproducing very much (1). OR • The animals may get lots of food and shelter if the weather is suitable for them for a while (1). This may lead to animals reproducing a lot and increasing in number (1).	**(2)**

Question Number	Correct Answer	Mark
3(c)	Amount of rainfall will affect how much the trees grow (1) . This would be especially important if they had planted some young trees (1) Poorer growth might mean less food for animals in the woods (1). Having local rainfall records would enable staff to see rainfall patterns (1) and so predict when they might need to provide extra help for wildlife (1)	**(4)**

Question Number	Correct Answer	Mark
3(d)	Any two from: • Allows air to circulate into and through the box. • Temperature measured is the air temperature and not the ground temperature. or any other suitable answer.	**(2)**

Question	Correct Answer	Mark

Number		
4(a)	Need to test a solution (1). Diluted water has a neutral pH (1) so it would not affect the results of the test (1).	**(3)**

Question Number	Correct Answer	Mark
4(b)	The largest particles sink to the bottom as they are heavier (1). The smaller particles float to the top as they are lighter (1).	**(2)**

Question Number	Correct Answer	Mark
4(c)	You need to test the pH of the soil solution (1) and not the soil particles (1).	**(2)**

Question Number	Correct Answer	Mark
4(d)	Universal indicator	**(1)**