

Qualification title: 0173 Technical in Land and Wildlife Management

Test title: 0173-011/511

Version: March 2018

| Q | Acceptable answer(s) | Guidance | Max mks |
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| 1 | <p>Answer:</p> <p>a) 1 mark for one of the following:</p> <ul style="list-style-type: none"> - Diorite - Gabbrogranite - Pegmatite - peridotite <p>1 mark each for the following</p> <p>a) Sand (1), Silt (1) & Clay (1)</p> <p>b) 1 mark for each point – up to 2 marks</p> <ul style="list-style-type: none"> - loss of organic matter - decreased permeability - degradation of soil makes it hard and compact | | 6 |
| 2 | <p>Answer:</p> <p>Pyramid of biomass represents how much energy is passed on from each trophic level (1 mark) biomass at each level is lesser than the level below (1 mark). When animals eat, only a small portion is converted to new tissue (1 mark) which is the food for the next trophic level. This is because energy is lost at each step (1 mark) as heat or due to being used for life processes by the organism at each level (1 mark). Therefore a larger biomass of oak tree is required to support a smaller biomass of caterpillar/a larger biomass of blue tit is required to support a smaller biomass of sparrowhawk/ a larger biomass of caterpillar is required to support a smaller biomass of blue tit/ (1 mark).</p> | <p><i>Accept and award marks for any other appropriate alternative wording of the answer.</i></p> | 6 |
| 3 | <p>Answer:</p> <p>Any two from the following:</p> <ul style="list-style-type: none"> - Faeces - Footprints - Hones/nests - Fur/feathers - Evidence of kill - Smell | <p><i>Accept and award marks for any other appropriate signs.</i></p> | 2 |

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| 4 | <p>Answer:</p> <p>a)</p> <ul style="list-style-type: none"> - audible deterrent - scent - taste - electrical - diversionary feeding - habitat manipulation <p>1 mark each up to 2 marks</p> <p>b) Exclusion is the process of removing an animal from an area to protect entry of unwanted pests (1 mark). <i>Example – fencing/release pens/tree guards (1 mark)</i></p> <p>c) Three advantages and three disadvantages as below:</p> <p><i>Disadvantages (1 mark each)</i></p> <ul style="list-style-type: none"> - Habituation (get used to them) - effectiveness short lived - non selective - timing can be inappropriate <p><i>Advantages (1 mark each)</i></p> <ul style="list-style-type: none"> - cheap/free - easy to deploy - no training required - can be used on protected species as they non-lethal | <p><i>Accept and award marks for any other appropriate alternative wording of the answer.</i></p> | 10 |
| 5 | <p>Answer:</p> <p>a) A - Top lever (1 mark) B - Safety catch (1 mark)</p> <p>Up to 2 marks</p> <p>b) Increasing the choke (1 mark) restricts the spread of the pellets (1 mark) as they leave the barrel. This produces a tighter (1 mark) with less chance of wounding/increased chance of killing at longer ranges (1 mark).</p> <p>Up to 4 marks</p> | | 6 |
| 6 | <p>Answer:</p> <p>a) 6.5 = diameter of bullet (1 mark) 55 = length of cartridge case (1 mark) Both measured in mm (1 mark)</p> | | 6 |

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| | <p>b) 1 click = 1cm at 100m (1 mark) Therefore 1 click = 0.25cm at 25m (1 mark) Therefore, 2cm adjustment requires $2 / 0.25 = (1) 8$ clicks (1 mark)</p> | | |
| 7 | <p>Answer:</p> <p>Any two of these:</p> <ul style="list-style-type: none"> - pink footed - greylag - white fronted - Canada - Barnacle <p>1 mark each up to 2 marks</p> | | 2 |
| 8 | <p>Answer:</p> <p>a. December (1 mark) b. Young to old ratio/average young per pair/young:old (1 mark)</p> | | 2 |
| 9 | <p>Answer:</p> <p>Pheasants are polygamous (1 mark) whereas grouse are monogamous (1 mark) A cock pheasant will defend a territory but will also defend a harem of up to 12 hens – territorial harem defence (1 mark). Red grouse cocks will defend a territory but will pair-up with a single hen (1 mark).</p> | | 4 |
| 10 | <p>Answer:</p> <p>Red grouse (1 mark) – heather burning (1 mark) increases patch mosaic of heather stands (1 mark) resulting in smaller territories (1 mark).</p> <p>Pheasants (1 mark) - woodland ride management (1 mark) increases length of woodland edge (1 mark) resulting in more cock territories and hen nesting habitat (1 mark).</p> | <p>1 mark for species, 1 mark for technique and 2 marks for explaining the process and impact.</p> <p><i>Accept and award marks for any other appropriate examples.</i></p> | 4 |
| 11 | <p>Answer:</p> <p>Indicative content</p> <ul style="list-style-type: none"> - Impact of cooler wetter climate on upland land use is that soils tend to be less productive, - growing seasons shorter - snow/frost events longer and harsher | | 12 |

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| <ul style="list-style-type: none"> - this results in less choice of crops/trees - more extensive agricultural systems - large scale commercial plantation forestry - lower input systems - Also makes uplands dramatic landscapes leading to greater public recreation - Predominant habitat is heather moorland - Organic/peat soils - Blanket bog - Species linked to heather are red and black grouse - Predator control, heather burning, medicated grit, grouse counts - Unsuitable for rear and release game birds <p>Band 1: 1-4 Marks A basic explanation, showing some understanding of effect of wetter climate on a limited range of land uses. A brief description of the type of game management which is suited to the uplands. Answer may be disorganised and ambiguous.</p> <p>Band 2 : 5-8 Marks A clear explanation, showing a good understanding of effect of wetter climate on a range of land uses, but lacks details. A good description of the type of game management, with an attempt to link this description to aspects of climate and land use. The information is presented mostly in a structured format.</p> <p>Band 3: 9-12 Marks An excellent explanation, showing a comprehensive understanding of effect of wetter climate on a range of land uses with details. A clear description of the type of game management, with strong linkage to aspects of climate and land use. Information will be presented in a well-structured format.</p> | |
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