# 0173-501 JUNE 2018
## Level 3 Technicals in Land and Wildlife management
### Level 3 Land and Wildlife Management – Theory Exam (1)

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<th>Candidate name (first, last)</th>
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<th>Assessment date (DDMMYYYY)</th>
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- If any additional answer sheets are used, enter the additional number of pages in this box.
- Please ensure that you **staple** additional answer sheets to the **back** of this answer booklet, clearly labelling them with your full name, enrolment number, centre number and qualification number in **BLOCK CAPITALS**.
- All candidates need to use a **black/blue pen. Do not** use a pencil or gel pen.
- If provided with source documents, these documents **will not** be returned to City & Guilds, and will be shredded. **Do not** write on the source documents.

* I **declare that I had no prior knowledge of the questions in this assessment and that I will not divulge to any person any information about the questions.**

You should have the following for this examination
- a pen with blue or black ink
- a calculator

### General instructions
- Use black or blue ball-point pen.
- The marks for questions are shown in brackets.
- This examination contains 12 questions. Answer **all** questions.
- Answer the questions in the spaces provided. Answers written in margins or on blank pages will **not** be marked.
- Cross through any work you do not want to be marked.
1 a) Identify the part marked A in Figure 1. 


Figure 1

b) Identify the component shown in Figure 2. 

Source: http://www.malpasonline.co.uk

Figure 2

c) Give two reasons why it is important to inspect a machine before it is used. 

(2 marks)
2  a) State why it is good practice to wear a solid screen visor whilst strimming. (1 mark)

b) Explain the potential dangers of using a quad bike on a hillside. (4 marks)

3  In ecology, what does ‘fecundity’ mean? (1 mark)
4  a) Label the levels of organisation A, B and C in Figure 3.  

Figure 3

A  
B  
C  

b) State three causes of fluctuation in global wildlife population.  


5 The diagram in Figure 4 shows a classic population cycle between a predator and its prey.

![Figure 4](https://services.math.duke.edu/education/ccp/materials/diffeq/predprey/lynxhare.gif)

**Figure 4**

Explain why the peak in lynx population usually occurs after the peak in hare population. (4 marks)

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6 Explain the impact on an ecosystem of introducing a non-native species. (4 marks)

7 Some species in the UK have undergone population changes in the last 100 years.
   a) For one named species, explain the reasons for its decline. (3 marks)

   b) For the same species, explain how conservation strategies have led to its recovery. (3 marks)
8 Estate management tasks require planning to choose the correct materials, tools, PPE, measurements, and cost implications.

Figure 5

a) Name the tool shown in Figure 5. .................................................. (1 mark)

b) Name one piece of PPE that should be worn whilst using a hand held post thumper/knocker. .................................................. (1 mark)

c) A surfacing material costs £10 per m$^3$. Calculate the total cost to surface an area of path which is 10 m x 4 m to a depth of 10 cm. You must show your working. .................................................. (3 marks)

d) Explain two factors that need to be considered when selecting materials to construct a path. .................................................. (4 marks)
9 A site needs to be cleared of low shrubby vegetation.
a) Identify one suitable method for this activity. (1 mark)

b) Give one advantage and one disadvantage of the method identified in 9a). (2 marks)

10 According to the Control of Vibration at Work Regulations 2005, explain what should be checked on a hand held petrol engine machine before use. (3 marks)

11 Define the terms biotic and abiotic, and describe their relationship in an ecosystem. (3 marks)
12 A landowner wishes to create a small woodland on a piece of existing grassland. Discuss the factors that will need to be considered and implemented for the woodland to be successfully established.

(12 marks)