



**0173-509 JUNE 2018**

**Level 3 Technicals in Land and Wildlife**

Level 3 Land and Wildlife – Theory Exam (2)

If provided, stick your candidate barcode label here.

**Monday 11 June 2018**  
**13:30 – 15:30**

Candidate name (first, last)

First

Last

Candidate enrolment number

Date of birth (DDMMYYYY)

Gender (M/F)

Assessment date (DDMMYYYY)

Centre number

Candidate signature and declaration\*

• 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

**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) State what type of rocks form through cooling and solidification of magma/lava. (1 mark)

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b) List the **four** basic components of soil. (4 marks)

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2 a) Describe the atomic structure of a water molecule. (2 marks)

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b) Describe how the physical state of water is altered at a molecular level by increasing the temperature of liquid water beyond the boiling point. (2 marks)

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3 a) Explain how energy moves through a food chain.

(7 marks)

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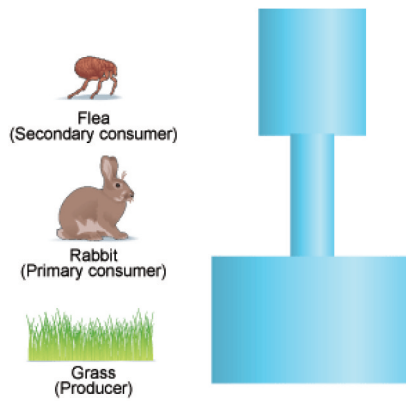
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- b) The population of each organism in a food chain can be shown in a sort of bar chart called a pyramid of numbers. The more organisms there are, the wider the bar.



Source: <http://www.bbc.co.uk/schools/gcsebitesize/science>

**Figure 1**

Explain the pyramid of numbers in Figure 1 above.

(3 marks)

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4 If a cold air mass descends, state what happens to the surface pressure. (1 mark)

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5 a) With regards to the water cycle, state what is meant by a catchment. (1 mark)

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b) Within the Carbon cycle, give **three** examples of how carbon is released to the atmosphere. (3 marks)

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6 a) State what is meant by a polyandrous mating system. (1 mark)

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b) State which life history strategy is typically favoured in unstable environments. (1 mark)

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c) Define the term Fecundity. (1 mark)

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d) Give **three** reasons why monogamous relationships within the animal kingdom result in bi-parental care. (3 marks)

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7 Explain how humans have caused habitat fragmentation and isolation. (4 marks)

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8 a) State when the Forestry Commission was formed. (1 mark)

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b) Give **one** aim of the Forestry Commission. (1 mark)

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9 During the Neolithic period, the original wildwood that covered the British Isles was significantly reduced. State the reason for this. (1 mark)

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10 Explain how coppicing was used to produce bronze and iron. (4 marks)

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11 a) Name **three** types of information included on a woodland management plan. (3 marks)

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b) Explain how a woodland ride should be managed to create a good variety of habitats within it. (4 marks)

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