If provided, stick your candidate barcode label here.

Thursday 15 March 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 13 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 **three** elements within the formula for photosynthesis.  

   (3 marks)

   b) Name the plant pigment involved in photosynthesis.  

   (1 mark)

2  Precipitation is one of the processes in the hydrological cycle.
   a) Name **two** examples of precipitation in the hydrological cycle.  

   (2 marks)

   b) Name **two other** processes involved in the hydrological cycle.  

   (2 marks)

3  Describe the differences between anaerobic respiration and aerobic respiration.  

   (4 marks)
4 The nitrogen cycle and the carbon cycle are two important biogeochemical cycles.
   a) Explain how carbon enters and leaves the atmosphere. (4 marks)

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   b) Name two natural agents that fix atmospheric nitrogen. (2 marks)
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5 Name one from each of the following. A type of
   a) soil comprising varying amounts of sand, silt and clay (1 mark)
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   b) rock that is formed due to transformation of original rock by high heat and pressure. (1 mark)
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6 Explain why atmospheric pressure changes with altitude. (4 marks)
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7 Define each of the following mating systems.
   a) Polygamous. (1 mark)
   b) Monogamous. (1 mark)

8 a) Describe how source populations are different to sink populations as part of a meta-population. (3 marks)

   b) Describe how isolation affects a wildlife population. (3 marks)

9 Identify one factor that can result in habitat fragmentation. (1 mark)
10 a) Identify four historic features that could be found in a woodland that would indicate long-standing, continuous woodland cover. (4 marks)

b) Give two reasons why deadwood should be retained within a woodland. (2 marks)

11 Describe the differences in vertical structure between an active wood pasture and a coppice with standard woodland. (6 marks)
12 Explain how ecotones in a woodland benefit wildlife. (3 marks)
13 For a recently acquired woodland, discuss how a range of surveys could be undertaken to highlight the physical and biological characteristics of the woodland. (12 marks)