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 additional answer sheets are used, enter the additional number of pages in this box.
• Before taking the examination, all candidates must check that their barcode label is in the appropriate box. Incorrectly placed barcodes may cause delays in the marking process.
• Please ensure that you staple additional answer sheets to the back of this answer booklet, clearly labelling these 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, unless otherwise instructed.
• 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 examination 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 16 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 Name three stages of the hydrological cycle.  (3 marks)

2 Describe two stages in the formation of sedimentary rocks.  (4 marks)

3 Explain two causes of bankside erosion.  (4 marks)

4 Describe where and how aerobic and anaerobic respiration takes place within a pond.
   Aerobic:  (2 marks)
   Anaerobic:  (2 marks)
5 a) Name one apex predator within a freshwater ecosystem. (1 mark)

b) Name two trophic levels within one aquatic food chain, using a named example for each trophic level. (4 marks)

6 State three ways how a fish uses it fins. (3 marks)

7 Describe how two characteristics found on a teleost fish scale from a temperate environment can determine events within its life history. (4 marks)

8 Describe the main function of one physiological system found in fish. (2 marks)

9 State two causes that lead to abnormal behaviour in fish. (2 marks)
10 Explain why a rearing diet for juvenile fish would have a higher protein content than a maintenance diet for adult fish. (3 marks)

11 For a named viral infection, describe three of the clinical symptoms displayed by an infected fish. (4 marks)

12 Give two methods of managing fungal infections in a fishery. (2 marks)

13 Describe two nutritional health issues that could cause vertebral deformity in fish. (2 marks)
14 Name **three** health problems in fish caused by environmental conditions. (3 marks)

15 Give the full names of **three** non-government national organisations that are involved in fish welfare. (3 marks)
A stillwater sport fishery has undergone a period of excessive rainfall. Discuss what factors could influence the fish health and behaviour and how these factors may be managed. (12 marks)