

UNIVERSITY OF BOLTON
SCHOOL OF SPORT AND BIOLOGICAL SCIENCES
BSC (HONS) BIOLOGY
SEMESTER ONE EXAMINATION 2018/2019
APPLIED FRESHWATER BIOLOGY
AND ECOTOXICOLOGY
MODULE NO: BIO6013

Date: Wednesday 16 January 2019

Time: 10.00 am – 1.00 pm

INSTRUCTIONS TO CANDIDATES:

Candidates are advised that the examiners attach importance to legibility of writing and clarity of expression. **YOU ARE STRONGLY ADVISED TO PLAN YOUR ANSWERS**

There are **SIX** questions on this paper. There are **TWO** sections.

Answer **THREE** questions. Answer **ONE** question from each section and **ONE** other question from either section. Answer all parts of the question.

All questions carry 100 marks.

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Answer THREE questions. Answer ONE question from each section and ONE other question from either section. Make use of labelled diagrams where appropriate. All questions carry equal marks.

Section One

1. Critically appraise the merits and limitations of biotic and abiotic methods of assessing habitat and water quality in a range of named freshwater systems.

[100 Marks]

2. Peat bogs are internationally important habitats, of which the UK holds a significant proportion. However, many of them are classified as being in a 'degraded' state. Assess the prospects for conserving them in the long-term.

[100 Marks]

3. Evaluate the efficacy of the Water Framework Directive in the UK to date. Discuss the current challenges in achieving its targets and the possible interventions required to fulfil them.

[100 Marks]

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Section Two

4. If you were a scientific advisor to the government, would you recommend tighter controls on the use and release of xenobiotics into the environment? Justify your recommendations.

[100 Marks]

5. In aquatic ecotoxicology, the phrase 'what we throw away can come back and hurt us' is often used. Critically appraise the validity of this statement, using case studies within your discussion.

[100 marks]

6. Analyse the potential detrimental effects of heavy metals on aquatic organisms.

[100 marks]

END OF QUESTIONS