Imperial College London

FACULTY OF NATURAL SCIENCES
GOOD PRACTICE GUIDE- EXAMINATION SETTING AND MARKING

July 2016

FACULTY OF NATURAL SCIENCES

Introduction

This document contains examples of good practice from across the Faculty relating to the setting and marking of examinations, plus links to College level regulations.

Exam Paper Setting

The Scheme for the Award of Honours for each degree outlines the type and duration of the exam, where appropriate, for each element of a programme.

The College Regulations for the setting of exam papers are outlined within the Examination Regulations, a link to which can be found in the box to the right.

The regulations specify the following:
10.1 Each Board shall appoint two or more of its members to be jointly and severally responsible for the first draft and the final accuracy of each paper.

10.2 Each Board shall consider and approve all papers within its purview. Any paper set by a Board must be approved by an External Examiner on that Board. A Board may meet before the examination to discuss the questions to be set and the standard to be adopted.

The Department of Chemistry introduced a refined internal procedure for setting exam papers in 2015/16, with a view to eradicating errors. The Chemistry process is outlined in fig. 1. below.

LINKS TO COLLEGE REGULATIONS:

Regulations for the award of the degrees of Bachelor of Science (BSc) and Master in Science (MSci) in the Faculty of Natural Sciences

Regulations for the Examination of BSc, MSci, BEng, MEng, MBBS Degrees

College level guidance on the use of Multiple Choice Questions in assessment

College level guidance on model answers to questions

Guidance on the use of Multiple Choice Questions (MCQs)

The College has published guidance on the use of MCQs in assessment- see the link in the box above. This includes some useful advice about using such questions, including the following:

- Ensure that the question set is robust from a reliability/psychometric perspective
- Make sure the content of each question is important and relevant
- Use stems and options that are unambiguous and each contain only one idea
- Be very careful that any true/false items *are* unequivocally either true or false
- Avoid negative statements

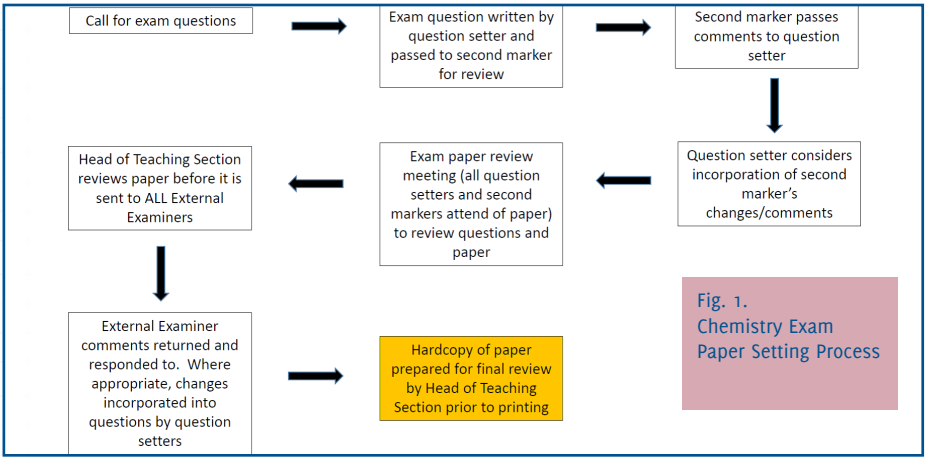

Fig. 1.
Chemistry Exam Paper Setting Process

Marking- good practice from the Department of Life Sciences

Course convenors should provide the following to the first marker, who should then pass them on to the second marker:
1. A copy of the procedures set out below
2. A copy of the assessment criteria
3. A copy of the examination paper
4. A copy of the outline answer

Procedures for marking examination scripts:
All scripts should be double marked (*in line with the College Examination Regulations*) and annotated to indicate that first and second marking has taken place. This marking has to be clearly visible to an External Examiner and is most easily indicated if the markers use different coloured pens, distinguishable from the candidate's work. Each page should be marked with at least one indication from each Examiner to show that it has been marked, at the very least by initialling a corner of each page.

The first marker should:
1. Highlight all factual errors.
2. Indicate irrelevant material.
3. Note all examples of outside reading in the margin (for example with OR).

These areas are important because they may not be apparent to a second marker or to an External Examiner with less knowledge of the taught material.

Both first and second markers should:
4. Insert summary sentences along with the marks in the boxes at the front of the answer book, justifying the marks awarded based on the marking criteria. Please ensure that marks and comments are consistent with the criteria for assessment. For example do not combine an overall comment of 'excellent' with a mark of less than 70%. It is, however, acceptable and can be informative to explain a lower mark with an explanation such as 'excellent coverage of the first part of the question but does not address the second part at all'. It is also useful if markers indicate where students could have gained more marks particularly for marks above 70%.

Where there is a discrepancy between the two marks, the first and second markers should:
5. Agree a single mark for each candidate, referring to the Course Convenor if necessary. The agreed mark should be indicated clearly at the front of the answer book, along with comments explaining how significantly discrepant marks were moderated.

Marking when a student answers more than the required number of questions or parts of a question- from the Department of Chemistry

In the College 'Instructions to Candidates for Examination', there is a clear instruction that "Candidates should not submit answers to more than the required number of questions".

However, there is currently no explicit guidance at College level as to how markers should respond if a candidate *does* submit answers to more than the required number of questions. Faculty recommended policy is therefore that markers should mark the required number of questions in the order in which they are found in the exam booklet. For example, if the instruction for an exam question is "Answer any two of the three parts a), b) and c)" and a student answers parts a, b and then c in the booklet in that order. The marker should mark parts a) and b) and then stop.

Second markers should check that this policy has been complied with and inform the first marker of any errors or corrections that need to be made.

Students should also be informed that this is how such situations will be handled and should be informed that they must clearly cross through anything they do not want to be marked.

Where a student is required to answer a set number of questions over several exam papers (for example nine questions over three papers in IIIB) then if more than the required number of questions are answered, the marks will be averaged.

Higher Education Academy

The HEA has produced some useful 'Toolkits' related to Assessment:

https://www.heacademy.ac.uk/frameworks-toolkits/welcome-hea-toolkits